



# WYOMING STATE BOARD OF EDUCATION

Wyoming education partners support a student-centered learning system in which all Wyoming students graduate prepared and empowered to create and own their futures.

May 19, 2016 University of Wyoming College of Education, Room 117 Laramie, Wyoming		
11:30 a.m. – 12:00 p.m.	Lunch	
12:00 p.m. – 12:30 p.m.	<b>State Board of Education</b>	
	<ul style="list-style-type: none"> <li>• Call to order</li> <li>• Roll Call</li> <li>• Pledge of Allegiance</li> </ul>	
	<ul style="list-style-type: none"> <li>• Approval of agenda</li> </ul>	Tab A
	<ul style="list-style-type: none"> <li>• Minutes - April 28-29,2016</li> </ul>	Tab B
	<ul style="list-style-type: none"> <li>• Treasurer's report</li> </ul>	Tab C
12:30 p.m. 12:45 p.m.	Wyoming State Superintendent Update	
12:45 p.m.- 1:15 p.m.	Update from Individualized Learning Division	Tab D
1:15 p.m.- 2:00 p.m.	Board Reports and Updates- Paige Fenton Hughes & Brent Young	
	<ul style="list-style-type: none"> <li>• Legislative Update and Tasks</li> </ul>	Tab E
	<ul style="list-style-type: none"> <li>• NASBE Grant</li> </ul>	Tab F
	<ul style="list-style-type: none"> <li>• Strategic Planning</li> </ul>	Tab G
	<ul style="list-style-type: none"> <li>• SBE Policies</li> <li>• Board Budget Review</li> <li>• ESSA Update</li> <li>• Chapter 31 Rules Update</li> </ul>	
2:00 p.m.-3:00 p.m.	School Campus Tour	
3:00 p.m.- 3:30 p.m.	Continuation of Board Reports and Updates	
3:30 p.m. – 5:00 p.m.	<u>Discussion Items:</u>	
	<ul style="list-style-type: none"> <li>• Revised ELA K-1 Standards- Laurie Hernandez</li> </ul>	Tab H
	<ul style="list-style-type: none"> <li>• Proposed 2016 Science Standards- Laurie Hernandez</li> </ul>	Tab I
	<ul style="list-style-type: none"> <li>• Chapter 10 Rules- Laurie Hernandez</li> </ul>	Tab J
State Board of Education Meeting Recess		

May 20, 2016 University of Wyoming College of Education, Room 117 Laramie, Wyoming		
8:00 a.m.- 9:00 a.m.	<b>State Board of Vocational Education</b>	
	<ul style="list-style-type: none"> <li>• Roll Call</li> </ul>	
	<ul style="list-style-type: none"> <li>• Approval of Agenda</li> </ul>	Tab K
	<ul style="list-style-type: none"> <li>• Minutes-March 18, 2016</li> </ul>	Tab L
8:10 a.m.- 9:00 a.m.	<u>Discussion Items:</u>	
	<ul style="list-style-type: none"> <li>• T.A. - RTI &amp; Marzano REL Projects- Guy Jackson</li> </ul>	Tab M
	<ul style="list-style-type: none"> <li>• WyCTE Assessment System (NOCTI) – Loralyn O’Kief</li> </ul>	Tab N
	<ul style="list-style-type: none"> <li>• Career Development Facilitator Course/UW Echo Project – Tonya Gerharter</li> </ul>	Tab O
	<ul style="list-style-type: none"> <li>• Roadmap to STEM Conference - Tonya Gerharter and Loralyn O’Kief</li> </ul>	Tab P
9:15 a.m.	Reconvening of the <b>State Board of Education</b>	
9:15 a.m. – 10:00 a.m.	SBE Committee Reports	
10:00 a.m. – 10:30 a.m.	Digital Learning/NGA Policy Academy-Laurel Ballard	Tab Q
10:30 a.m.- 11:30 a.m.	<u>Action Items:</u>	Tab R
	<ul style="list-style-type: none"> <li>• Alternative Schedules- Julie Magee</li> </ul>	Tab S
	<ul style="list-style-type: none"> <li>• Revised ELA K-1 Standards- Laurie Hernandez</li> </ul>	Tab T
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	<ul style="list-style-type: none"> <li>• SBE Meeting Schedule</li> </ul>	Tab U
	Other issues, concerns, discussion, public comment:	
	Adjourn	



**ACTION SUMMARY SHEET**

**DATE:** May 19,2016

**ISSUE:** Approval of Agenda

**BACKGROUND:**

**SUGGESTED MOTION/RECOMMENDATION:**

To approve the Agenda for the May 19-20,2016 State Board of Education meeting.

**SUPPORTING INFORMATION ATTACHED:**

- Agenda

**PREPARED BY:** Chelsie Oaks

**Chelsie Oaks, Executive Assistant**

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**



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**ACTION SUMMARY SHEET**

**DATE:** May 19, 2016

**ISSUE:** Approval of Minutes

**BACKGROUND:**

**SUGGESTED MOTION/RECOMMENDATION:**

To approve the minutes from the State Board of Education meeting on April 28-29, 2016

**SUPPORTING INFORMATION ATTACHED:**

- Minutes of April 28-29, 2016

**PREPARED BY:** Chelsie Oaks

**Chelsie Oaks, Executive Assistant**

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**

WYOMING STATE BOARD OF EDUCATION  
April 28-29  
Washakie CSD #1  
1900 Howell, Worland Wyoming

Wyoming State Board of Education members present: Pete Gosar (by phone), Kathy Coon, Ken Rathbun, Jillian Balow, Sue Belish, Scotty Ratliff, Robin Schamber, Kathryn Sessions, Walt Wilcox, Jim Rose (by phone) and Belenda Willson (by phone)

Members absent: Hugh Hageman and Nate Breen

Also present: Chelsie Oaks, WDE; Dicky Shanor, WDE; Paige Fenton Hughes, SBE Coordinator; Mackenzie Williams, Attorney General's Office (AG); WDE; Joel Dvorak, WDE; Brent Bacon, WDE; Dave Nicolas, Superintendent Washakie #1; Jody Rakness, Washakie #1.

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April 28th, 2016

CALL TO ORDER

Vice Chair, Kathy Coon, called the meeting to order at 1:00 p.m.

Chelsie Oaks conducted roll call and established that a quorum was present.

APPROVAL OF AGENDA

Sue Belish moved to approve the agenda, seconded by Ken Rathbun.

Sue Belish moved to amend the agenda, to include the SBE Administrative Committee report on April 28<sup>th</sup>, 2016 after the school tour instead of on April 29<sup>th</sup>. Kathryn Sessions seconded.

The motion carried.

APPROVAL OF MINUTES

Minutes from the March 18, 2016 & March 31, 2016 State Board of Education (SBE) meetings were presented for approval.

Kathryn Sessions moved to approve the minutes as presented, seconded by Belenda Willson; the motion carried.

TREASURER'S REPORT

SBE Treasurer, Ken Rathbun, presented the summary review and expenditures report for board's budgets.

Sue Belish asked how much money would revert back at the end of the biennium and if the SBE could use those funds towards the coordinator AWEC position.

Ken Rathbun felt that it made the most logical sense for the board to have the left-over funds go towards the board's position. Additionally, Ken reviewed additional cuts that would be taken out of the boards budgets in the next biennium, these cuts were requested by Governor Mead for all agencies.

Scotty Ratliff thanked Ken for his in-depth report on the SBE budget's.

Sue Belish moved that once the SBE Treasurer, staff and WDE staff have determined the amount of the remaining balance in the current biennium; that those funds would be used towards the coordinator position. Kathryn Sessions seconded; the motion carried.

Lastly, Ken recommended to the board that it consider paying the NASBE dues a year in advance to cover the 2017 dues. He believed it would be beneficial to the board to alleviate one year of dues, especially with the budget cuts the board faces in the 2017-2018 biennium.

Belenda Willson moved the NASBE dues for 2017 be paid out of the current biennium budget, Sue Belish seconded. The motion carried.

#### WYOMING STATE SUPERINTENDENT UPDATE

Jillian Balow gave an update on the Wyoming Department of Education (WDE). She stated that in the May SBE meeting WDE division directors would be coming before the board to present information about the different divisions.

Dean Ray Reutzler, College of Education, gave an update about the University of Wyoming and the work that the college of education is doing to become a great teacher college.

Scotty Ratliff requested that the Dean or one of his representatives come to all SBE meetings and thanked him for his attendance.

#### BOARD REPORTS AND UPDATES

##### Legislative Tasks

Paige Fenton Hughes, SBE Coordinator, reviewed the memo she provided to the board in the meeting packet.

##### NASBE Grant and Legislative Forum Meeting

Paige Fenton Hughes reviewed her experience at the NASBE Legislative Forum in early April and gave an update on the status of the NASBE grant work she and Chelsie have been doing.

Pete Gosar informed the board on his take-away from the conference.

##### SBE Policies

Paige Fenton Hughes described to the board how the SBE Policy and Governance were being updated with a tool provided by NASBE. She notified the board that it should plan on updating its policies after every legislative session. Lastly, Paige Fenton Hughes asked the board how it would like to review the policies. The board decided to review a couple of chapters at each meeting.

### Native American Education and Root Cause Analysis.

Deb Lindsey discussed with the board the data retreats that are being provided to high priority schools.

### ESSA Update

Brent Bacon notified the board that there is an ESSA PowerPoint in the packet, but that most of the information in it has already been presented to the board in a previous meeting.

Also, Brent Bacon will bring forward follow-up information on restructuring plans at a later SBE meeting.

### Statewide Assessment

Deb Lindsey gave an update on a meeting with US. Department of Education on peer review and on the specialty assessment committees that have been formed.

The purpose of the specialty assessment committees is to determine the “appropriate application or modification of the recommendations” of the Wyoming Assessment Task Force report to the areas listed above and report any recommendations related to the specialty assessments to the Select Committee on Statewide Education Accountability by September 30, 2016.

If a board member is interested on sitting on any of the committees they are more than welcomed to and to let Deb Lindsey know.

### SBE ADMINISTRATION COMMITTEE

Sue Belish reported that 29 people applied for the State Board of Education Coordinator position. The committee reviewed all the applications and chose to interview three candidates. Interviews have been scheduled for May 7, 2016 and will begin at 10:00 a.m. and the candidates will be given two writing prompts. Sue asked if any members of the board wished to be in the interviews. Kathryn Sessions requested to be a part of the interviewing committee.

Additionally, the Administration Committee reported on the status of the Chapter 31 rules and that currently there is no issue with the content or context, but that the rules need to be more articulate. Mackenzie Williams will be assisting to ensure the language provided in the rules is fluent.

### WYOMING STATEWIDE SYSTEM OF SUPPORT

Dr. Joel Dvorak presented on the final comprehensive framework for a statewide system of support for Wyoming and an update on the root cause analysis and his visits to districts.

Jillian Balow added that it was important to know that the Every Student Succeeds Act (ESSA) is becoming a part of everything and that it will change the way the Wyoming does business but with change creates great opportunities for Wyoming.

The Wyoming State Board of Education recessed at 5:05 p.m.

April 29, 2016

The Wyoming State Board of Education reconvened at 8:00 a.m.

## SBE COMMITTEE REPORTS

### Communication Committee

Ken Rathbun reported to the board the status of the new SBE website. The board will receive a link to the preview page via Chelsie.

## PROFESSIONAL LEARNING COMMUNITIES

Kevin Mitchell, Superintendent at Park CSD 1 introduced Jason Hillman and Scott Schiller. Mr. Hillman and Mr. Schiller presented to the board on what Professional Learning Communities (PLCs) look like and operate in their schools and the benefits of having the PLCs.

## STRATEGIC PLANNING PLAN

Paige Fenton Hughes asked the board on how it wished to move forward with the strategic planning process. In the NASBE grant the board is obligated to create a strategic plan.

The Board requested that Paige create a draft and present it at the next SBE meeting.

## CHAPTER 3 RULES

Mackenzie Williams reviewed the rules provided in the meeting packet and the necessity to revise them.

Scotty Ratliff moved to approve the rules as they were presented, seconded by Ken Rathbun; the motion carried.

## NEXT YEAR MEETING SCHEDULE

The board discussed where and when it would like hold the next year of meetings. The board agreed to meet in more central locations and to start later the first day meeting to allow people to travel in the morning which will reduce travel costs.

Additionally, the board agreed it needed to be more accommodating to WDE employees who needed to present and discussed the logistics of having WDE staff present via GoToMeeting.

The board will approve a final meeting schedule as its May 19-20, 2016 meeting.

## PUBLIC COMMENT

Jodi Cole gave public comment on the Washakie CSD #1 grading system.

NEXT MEETING

The board's next meeting will take place in Laramie May 19-20, 2016

The meeting adjourned at 10:50 a.m.

DRAFT



**ACTION SUMMARY SHEET  
STATE BOARD OF EDUCATION**

**DATE:** May 19, 2016

**ISSUE:** Approval of Treasurer's Report

**BACKGROUND:** The State Board of Education budget for the period ending May 1, 2016 shows a balance of \$120,355.72

**SUGGESTED MOTION/RECOMMENDATION:**

To approve the Treasurer's Reports as submitted.

**SUPPORTING INFORMATION ATTACHED:**

- State Board Budget Summary ending May 1, 2016

**PREPARED BY:** Chelsie Oaks

Chelsie Oaks, Executive Assistant

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**

**State Board of Education Reporting Period of Apr 5th - May 1st, 2016 Expenditures**

Date	Object	Amount	Vendor Name	Description	App Unit
<b>Personal Services (0100 series)</b>					
25-Apr-2016	0104	10,416.64		Salaries	009
25-Apr-2016	0105	796.88		Employer Paid Benefits	009
27-Apr-2016	0105	113.54		Worker's Compensation: 2/29/20016	009
		<b>11,327.06</b>			
<b>App Unit 009</b>	<b>Total</b>	<b>\$11,327.06</b>			

Date	Object	Amount	Vendor Name	Description	App Unit
<b>Personal Services (0100 series)</b>					
25-Apr-2016	0104	8,100.00		Salaries	001
25-Apr-2016	0105	21.68		Employer Paid Benefits	001
25-Apr-2016	0105	131.25		Employer Paid Benefits	001
		<b>8,252.93</b>			
<b>Supportive Services (0200 series)</b>					
11-Apr-2016	0221	115.50	Williams, Mackenzie -	M&IE/Hulett, WY	
11-Apr-2016	0221	172.78	Williams, Mackenzie -	Lodging/Hulett, WY	
14-Apr-2016	0221	106.38	Rathbun, Ken -	Mileage - Guild Charter School Hearing 2/20/16, Casper, WY	
14-Apr-2016	0221	106.38	Rathbun, Ken -	Mileage - SBE Meeting 2/22/16, Cheyenne, WY	
14-Apr-2016	0221	109.00	Rathbun, Ken -	Per Diem - Guild Charter School Hearing 2/20/16, Casper, WY	
14-Apr-2016	0221	327.00	Rathbun, Ken -	Per Diem - SBE Meeting 2/22/16, Cheyenne, WY	
14-Apr-2016	0221	327.00	Schamber, Robin -	Per Diem - SBE Meeting 3/17-18, 2016 Hulett, WY	
14-Apr-2016	0221	514.08	Schamber, Robin -	Mileage - SBE Meeting 3/17-18, 2016 Hulett, WY	
25-Apr-2016	0221	109.00	Coon, Kathy -	Per Diem-SBE Charter School Hearing Casper, WY 2/20/16	
25-Apr-2016	0221	112.32	Coon, Kathy -	Mileage-SBE Charter School Hearing Casper, WY 2/20/16	
25-Apr-2016	0221	151.20	Coon, Kathy -	Mileage-SBE Meeting Cheyenne, WY 2/22/16	
25-Apr-2016	0221	327.00	Coon, Kathy -	Per Diem-SBE Meeting Cheyenne, WY 2/22/16	
29-Apr-2016	0221	45.00		206MV9571	
29-Apr-2016	0221	135.00		206MV9571	
29-Apr-2016	0221	332.00		206MV9571	
13-Apr-2016	0255	1,410.00		Administrative Hearing (Guild Charter School) Invoice #270-	
		<b>4,399.64</b>			
<b>Data Processing Charges (0400 series)</b>					
29-Apr-2016	0420	259.09		Telecommunications (206TC5125)	001
		<b>259.09</b>			
<b>App Unit 001</b>	<b>Total</b>	<b>\$4,658.73</b>			

# WYOMING DEPARTMENT OF EDUCATION

State Board of Education

FY15 Budget

1 JULY 2014 thru 1st MAY 2016

## SUMMARY REPORT

DESCRIPTION	BUDGETED	EXPENDED	ENCUMBERED	REMAINING BALANCE	Percentage
Personal Services (0100 series)					
[App Unit 001]	60,000.00	55,128.22		4,871.78	8.12%
Supportive Services (0200 series)					
[App Unit 001]	154,840.00	151,761.48		3,078.52	1.99%
Data Processing Charges (0400 series)					
[App Unit 001]	6,031.00	5,602.65		428.35	7.10%
Professional Services (0900 series)					
[App Unit 001]	62,841.00	45,702.11	8,529.75	8,609.14	13.70%
	283,712.00	258,194.46	8,529.75	16,987.79	5.99%
<hr/>					
DESCRIPTION	BUDGETED	EXPENDED	ENCUMBERED	REMAINING BALANCE	Percentage
Personal Services (0100 series)					
[App Unit 009]	266,500.00	250,898.03		15,601.97	5.85%
Supportive Services (0200 series)					
[App Unit 009]	63,500.00	39,776.88		23,723.12	37.36%
Professional Services (0900 series)					
[App Unit 009]	120,000.00	55,957.16		64,042.84	53.37%
	450,000.00	346,632.07		103,367.93	22.97%
<hr/>					
<b>TOTAL</b>	<b>733,712.00</b>	<b>604,826.53</b>	<b>8,529.75</b>	<b>120,355.72</b>	<b>16.40%</b>

**Our Vision:**

*The Division of Individual Learning of the WDE will ensure POSITIVE outcomes for learners (with disabilities) by effecting significant growth and improvement in educational systems throughout the State of Wyoming.*

**Our Mission:**

*The Division of Individual Learning of the WDE SERVES education agencies in WY through the provision of quality technical assistance, meaningful professional development, and credible program evaluation and feedback consistent with the letter and spirit of IDEA.*

WE ARE the Division of Individual Learning: 28 Team Members- Continuous Improvement Team, Early Childhood Team, Vision Outreach Team, Deaf and Hard of Hearing Outreach Team.

**Responsible for Eight Components of General Supervision:**

- State Performance Plan: Individuals with Disabilities Act (IDEA reauthorization 2004) requires all States to develop a State Performance Plan (SPP). Assists States in evaluating its efforts and its improvements within six year time period. Plan includes baseline data, measureable and rigorous targets, and improvement areas for 20 indicators. Results reported and shared with all LEA's through Data Reviews. (20 Indicator Chart)
- Policies, Procedures, and Effective Implementation: On-going evaluation and alignment to ensure policies, procedures, and practices are carried out in accordance with IDEA
- Integrated Monitoring Activities: "Collaborative Monitoring" focus area Behavioral Health Division year 2 to include: Data reviews, need areas, on-site monitoring and technical assistance. Future focus area correctional education
- Fiscal Management: Oversight for LEA federal grant management and monitoring
- Data Processes and Results: Robust Data System to include internal and external data reviews. Implemented a "Steps to Success" project this year to target 5 district in "Needs Intervention" determination category
- Improvement, Correction, Incentives, and Sanctions: Celebrate district successes, provide sharing opportunities, corrective action plans if needed
- Effective Dispute Resolution: Process provided by Consultant to assist in ensuring procedural safeguards are afforded to families. Exploring EIP facilitation process similar to other states
- Targeted Technical Assistance and Professional Development: Delivered and planned according to LEA need, data reviews, and federal guidance

## **Celebrations: Top 10**

- State Determination review of 20 Indicators- Wyoming **Meets Expectation Category**
- Office of Special Education Differentiated Monitoring System: Office of Special Education Programs Results Driven Accountability (RDA) System of Differentiated Monitoring and Support under RDA, every State receives a designation of universal, targeted or intensive differentiated monitoring and support (DMS) for the fiscal year. The FFY 2015 DMS includes four areas: 1) results; 2) compliance; 3) dispute resolution (FFY 2015 Special Focus Area); and 4) fiscal. **Wyoming = Universal Technical Assistance**
- New Director Institute Training- LEA directors provided leadership, guidance and support to leaders in transition. Completed on-site visits to each new director district.
- Increased customer service- provided over 1200 (year 15-16) technical assistance and support calls
- Project ECHO- Live web based professional learning communities targeting three areas: Autism, Positive Behavioral Supports, and transition
- Regional Training to support Positive Behavioral Supports and Autism: 108 participants.
- Multi-Tiered Systems of Support Project- Professional Learning Community 16 schools- one Blue Ribbon School will include 12 more teams and district coaching training provided. Aligned with other school-state level initiatives/goals, WDE strategic goal- State Systemic Improvement Plan (John Hattie resource)
- Week of Academic and Excellence (WAVE) Leadership Training August 1<sup>st</sup> through 4<sup>th</sup> outstanding line up
- Increased Collaboration and support with Behavioral Health Division, Residential Facilities, Correctional Education, and Department of Vocational Rehabilitation
- Wyoming Advisory Panel for Students with Disabilities-29 active members

## **Next Steps/Future Work:**

- Improvements to current monitoring system- “collaborative approach”
- On-site support for correctional education teams
- Develop Dyslexia Guidance Manual for Wyoming stakeholders
- Implementation of IEP Facilitation- positive communication with parents and LEA’s
- Collaborative data review process with LEA’s, Behavioral Health, Correctional Education
- Continue to increase technical assistance opportunities- “we only get better together!”
- Multi- Tiered Systems of Support and Phase III State Systemic Improvement Plan
- Assist LEA’s with special education staffing shortages- outlined in Equity Plan
- Legislative Service Office Study- Early Intervention Program: 3 areas- Structure and Organization, Identification Rates, and Overall Program Outcomes
- Continue to celebrate accomplishments- overall goal to increase positive outcomes for students with disabilities- **CONTINUE THE QUALITY WORK**

“Thank you so much for the opportunities WDE is providing in bringing improved practices to our district team!”-Comment shared recently from a Wyoming stakeholder.



May 10, 2016

MEMORANDUM

To: State Board of Education

From: Paige Fenton Hughes, Coordinator

RE: May 2016 Board Report

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**Legislative Tasks**

By the time you read this, Chelsie and I will have met to begin the statute review part of our NASBE work. I'll update you on the progress of the review at our meeting. The next step will be to determine a plan for updating and reviewing of rules and whether or not we want to suggest changes in statute to ensure we align from policy to rules to statute.

Regarding the report to the select committee about the need for the coordinator position, I am working on it and will have that substantially outlined and drafted for the board prior to the end of my contract. You will need to review that at your June and July meetings and finally approve it for submission to LSO at your August meeting.

Finally, at the Select Committee on Statewide Education Accountability meeting on the 10<sup>th</sup>, the committee asked us to have a discussion as a board about Phase II accountability (leader/teacher evaluation) and the possible revision of Chapter 29 rules. They are asking the board if we want to weigh in on the direction the committee takes in this regard. Here is a link to the advisory committee report: <http://legisweb.state.wy.us/InterimCommittee/2016/SEA05092016AppendixI.pdf>. Here is a link to the draft bill: <http://legisweb.state.wy.us/InterimCommittee/2016/SEA05092016AppendixJ.pdf>. Here is a link to Chapter 29 rules: <http://legisweb.state.wy.us/InterimCommittee/2016/SEA05092016AppendixR.pdf>. Take a peek at these, let's talk about it a bit at our meeting, and I told the co-chairs we'd get some feedback to them.

Also, the issue of a Native American task force was brought up again at the select committee meeting. Do we want to partner with Rob Black and tie into the work he's doing with TRIAD? Think on this and plan to give me some direction at our meeting, and I'll get back to the select committee on this issue.

**NASBE Grant**

This NASBE grant is tied up with a lot of our work. As you know, we will be working on the policy, rules, and statutory alignment as I mentioned above. We will be checking for alignment with the NASBE standards-

based system framework as well as checking for internal alignment. We'll have to coordinate with WDE and LSO once we determine what needs to be done.

Laurie and Brent are working with Mackenzie to determine a process for reviewing standards outside the nine-year cycle.

The last part of the NASBE grant work is completing our strategic plan. You'll see in your packet a revised one-page overview of your vision, mission, and priorities. I have added a *very rough* start on an action plan related to your goals. I'm not even sure this is the format you want or the direction you want to take. Please review this sample, and let's talk at the meeting about how you want to proceed. Let's plan to set aside a bit of time to work on this action plan. Then, I'll map out a plan from here so you can get this work done before the next school year.

### **SBE Policy Review**

I have included in your packet a plan for you to review, read, and approve the policies in your own policy book that need revisited. Included in your packet are the first three policies for your reading and adoption. These are just simple updates. If you are amenable to this plan, then we will proceed by putting these policies on your agendas for the next few months until the policy book is completely updated. This is just the first part of the NASBE work in updating and aligning policies.

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Pete Gosar, Chair  
Kathy Coon, Vice Chair  
Ken Rathbun, Treasurer  
Jillian Balow, State Superintendent  
Sue Belish  
Nate Breen

Wyoming State Board of Education  
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Hugh Hageman  
Scotty Ratliff  
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Jim Rose



**Vision**

Wyoming education partners support a student-centered learning system in which all Wyoming students graduate prepared and empowered to create and own their futures.

**Mission**

Lead collaborative partnerships in which student, teacher and administrative judgment are valued to craft policies and create future-focused systems oriented around the individual student by:

- Communicating the urgent need for transformational change
- Incentivizing innovative education
- Developing a system of district support
- Utilizing flexible measurements to gauge and celebrate successful change

**Goals**

1. Facilitate the development of and implementation of a comprehensive, multi-tiered system of support focused on continuous improvement which provides assistance to schools not meeting expectations;
2. Foster understanding of the role, duties, and responsibilities of the state board;
3. Stress the importance of communities and families in supporting high-quality education for all Wyoming children;
4. Share the importance of rigorous, college and career ready content and performance standards; and,
5. Encourage collaborative partnerships to collectively impact positive student outcomes.





<u>Goals</u>	<u>Strategies/Actions</u>	<u>Person Responsible</u>	<u>Measures</u>
Facilitate the development of and implementation of a comprehensive, multi-tiered system of support focused on continuous improvement which provides assistance to schools not meeting expectations	<ol style="list-style-type: none"> <li>1. Receive regular updates on the progress of the System of Support Collaborative Council and development of the system of support plan.</li> <li>2. Have coordinator and board representation on collaborative council.</li> <li>3. Monitor implementation of the system of support plan and receive reports on set deliverables related to implementation.</li> </ol>	Board chair, board coordinator, board representative on collaborative council.	<ul style="list-style-type: none"> <li>• Agendas will reflect system of support reports at each regular meeting.</li> <li>• Coordinator and board representative provide updates to the board either via email or at a regular board meeting.</li> <li>• Reports on implementation of system of support appear as part of board packet or are sent out to the board beginning in September, 2016.</li> </ul>
Foster understanding of the role, duties, and responsibilities of the state board	<ol style="list-style-type: none"> <li>1. Update and distribute yearly "report" and legislative priorities.</li> <li>2. Choose additional items from the communication plan and implement them as funds are available.</li> <li>3. Continue to have regular website updates and press releases sharing the work of the board.</li> </ol>	Communications committee, board coordinator, Kelly Pascal Gould	<ul style="list-style-type: none"> <li>• Yearly report and legislative priorities will be revised in October and November and distributed in early December, 2016.</li> <li>• Communications committee will give regular updates at board meetings about communications efforts including website updates and press releases.</li> <li>• Communications committee will recommend additional communications activities and the board will approve activities.</li> </ul>
Stress the importance of communities and families in supporting high-quality education for all Wyoming children	<ol style="list-style-type: none"> <li>1. Make this a communication option chosen by the board.</li> </ol>	Communications committee, Kelly Pascal Gould	<ul style="list-style-type: none"> <li>• Track and report communications on the topic of importance of families in supporting quality education.</li> </ul>
Share the importance of rigorous, college and career ready content and performance standards	<ol style="list-style-type: none"> <li>1. Partner with WDE standards team to share information about why rigorous college and career ready standards are important.</li> <li>2. If possible, make the importance of standards part of the</li> </ol>		<ul style="list-style-type: none"> <li>• Track and report information that is disseminated regarding rigorous college and career ready standards.</li> <li>• Track communications efforts regarding communications options regarding the importance of college and career ready standards.</li> </ul>

	<p>communication options chosen by the board.</p> <ol style="list-style-type: none"> <li>3. Present about the topic of college and career ready standards at workshops or meetings.</li> </ol>		<ul style="list-style-type: none"> <li>• Provide reports to the board about presentations at meetings/workshops.</li> </ul>
Encourage collaborative partnerships to collectively impact positive student outcomes	<ol style="list-style-type: none"> <li>1. Coordinator or board members to attend educational convenings across the state.</li> <li>2. Contact school districts and legislators in the areas in which the board meets.</li> </ol>		<p>Coordinator and board members track meeting/workshop attendance and update the board. Track attendance of guests at meetings.</p>



**Wyoming State Board of Education  
Policy Review Plan**

<i>Month</i>	<i>SBE Policy</i>	<i>Proposed Action</i>
May	SBE.1, SBE.2, SBE.3	Read and approve
June	SBE.7 and SBE.8 SBE.22	First reading Read and approve
August	SBE.7 and SBE.8 SBE.11 SBE.12	Second reading, approve First reading Read and approve
September	SBE.11 SBE.14 SBE.17	Second reading, approve Read and approve First reading
October	SBE.17 SBE.18 SBE.19 SBE.20	Second reading, approve Read and approve First reading First reading
November	SBE.19 SBE.20 SBE.21	Second reading, approve Second reading, approve Read and approve

# BOARD LEGAL STATUS

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## Constitutional and Statutory Provisions:

§21-2-301. Appointment; qualifications, terms and removal of members; meetings; chairman.

(a) There is created a state board of education composed of ~~twelve~~ thirteen (13~~4~~2) voting members, eleven (11) of whom shall be appointed members with at least one (1) member appointed from each appointment district pursuant to W.S. 9-1-218. The remaining voting member of the board shall be the state superintendent of public instruction. The executive director of the Wyoming community college commission shall be an ex-officio member and shall not have the right to vote. One (1) appointed member shall be appointed at large and shall be a certified classroom teacher at the time of appointment. One (1) appointed member shall also be appointed at large and shall be a certified school administrator at the time of appointment. Two (2) appointed members shall be appointed at large and shall be representative of private business or industry in Wyoming. The remaining seven (7) appointed members of the board shall be appointed from among the lay citizens of the state who are electors of the state, known for their public spirit, business or professional ability and interest in education. Not more than six (6) appointed members of the board shall be from one (1) political party. Members shall be appointed for six (6) year terms, except those who may be appointed to fill unexpired terms. Members shall be appointed by the governor with the approval of the senate. Vacancies shall be filled by the governor without senate approval until the next session of the legislature. No member is eligible to reappointment, except any member appointed to fill an unexpired term of less than six (6) years and the term expires on or after January 1, 1996, may be reappointed for one (1) additional six (6) year term. Appointed members of the board may be removed by the governor as provided in W.S. 9-1-202.

(b) During the first quarter of the calendar year a meeting shall be held at which a chairman shall be elected. Meetings may be held at regular intervals as often as the duties of the board require and the board shall meet at the call of the state superintendent of public instruction or the governor or the chairman whenever in the opinion of these officials, or any of them, the need for such meeting exists.

(c) Notwithstanding subsection (a) of this section, the superintendent of public instruction shall not participate in board deliberations on or vote on any matter relating to a contested case involving actions of the department of education.

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## State Board Policy:

All board members will take The Oath of Office. Board members will be sworn in prior to taking office by the Chair.

### Oath of Members of the Board

*I, (name) do solemnly swear that I will uphold the duties and the laws of the state of Wyoming based on statutes governing operations of the Wyoming State Board of Education.*

# POWERS AND DUTIES

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## Constitutional and Statutory Provisions:

§21-2-304. Duties of the state board of education.

(a) The state board of education shall:

(i) Establish policies for public education in this state consistent with the Wyoming Constitution and statutes and may promulgate rules necessary or desirable for the proper and effective implementation of this title and its responsibilities under this title. Nothing in this section shall give the state board rulemaking authority in any area specifically delegated to the state superintendent;

(ii) Through the evaluation and accreditation of school districts, implement and enforce the uniform standards for educational programs prescribed under W.S. 21-9-101 and 21-9-102 in the public schools of this state, including any educational institution receiving any state funds except for the University of Wyoming and Wyoming community colleges, and implement and enforce the statewide education accountability system pursuant to W.S. 21-2-204. The board shall ensure that educational programs offered by public schools in accordance with these standards provide students an opportunity to acquire sufficient knowledge and skills, at a minimum, to enter the University of Wyoming and Wyoming community colleges, to prepare students for the job market or postsecondary vocational and technical training and to achieve the general purposes of education that equips students for their role as a citizen and participant in the political system and to have the opportunity to compete both intellectually and economically in society. In addition, the board shall require school district adherence to the statewide education accountability system;

(iii) By rule and regulation and in consultation and coordination with local school districts, prescribe uniform student content and performance standards for the common core of knowledge and the common core of skills specified under W.S. 21-9-101(b), and promulgate uniform standards for programs addressing the special needs of student populations specified under W.S. 21-9-101(c) that ensure these student populations are provided the opportunity to learn the common core of knowledge and skills as prescribed by the uniform student content and performance standards pursuant to this paragraph. Student content and performance standards prescribed under this paragraph shall include standards for graduation from any high school within any school district of this state. The ability to prescribe content and performance standards shall not be construed to give the state board of education the authority to prescribe textbooks or curriculum which the state board is hereby forbidden to do. Graduation standards imposed under this paragraph shall require the successful completion of the following components, as evidenced by passing grades or by the successful performance on competency based equivalency examinations:

(A) Four (4) school years of English;

(B) Three (3) school years of mathematics;

(C) Three (3) school years of science; and

(D) Three (3) school years of social studies, including history, American government and economic systems and institutions, provided business instructors may instruct classes

on economic systems and institutions.

(iv) Effective school year 2013-2014, and each school year thereafter, require district administration of common benchmark adaptive assessments statewide in reading and mathematics for grades one (1) through eight (8) in accordance with W.S. 21-3-110(a)(xxiv). The board shall also establish, in consultation with local school districts, requirements for students to earn a high school diploma as evidenced by course completion and as measured by each district's assessment system prescribed by rule and regulation of the state board and required under W.S. 21-3-110(a)(xxiv). Once every five (5) years and on a staggered basis, the state board shall through the department, review and approve each district's assessment system designed to determine the various levels of student performance as aligned with the uniform state standards and the attainment of high school graduation requirements as evidenced by course completion. In addition and following review, refinement and revision of student content and performance standards adopted under paragraph (a)(iii) of this section and reviewed under subsection (c) of this section, the board shall establish a process to ensure district assessment systems are aligned with the refined and revised standards within three (3) full school years following adoption of revised standards;

(A) through (C) Repealed by Laws 2015, ch. 179, § 3.

(v) Through the state superintendent and in consultation and coordination with local school districts, implement a statewide assessment system comprised of a coherent system of measures that when combined, provide a reliable and valid measure of individual student achievement for each public school and school district within the state, and the performance of the state as a whole. Statewide assessment system components shall be in accordance with requirements of the statewide education accountability system pursuant to W.S. 21-2-204. Improvement of teaching and learning in schools, attaining student achievement targets for performance indicators established under W.S. 21-2-204 and fostering school program improvement shall be the primary purposes of statewide assessment of student performance in Wyoming. The statewide assessment system shall:

(A) Measure individual student performance and progress in a manner substantially aligned with the uniform educational program and student content and performance standards imposed by law and by board rule and regulation;

(B) Effective school year 2012-2013, and each school year thereafter, be administered in specified grades aligned to the student content and performance standards, specifically assessing student performance in reading and mathematics at grades three (3) through eight (8). In addition, the statewide assessment system shall assess student performance in science in grades four (4) and eight (8);

(C) In addition to subparagraph (a)(v)(B) of this section, measure student performance in Wyoming on a comparative basis with student performance nationally;

(D) Measure year-to-year changes in student performance and progress in the subjects specified under subparagraph (a)(v)(B) of this section and by school year 2015-2016, link student performance and progress to school and district leaders, including superintendents, principals and other district or school leaders serving in a similar capacity. The assessment system shall ensure the student performance measurements used at each grade level are valid for the purposes for which they are being used, including valid year-to-year comparisons of student and school level results, and shall be sufficient to produce necessary data to enable application of measures of performance indicators as required

under W.S. 21-2-204;

(E) Use only multiple choice items to ensure alignment to the statewide content and performance standards;

(F) Provide a fair and unbiased assessment of student performance without regard to race, ethnicity, limited English proficiency and socioeconomic status;

(G) Provide appropriate accommodations or alternative assessments to enable the assessment of students with disabilities as specified under W.S. 21-9-101(c)(i) and students with limited English proficiency;

(H) Provide a measure of accountability to enhance learning in Wyoming and in combination with other measures and information, assist school districts in determining individual student progress as well as school level achievement, growth and readiness targets. In addition to reporting requirements imposed under W.S. 21-2-204, the assessment results shall be reported to students, parents, schools, school districts and the public in an accurate, complete and timely manner. Assessment results shall be used in conjunction with each school district's assessments to design educational strategies for improvement and enhancement of student performance required under W.S. 21-2-204. Assessment results shall also be used to guide actions by the state board and the department in providing and directing a progressive multi-tiered system of support, intervention and consequences to districts in developing school improvement plans in response to student performance to attain target levels measured and established under W.S. 21-2-204. In consultation and coordination with school districts, the board shall subject to W.S. 21-2-204, review and evaluate the assessment system regularly and based upon uniform statewide reports, annually report to the legislature as required under W.S. 21-2-204.

(vi) Subject to and in accordance with W.S. 21-2-204, through the state superintendent and in consultation and coordination with local school districts, by rule and regulation implement a statewide accountability system. The accountability system shall include a technically defensible approach to calculate achievement, growth, readiness and equity as required by W.S. 21-2-204. The state board shall establish performance targets as required by W.S. 21-2-204(e), establish a progressive multi tiered system of supports, interventions and consequences as required by W.S. 21-2-204(f) and shall establish a statewide reporting system pursuant to W.S. 21-2-204(h). The system created shall conform to the January 2012 education accountability report as defined by W.S. 21-2-204(k). In addition and for purposes of complying with requirements under the federal No Child Left Behind Act of 2001, the board shall by rule and regulation provide for annual accountability determinations based upon adequate yearly progress measures imposed by federal law for all schools and school districts imposing a range of educational consequences and supports resulting from accountability determinations;

(vii) Repealed by Laws 2012, ch. 101, § 2.

(b) In addition to subsection (a) of this section and any other duties assigned to it by law, the state board shall:

(i) Repealed by Laws 1997 Special Session, ch. 3, § 302; 1994, ch. 17, § 2.

(ii) Enforce the uniform state educational program standards imposed by W.S. 21-9-101 and 21-9-102 and the uniform student content and performance standards established by

rules and regulations adopted under subsection (a) of this section, together with student performance indicators established and measured pursuant to W.S. 21-2-204, by taking appropriate administrative action with the state superintendent, including but not limited to the changing of accreditation status;

(iii) Repealed by Laws 1993, ch. 217, § 3.

(iv) Repealed by Laws 1987, ch. 190, §§ 2, 5.

(v) Initiate or facilitate discussions regarding the needs of and the means for improving education;

(vi) Repealed by Laws 1987, ch. 190, §§ 2, 5.

(vii) Repealed by Laws 1994, ch. 17, § 2.

(viii) Approve or disapprove alternative scheduling for school districts requesting to operate for fewer than one hundred seventy-five (175) days in school year, but no schedule shall be approved which reduces the pupil-teacher contact time defined by the state board;

(ix) Repealed by Laws 1994, ch. 17, § 2.

(x) Repealed by Laws 2006, ch. 34, § 2.

(xi) through (xiii) Repealed by Laws 1994, ch. 17, § 2.

(xiv) Based upon student performance levels determined under W.S. 21-2-204, establish improvement goals for public schools for assessment of student progress based upon the national assessment of educational progress testing program and the statewide assessment system established under paragraph (a)(v) of this section;

(xv) Not later than July 1, 2019, promulgate rules and regulations for the implementation and administration of a comprehensive school district teacher performance evaluation system based in part upon defined student academic performance measures as prescribed by law, upon longitudinal data systems and upon measures of professional practice according to standards for professional practice prescribed by board rule and regulation. The evaluation system shall clearly prescribe standards for highly effective performance, effective performance, performance in need of improvement and ineffective performance. Rules and regulations adopted under this paragraph shall to the extent the statewide accountability system is not compromised, allow districts the opportunity to refine the system to meet the individual needs of the district. The performance evaluation system shall also include reasonable opportunity for state and district provision of mentoring and other professional development activities made available to teachers performing unsatisfactorily, which are designed to improve instruction and student achievement;

(xvi) Not later than July 1, 2018, promulgate rules and regulations for implementation and administration of a comprehensive performance evaluation system for school and district leadership, including superintendents, principals and other district or school leaders serving in a similar capacity. The performance evaluation system shall be based in part upon defined student academic performance measures as prescribed by law, upon longitudinal data systems and upon measures of professional practice according to standards prescribed by board rule and regulation. The system shall also allow districts opportunity to refine the system to meet the individual needs of the district and shall

include reasonable opportunity for state and district provision of mentoring and other professional development activities made available to district administrative personnel performing unsatisfactorily, designed to improve leadership, management and student achievement;

(xvii) Through the state superintendent, implement, administer and supervise education programs and services for adult visually handicapped and adult hearing impaired persons within the state.

(c) The state board shall perform an ongoing review of state board duties prescribed by law and may make recommendations to the legislature on board duties. In addition and not less than once every nine (9) years, the board shall evaluate and review the uniformity and quality of the educational program standards imposed under W.S. 21-9-101 and 21-9-102 and the student content and performance standards promulgated under paragraph (a)(iii) of this section. The state board, in consultation with the state superintendent, shall establish a process to receive input or concerns related to the student content and performance standards from stakeholders, including but not limited to parents, teachers, school and district administrators and members of the public at large, at any time prior to the formal review by the state board. The state board shall report findings and recommendations to the joint education interim committee of the legislature on or before December 1 of the year in which the formal review and evaluation of the student content and performance standards was undertaken. The joint education interim committee shall report its recommendations, based upon findings and recommendations of the state board, to the legislature during the immediately following legislative session.

(d) Repealed by Laws 1994, ch. 17, § 2.

(e) In addition to subsections (a) and (b) of this section, the state board shall establish statewide goals for Wyoming public education. ~~(a) The state board of education shall:~~

~~(i) Establish policies for public education in this state consistent with the Wyoming Constitution and statutes and may promulgate policies necessary or desirable for the proper and effective implementation of this title and its responsibilities under this title. Nothing in this section shall give the state board rulemaking authority in any area specifically delegated to the state superintendent;~~

~~(ii) Through the evaluation and accreditation of school districts, implement and enforce the uniform standards for educational programs prescribed under W.S. 21-9-101 and 21-9-102 in the public schools of this state, including any educational institution receiving any state funds except for the University of Wyoming and Wyoming community colleges. The board shall ensure that educational programs offered by public schools in accordance with these standards provide students an opportunity to acquire sufficient knowledge and skills, at a minimum, to enter the University of Wyoming and Wyoming community colleges, to prepare students for the job market or postsecondary vocational and technical training and to achieve the general purposes of education that equips students for their role as a citizen and participant in the political system and to have the opportunity to compete both intellectually and economically in society;~~

~~(iii) By policy and regulation and in consultation and coordination with local school districts, prescribe uniform student content and performance standards for the common core of knowledge and the common core of skills specified under W.S. 21-9-101(b), and promulgate uniform standards for programs addressing the special needs of student~~

~~populations specified under W.S. 21-9-101(c) that ensure these student populations are provided the opportunity to learn the common core knowledge and skills as prescribed by the uniform student content and performance standards pursuant to this paragraph. Student content and performance standards prescribed under this paragraph shall include standards for graduation from any high school within any school district of this state and shall describe required performance levels in order to achieve proficiency of the common core of knowledge and common core of skills prescribed under W.S. 21-9-101(b). The ability to prescribe content and performance standards shall not be construed to give the state board of education the authority to prescribe textbooks or curriculum which the state board is hereby forbidden to do. Graduation standards imposed under this paragraph shall require the successful completion of the following components, as evidenced by passing grades or by the successful performance on competency-based equivalency examinations:~~

~~(A) Four (4) school years of English;~~

~~(B) Three (3) school years of mathematics;~~

~~(C) Three (3) school years of science; and~~

~~(D) Three (3) school years of social studies, including history, American government and economic systems and institutions, provided business instructors may instruct classes on economic systems and institutions.~~

~~(iv) Establish, in consultation with local school districts, requirements for students to earn a high school diploma as measured by each district's body of evidence assessment system prescribed by policy and regulation of the state board and required under W.S. 21-3-110(a)(xxiv). A high school diploma shall provide for one (1) of the following endorsements which shall be stated on the transcript of each student:~~

~~(A) Advanced endorsement which requires a student to demonstrate advanced performance in a majority of the areas of the common core of knowledge and skills specified under W.S. 21-9-101(b) and proficient performance in the remaining areas of the specified common core of knowledge and skills, as defined by the uniform student content and performance standards promulgated by the state board pursuant to paragraph (a)(iii) of this section;~~

~~(B) Comprehensive endorsement which requires a student to demonstrate proficient performance in all areas of the common core of knowledge and skills specified under W.S. 21-9-101(b) as defined by the uniform student content and performance standards promulgated by the state board pursuant to paragraph (a)(iii) of this section;~~

~~(C) General endorsement which requires a student to demonstrate proficient performance in a majority of the areas of the common core of knowledge and skills specified under W.S. 21-9-101(b) as defined by the uniform student content and performance standards promulgated by the state board pursuant to paragraph (a)(iii) of this section.~~

~~(v) Through the state superintendent and in consultation and coordination with local school districts, implement a statewide assessment system comprised of a coherent~~

~~system of measures that when combined, provide a reliable and valid measure of individual student achievement for each public school and school district within the state, and the performance of the state as a whole. Improvement of teaching and learning in schools and fostering school program improvement shall be the primary purposes of statewide assessment of student performance in Wyoming. The statewide assessment system shall:~~

~~(A) Measure individual student performance and progress in a manner substantially aligned with the uniform educational program and student content and performance standards imposed by law and by board policy and regulation;~~

~~(B) Be administered at appropriate levels at specified grades and at appropriate intervals aligned to the standards, specifically assessing student performance in reading, writing and mathematics at grades four (4), eight (8) and eleven (11), and effective school year 2005-2006, and each school year thereafter, assessing student performance in reading, writing and mathematics at grades three (3) through eight (8) and at grade eleven (11). In addition and commencing school year 2007-2008 and each school year thereafter, the statewide assessment system shall assess student performance in science not less than once within each grade band for grades three (3) through five (5), grades six (6) through eight (8) and grades ten (10) through twelve (12). The structure and design of the assessment system shall allow for the comprehensive measurement of student performance through assessments that are administered each school year simultaneously on a statewide basis and through assessments administered periodically over the course of the school year which are designed to provide a more comprehensive and in-depth measurement of subject areas aligned to the state content and performance standards. The assessment system may also measure the other common core of knowledge and skills established under W.S. 21-9-101(b) which can be quantified;~~

~~(C) In addition to subparagraph (a)(v)(B) of this section, measure student performance in Wyoming on a comparative basis with student performance nationally;~~

~~(D) Measure year-to-year changes in student performance and progress in the subjects specified under subparagraph (a)(v)(B) of this section and compare and evaluate student achievement during the process of student advancement through grade levels. The assessment system shall ensure the integrity of student performance measurements used at each grade level to enable valid year-to-year comparisons;~~

~~(E) Include multiple measures and item types including grade appropriate multiple choice and open-ended testing such as constructed response, extended response and performance-based tasks, to ensure alignment to the statewide student content and performance standards;~~

~~(F) Provide a fair and unbiased assessment of student performance without regard to race, ethnicity, limited English proficiency and socioeconomic status;~~

~~(G) Provide appropriate accommodations or alternative assessments to enable the assessment of students with disabilities as specified under W.S. 21-9-101(c)(i) and students with limited English proficiency;~~

~~(H) Provide a measure of accountability to enhance teaching and learning in Wyoming and in combination with other measures and information, assist school districts in determining individual student progress. The assessment results shall be reported to students, parents, schools, school districts and the public in an accurate, complete and timely manner and shall be used in conjunction with a school district's annual assessment to design educational strategies for improvement and enhancement of student performance. This design for improvement shall be part of each district's school improvement plan. In consultation and coordination with school districts, the board shall review and evaluate the assessment system regularly and based upon uniform statewide reports from each district, annually report to the legislature on student performance at specified grade levels and on school improvement plans.~~

~~(vi) Effective school year 2005-2006 and each school year thereafter, through the state superintendent and in consultation and coordination with local school districts, by policy and regulation establish a statewide accountability system providing annual accountability determinations for all schools and school districts imposing a range of educational consequences resulting from accountability determinations whereby:~~

~~(A) The continuous improvement of student achievement at all schools and appropriate educational interventions fostering continuous improvement serve as the basis for statewide accountability system design;~~

~~(B) Annual accountability determinations within the system are made for each school based upon adequate yearly progress measures defined by the federal No Child Left Behind Act of 2001, as may be subsequently amended, and the school's progress in improving student achievement as measured by adequate yearly progress data and by data from the district's body of evidence assessment system required under W.S. 21-3-110(a)(xxiv) and from other related sources which improve the reliability of accountability determinations as prescribed by policy and regulation of the board;~~

~~(C) To the extent possible, appropriate consequences resulting from accountability determinations are made subject to the discretion of school districts. The system shall establish a range of consequences which increase in the degree of intensity over time, with significant interventions imposed only upon repeated failure to meet school improvement and performance criteria over a consecutive period of time;~~

~~(D) Teacher and administrator quality and student remediation are the focus of consequences imposed upon schools failing to meet school improvement and performance criteria and target levels;~~

~~(E) A range of rewards is provided to schools meeting school improvement and performance criteria at levels set by the state board.~~

~~(b) In addition to subsection (a) of this section and any other duties assigned to it by law, the state board shall:~~

- ~~- (i) Repealed By Laws 1997 Special Session, ch. 3, 302; 1994, ch. 17, 2.~~
- ~~- (ii) Enforce the uniform state educational program standards imposed by W.S. 21-9-101 and 21-9-102 and the uniform student content and performance standards established by policies and regulations adopted under subsection (a) of this section by taking appropriate administrative action with the state superintendent, including but not limited to the changing of accreditation status;~~
- ~~- (iii) Repealed by Laws 1993, ch. 217, 3.~~
- ~~- (iv) Repealed by Laws 1987, ch. 190, 2, 5.~~
- ~~- (v) Initiate or facilitate discussions regarding the needs of and the means for improving education;~~
- ~~- (vi) Repealed by Laws 1987, ch. 190, 2, 5.~~
- ~~- (vii) Repealed by Laws 1994, ch. 17, 2.~~
- ~~- (viii) Approve or disapprove alternative scheduling for school districts requesting to operate for fewer than one hundred seventy-five (175) days in school year, but no schedule shall be approved which reduces the pupil-teacher contact time defined by the state board;~~
- ~~- (ix) Repealed by Laws 1994, ch. 17, 2.~~
- ~~- (x) Repealed by Laws 2006, Chapter 34, 2.~~
- ~~- (xi) Repealed by Laws 1994, ch. 17, 2.~~
- ~~- (xii) Repealed by Laws 1994, ch. 17, 2.~~
- ~~- (xiii) Repealed by Laws 1994, ch. 17, 2.~~
- ~~- (xiv) Establish improvement goals for public schools for assessment of student progress based upon the national assessment of educational progress testing program and the statewide assessment system established under paragraph (a)(v) of this section;~~
- ~~- (xv) Promulgate policies and regulations for the development, assessment and approval of school district teacher performance evaluation systems. Policies and regulations adopted under this paragraph shall allow each district flexibility in developing an evaluation system which meets the individual needs of the district;~~
- ~~- (xvi) Through the state superintendent, implement, administer and supervise education programs and services for adult visually handicapped and adult hearing impaired persons within the state.~~
- ~~-~~

~~(c) The state board shall perform an ongoing review of state board duties prescribed by law and may make recommendations to the legislature on board duties. In addition and not less than once every five (5) years, the board shall evaluate and review the uniformity and quality of the educational program standards imposed under W.S. 21-9-101 and 21-9-102 and the student content and performance standards promulgated under paragraph (a)(iii) of this section, and shall report findings and recommendations to the joint education interim committee of the legislature on or before December 1 of the year in which the review and evaluation was undertaken. The joint education interim committee shall report its recommendations, based upon findings and recommendations of the state board, to the legislature during the immediately following legislative session.~~

~~(d) Repealed by Laws 1994, ch. 17, 2.~~

~~(e) In addition to subsections (a) and (b) of this section, the state board shall establish statewide goals for Wyoming public education.~~

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### **State Board Policy:**

The Board will annually review the established goals at its September meeting. At the meeting following the legislature, the Board Attorney and Board Coordinator will update the Board on any legislative changes that affect the power and duties of the Board.

## BOARD MEMBER METHOD OF SELECTION (INCLUDING VACANCY)

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### Constitutional and Statutory Provisions:

§ 21-2-301. Appointment, qualifications, terms and removal of members, meetings; chairman.

(a) There is created a state board of education composed of ~~thirteen twelve~~(12) voting members, eleven (11) of whom shall be appointed members with at least one (1) member appointed from each appointment district pursuant to W.S. 9-1-218. The remaining voting member of the board shall be the state superintendent of public instruction. The executive director of the Wyoming community college commission shall be an ex-officio member and shall not have the right to vote. One (1) appointed member shall be appointed at large and shall be a certified classroom teacher at the time of appointment. One (1) appointed member shall also be appointed at large and shall be a certified school administrator at the time of appointment. Two (2) appointed members shall be appointed at large and shall be representative of private business or industry in Wyoming. The remaining seven (7) appointed members of the board shall be appointed from among the lay citizens of the state who are electors of the state, known for their public spirit, business or professional ability and interest in education. Not more than six (6) appointed members of the board shall be from one (1) political party. Members shall be appointed for six (6) year terms, except those who may be appointed to fill unexpired terms. Members shall be appointed by the governor with the approval of the senate. Vacancies shall be filled by the governor without senate approval until the next session of the legislature. No member is eligible to reappointment, except any member appointed to fill an unexpired term of less than six (6) years and the term expires on or after January 1, 1996, may be reappointed for one (1) additional six (6) year term. Appointed members of the board may be removed by the governor as provided in W.S. 9-1-202.

(b) During the first quarter of the calendar year a meeting shall be held at which a chairman shall be elected. Meetings may be held at regular intervals as often as the duties of the board require and the board shall meet at the call of the state superintendent of public instruction or the governor or the chairman whenever in the opinion of these officials, or any of them, the need for such meeting exists.

(c) Notwithstanding subsection (a) of this section, the superintendent of public instruction shall not participate in board deliberations on or vote on any matter relating to a contested case involving actions of the department of education.

**VACANCY** - *Any vacancy shall be filled in the same manner as the original appointment for the unexpired portion of the term.*

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### State Board Policy:

The Vice-Chair shall report to the board on current status of board members and continue to monitor vacancies and appointments.

# Implementation Plan – 2016 Wyoming Science Content and Performance Standards

## Phase 1: 2015-16 Awareness / Planning

- ✓ WDE Science Consultant maintain membership & participate in relevant national organizations (e.g., SCASS, CSSS) to collaborate with other states and gather resources to share
- ✓ Develop and gather information from District Transition Needs Survey
- ✓ Provide updates through Supt.'s Memos and statewide events (e.g., SIC, WCDA, WASA)
- ✓ Provide crosswalk and shifts

## Phase 2: 2016-18 Transition/Implementation

- ✓ WDE Science Consultant maintain membership & participate in relevant national organizations (e.g., SCASS, CSSS)
- ✓ Develop Communication Plan
- ✓ Present new information at statewide events (e.g., WCDA, SBE, Legislative Meetings, SIC, IF Summit, STAR)
- ✓ Provide resources for 2016 WY Science CPS
- ✓ Develop and provide PD around 2016 WY Science CPS
- ✓ Provide trainings and communication around Science state assessment (PAWS)

## Phase 3: 2018-19 2<sup>nd</sup> Yr. Implementation

- ✓ WDE Science Consultant maintain membership & participate in relevant national organizations (e.g., SCASS, CSSS)
- ✓ Maintain communication
- ✓ Present new information at statewide events (e.g., WCDA, SBE, Legislative Meetings, SIC, IF Summit, STAR)
- ✓ Continue to provide resources on WDE website
- ✓ Develop and provide PD, including cross disciplinary literacy
- ✓ Provide trainings and communication around Science state assessment
- ✓ Collect feedback from districts on implementation
- ✓ Provide resources and PD opportunities on Edmodo

## Phase 4: 2019-20 Full Implementation

- ✓ WDE Science Consultant maintain membership & participate in relevant national organizations (e.g., SCASS, CSSS)
- ✓ Maintain communication regarding implementation of 2016 WY Science CPS
- ✓ Present new information at statewide events (e.g., WCDA, SBE, Legislative Meetings, SIC, IF Summit, STAR)
- ✓ Continue to provide resources on WDE website
- ✓ Develop and provide PD, including cross disciplinary literacy
- ✓ Collect feedback from districts on Implementation Needs Survey
- ✓ Provide resources and PD opportunities on Edmodo

State Support – WDE

# Implementation Plan – 2016 Wyoming Science Content and Performance Standards

## Phase 1: 2015-16 Awareness / Planning

## Phase 2: 2016-18 Transition/Implementation

## Phase 3: 2018-19 2<sup>nd</sup> Yr. Implementation

## Phase 4: 2019-20 Full Implementation

### Recommended District Support

- ✓ Review proposed draft standards and give feedback on District Transition Needs Survey
- ✓ Consider possible impact of 2016 WY Science CPS on curriculum, district assessments, and instruction
- ✓ Review District Assessment System (DAS) Guidebook

- ✓ Develop Transition Plan to 2016 WY Science CPS
- ✓ Develop understanding of Learning Progressions of 2016 WY Science CPS
- ✓ Review alignment of curricular resources
- ✓ Review and align district curriculum, instruction, district assessments, and district PD

- ✓ Develop and implement PD aligned to 2016 WY Science CPS
- ✓ Maintain and develop further resources, including resources on the WDE website
- ✓ Identify and select aligned instructional practices
- ✓ Develop and update district assessments
- ✓ Parent night to show new methods and reasoning
- ✓ Provide feedback to WDE on 2016 WY Science CPS

- ✓ Evaluate implementation of 2016 WY Science CPS
- ✓ Review curriculum, district assessments, and instructional practices
- ✓ Review assessment data from classroom, district, benchmark, and summative assessments
- ✓ Parent night to show new materials/ texts
- ✓ Provide feedback to WDE on 2016 WY Science CPS

### State Assessment & Accountability

- ✓ No change to State Test
- ✓ ACT
- ✓ Accountability measures per WAEA

- ✓ Field test items on 2016 WY Science CPS
- ✓ ACT
- ✓ Accountability measures per WAEA

- ✓ Operational items and additional field test items on 2016 WY Science CPS
- ✓ ACT
- ✓ Accountability measures per WAEA

- ✓ Fully operational on 2016 WY Science CPS
- ✓ ACT
- ✓ Accountability measures per WAEA

# Communication Plan – 2016 Wyoming Science Content and Performance Standards

## Phase 1: 2015 – 17 Awareness / Planning

### Communicate the Following through Various Modes of Communication:

- ✓ Gather contact information of interested people to serve on committee:
  - K-12
  - Administrators
  - Higher Ed.
  - Community
  - Parents
  - Business Members
  - Students
- ✓ Information about standards revision process and invite public
- ✓ Survey requesting public feedback on current standards & possible revisions desired
- ✓ Survey results to SBE
- ✓ Resources on the WDE website

## Phase 2: 2017 – 18 Transition

### Communicate the Following through Various Modes of Communication:

- ✓ Proposed standards on website
- ✓ Survey requesting feedback on proposed standards
- ✓ Survey results to SBE
- ✓ Informational booth at conferences in WY
  - To educate districts on structure and layout of proposed standards
  - To gather feedback
- ✓ Crosswalk showing shifts, changes, and additions to standards
- ✓ Updated Implementation & PD Plans (as needed)
- ✓ PD opportunities and resources

## Phase 3: 2018– 20 Implementation

### Communicate the Following through Various Modes of Communication:

- ✓ New standards & resources on WDE website
- ✓ Survey requesting feedback on implementation of new standards
- ✓ Parent communication brochure for district use
- ✓ Updated Implementation & PD Plans (as needed)
- ✓ PD opportunities and resources

State Support – WDE

### MODES of COMMUNICATION

- ✓ WDE Website
- ✓ Supt.'s Memo
- ✓ Press Release
- ✓ Brochures / FAQs
- ✓ Social Media
  - Twitter
  - FB
  - Edmodo
- ✓ KWDE Radio Spot
- ✓ Google Hangout
- ✓ WEN
- ✓ WebEx
- ✓ Public Forum

# Professional Development Plan – 2016 Wyoming Science Content and Performance Standards

State Support – WDE

## Phase 1: 2016 – 17 Awareness / Planning

- ✓ Introduction of 2016 WY Science CPS on WDE website
- ✓ Survey districts on PD needs & develop PD Plan
- ✓ Update and maintain PD Calendar on WDE website
- ✓ Educate on the structure & layout of 2016 WY Science CPS
- ✓ Communicate largest instructional shifts
- ✓ Host an informational booth at conferences in WY
- ✓ Add resources to WDE website
- ✓ Present Standards Timeline & Processes at statewide events (e.g., WCDA, SBE, Legislative Meetings, SIC, IF Summit, STAR)
- ✓ Communicate with UW and CC's regarding standards implementation for pre-service teachers

## Phase 2: 2017 – 18 Transition

- ✓ Monitor district needs and collect feedback on implementation of 2016 WY Science CPS
- ✓ Respond to individual district needs and/or requests for PD
- ✓ Update and maintain PD Calendar
- ✓ PD for administrators to understand instructional shifts
- ✓ Address and unpack largest instructional shifts
- ✓ Develop & facilitate PD opportunities, including cross disciplinary literacy
- ✓ Update and maintain resources on WDE website
- ✓ Update & present new information at statewide events (e.g., WCDA, SBE, Legislative Meetings, SIC, IF Summit, STAR)
- ✓ Provide resources and PD opportunities on Edmodo

## Phase 3: 2018– 20 Implementation

- ✓ Monitor district needs and collect feedback on implementation of 2016 WY Science CPS
- ✓ Respond to individual district needs and/or requests for PD
- ✓ Update and maintain PD Calendar
- ✓ Prepare & present best practices PD around implementing 2016 WY Science CPS
- ✓ Develop & facilitate PD opportunities, including cross disciplinary literacy
- ✓ Update and maintain resources on WDE website
- ✓ Update & present new information at statewide events (e.g., WCDA, SBE, Legislative Meetings, SIC, IF Summit, STAR)
- ✓ Provide resources and PD opportunities on Edmodo

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>Kindergarten</b> Proposed standards are broken out for grades K-5.		<b>Kindergarten</b> Grade band of current standards is K-4.
K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.	2- Similar but with slightly different outcomes	SC4.1.3. Students show connections between living things, their basic needs, and the environments.
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>Kindergarten</b>		<b>Kindergarten</b>
K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	2 –The proposed standard requires investigation	SC4.1.10. Students demonstrate that pushing and pulling can change the position and motion of objects.
K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	2 –Proposed standard requires design and analyzing	SC4.2.1. Students research answers to science questions and present findings through appropriate means. SC4.1.10. Students demonstrate that pushing and pulling can change the position and motion of objects.
K-PS3-1. Make observations to determine the effect of sunlight on Earth’s surface.	1 –The proposed standard specifically deals with sunlight	SC4.1.5. Students describe observable objects in the sky and their patterns of movement.
K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	1-The proposed standard has greater specificity	SC4.2.1. Students research answers to science questions and present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>Kindergarten</b> Proposed standards are broken out for grades K-5.		<b>Kindergarten</b> Grade band of current standards is K-4.
K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.		3-Similar in intent and purpose
K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	2-Proposed standard requires argument from evidence	SC4.2.1. Students research answers to science questions and present findings through appropriate means.
K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	1-Proposed standard requires model development	SC4.1.6. Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	2-Proposed standard requires evaluation not just description	SC4.1.6. Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
K-ESS3-3. Communicate solutions that will manage the impact of humans on the land, water, air, and/or other living things in the local environment.	1-Proposed standard requires human impact	SC4.2.1. Students research answers to science questions and present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Grade K-2</b>		<b>Grade K-2</b>
Proposed standards are broken out for grades K-5.		Grade band of current standards is K-4.
K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	3-Proposed standard requires development of a new product but standards are similar in intent	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.
K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	0- New benchmark	SC4.2.1. Students research answers to science questions and present findings through appropriate means.
K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	1-Proposed standards requires analysis and comparison	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>Grade 1</b>		<b>Grade 1</b>
Proposed standards are broken out for grades K-5.		Grade band of current standards is K-4.
1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	1-Proposed standard requires design and problem solving	SC4.1.1. Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors.
1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	1-Proposed standard requires evaluation to evaluate patterns	SC4.1. Students sequence life cycles of living things, and recognize that plants and animals resemble their parents.
1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	2-Proposed standard requires evidence	SC4.1.2.: Students sequence life cycles of living things, and recognize that plants and animals resemble their parents.
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>Grade 1</b>		<b>Grade 1</b>
1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.		1-Proposed standard requires evidence for support
1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.	1-Proposed standard requires evidence for support	SC4.1.9.: Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.
1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.	1-Proposed standard requires specificity regarding a beam of light	SC4.1.9. Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.
1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.	1-Proposed standard requires evidence for support	SC4.2.3 Students identify and use appropriate scientific equipment .

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>Grade 1</b> Proposed standards are broken out for grades K-5.		<b>Grade 1</b> Grade band of current standards is K-4.
1-ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted.		3-Standards are essentially the same
1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year.	1-Proposed standard requires observations specific to daylight	SC4.1.5. Students describe observable objects in the sky and their patterns of movement.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Grade K-2</b> Proposed standards are broken out for grades K-5.		<b>Grade K-2</b> Grade band of current standards is K-4.
K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	3-Proposed standard requires development of a new product but standards are similar in intent	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.
K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	0- New benchmark	No current applicable standard
K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	1-Proposed standards requires analysis and comparison	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>		<b>Life Science</b>
<b>Grade 2</b> Proposed standards are broken out for grades K-5.	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Grade 2</b> Grade band of current standards is K-4.
2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.	1-Proposed standard requires specific outcomes for plants	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.
2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	0- New benchmark	No current applicable standard
2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.	2- Proposed standards require comparisons	SC4.1.1. Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>Grade 2</b> Proposed standards are broken out for grades K-5.		<b>Grade 2</b> Grade band of current standards is K-4.
2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.		3- Standards are essentially the same
2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	1-Proposed standard requires evidence and greater specificity	SC4.2.1. Students research answers to science questions and present findings through appropriate means.
2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	1-Proposed standard requires evidence and greater specificity	SC4.2.1. Students research answers to science questions and present findings through appropriate means
2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	2-Proposed standard requires argument from evidence	SC4.1.8. Students demonstrate that the processes of heating and cooling can change matter from one state to another.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>Grade 2</b> Proposed standards are broken out for grades K-5.		<b>Grade 2</b> Grade band of current standards is K-4.
2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	3- very close when utilizing two standards	SC4.1.6. Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather. SC4.2.1. Students research answers to science questions and present findings through appropriate means.
2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	2-Proposed standard requires multiple solutions	SC4.1.6. Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area.	1-Proposed standard requires evidence and greater specificity	SC4.1.1 Students investigate water, air, rocks, and soils to compare basic properties of earth materials.
2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid, liquid or gas.	1-Proposed standard requires evidence and greater specificity	SC4.1.1 Students investigate water, air, rocks, and soils to compare basic properties of earth materials.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Grade K-2</b> Proposed standards are broken out for grades K-5.		<b>Grade K-2</b> Grade band of current standards is K-4.
K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	3-Proposed standard requires development of a new product but standards are similar in intent	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.
K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	0- New benchmark	No current applicable standard
K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	1-Proposed standards requires analysis and comparison	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>Grade 3</b> Proposed standards are broken out for grades K-5.		<b>Grade 3</b> Grade band of current standards is K-4.
3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	2-Proposed standard requires model development of models	SC4.1.2. Students sequence life cycles of living things, and recognize that plants and animals resemble their parents.
3-LS2-1. Construct an argument that some animals form groups that help members survive.	1-Proposed standard requires argument from evidence	SC4.1.3. Students show connections between living things, their basic needs, and the environments
3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.	1-Proposed standard requires analysis and interpretation	SC4.1.2. Students sequence life cycles of living things, and recognize that plants and animals resemble their parents.
3-LS3-2. Use evidence to support the explanation that observable traits can be influenced by the environment.	2-The proposed standard requires evidence	SC4.1.3. Students show connections between living things, their basic needs, and the environments.
3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	0- New benchmark	No current applicable standard
3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	2- The proposed standard requires evidence and explanation	SC4.1.1. Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors.
3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	0- New benchmark	No current applicable standard
3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	1-Proposed standard requires claims and solutions	SC4.1. Students show connections between living things, their basic needs, and the environments.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>Grade 3</b> Proposed standards are broken out for grades K-5.		<b>Grade 3</b> Grade band of current standards is K-4.
3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.		1-Proposed standard requires investigation and evidence
3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	1-Proposed standard requires evidence for prediction	SC4.1.10. Students demonstrate that pushing and pulling can change the position and motion of objects.
3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.	1-Proposed standard requires cause and effect relationships	SC4.1.9. Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.
3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets.	1-Proposed standard requires design and application	SC4.1.9. Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>Grade 3</b>		<b>Grade 3</b>
3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.		2-Proposed standard requires greater specificity regarding weather
3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.	3-Very similar in intent	SC4.1.6. Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	2-Proposed standard requires making claims	SC4.1.6. Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Grade 3-5</b>		<b>Grade 3-5</b>
3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	1-Proposed standard requires design and analysis	SC4.2.1. Students research answers to science questions and present findings through appropriate means.
3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	0-New benchmark	No applicable current standard
3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	2-Proposed standard requires model analysis	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	<b>0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment</b>	<b>Life Science</b>
<b>Grade 4</b> Proposed standards are broken out for grades K-5.		<b>Grade 4</b> Grade band of current standards is K-4.
4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	2–The proposed standard requires explanation and argumentation from evidence not simple description	4.1.1. Characteristics of Organisms: Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors.
4-LS1-2. Use a model to describe that animals’ receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	2–The proposed standard requires explanation and argumentation from evidence not simple description	4.1.1. Characteristics of Organisms: Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>Grade 4</b>		<b>Grade 4</b>
Proposed standards are broken out for grades K-5.		Grade band of current standards is K-4.
4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object.	0–New benchmark	No current applicable standard
4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	3-Very similar with the new standard giving specifics about observations and evidence	4.1.9. Physical Phenomena: Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.
4-PS3-3. Ask questions and predict outcomes about the changes in energy that occur when objects collide.	3-Similar with the proposed standard requiring questioning and prediction	4.1.9. Physical Phenomena: Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.
4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	2-The proposed standard requires utilizing engineering design (investigation) to scientific ideas, not just investigation	4.1.9. Physical Phenomena: Students investigate physical phenomena commonly encountered in daily life, including light, heat, electricity, sound, and magnetism.
4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	2-The proposed standard requires model development not just demonstration	4.1.10. Position and Motion of Objects: Students demonstrate that pushing and pulling can change the position and motion of objects.
4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	0-New benchmark	No current applicable standard
4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.	0-New benchmark	No current applicable standard

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>Grade 4</b>		<b>Grade 4</b>
Proposed standards are broken out for grades K-5.		Grade band of current standards is K-4.
4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	2-The proposed standard requires evidence to support positions not simply observations	4.1.6. Changes in Earth and Sky: Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	3-The proposed standard requires using data & observation to provide evidence going beyond connections	4.1.3. Organisms and Their Environments: Students show connections between living things, their basic needs, and the environments.
4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.	2-The proposed standard requires analysis and interpretation not only observation	4.1.6. Changes in Earth and Sky: Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from renewable and non-renewable resources and how their uses affect the environment.	0-New benchmark	No current applicable standard
4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	0-New benchmark	No current applicable standard

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Grade 3-5</b>		<b>Grade 3-5</b>
3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	1-Proposed standard requires design and analysis	SC4.2.1. Students research answers to science questions and present findings through appropriate means.
3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	0-New benchmark	No applicable current standard
3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	2-Proposed standard requires model analysis	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>Grade 5</b>		<b>Grade 5</b>
Proposed standards are broken out for grades K-5.		Grade band of current standards is K-4.
5-LS1-1. Support an argument that plants get the materials they need for growth primarily from air and water.	1- Proposed standard requires specific argumentation from evidence	SC4.1.3. Students show connections between living things, their basic needs, and the environments.
5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	1-Proposed standard requires model development and greater specificity	SC4.1.1. Students describe observable characteristics of living things, including structures that serve specific functions and everyday behaviors.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>Grade 5</b>		<b>Grade 5</b>
Proposed standards are broken out for grades K-5.		Grade band of current standards is K-4.
5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.	0-New benchmark	No applicable current standard
5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	1-Proposed standard requires evidence and greater specificity	SC4.1.8. Students demonstrate that the processes of heating and cooling can change matter from one state to another.
5-PS1-3. Make observations and measurements to identify materials based on their properties.	3-Very similar in intent	SC4.1.7. Students classify objects by properties that can be observed, measured, and recorded, including color, shape, size, weight, volume, texture, and temperature.
5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	2-Proposed standard requires greater specificity	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.
5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.	0-New benchmark	No applicable current standard
5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	0-New benchmark	No applicable current standard

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science		Earth & Space Science
Grade 5		Grade 5
Proposed standards are broken out for grades K-5.		Grade band of current standards is K-4.
5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.	0- New benchmark	No applicable current standard
5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	2-Proposed standard has great specificity	SC4.1.5.: Students describe observable objects in the sky and their patterns of movement.
5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	1-Proposed standard requires model development and greater specificity	SC4.1.6. Students describe observable changes in earth and sky, including rapid and gradual changes to the earth's surface, and daily and seasonal changes in the weather.
5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	0- New benchmark	No applicable current standard
5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to conserve the Earth's resources and environment.	1-Proposed standard requires great specificity and greater synthesis	SC4.2.1. Students research answers to science questions and present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Grade 3-5</b>		<b>Grade 3-5</b>
3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	1-Proposed standard requires design and analysis	SC4.2.1. Students research answers to science questions and present findings through appropriate means.
3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	0-New benchmark	No applicable current standard
3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	2-Proposed standard requires model analysis	SC4.2.2. Students use the inquiry process to conduct simple scientific investigations. <ul style="list-style-type: none"> <li>• Collect and organize data.</li> <li>• Use data to construct simple graphs, charts, diagrams, and/or models.</li> <li>• Draw conclusions and accurately communicate results, making connections to daily life.</li> <li>• Pose or identify questions and make predictions.</li> </ul> Conduct investigations to answer questions and check predictions.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Life Science	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Life Science
Middle School		Middle School
MS-LS1-1. Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.	2-The proposed standard requires investigational design/evidence not just understanding	8.1.1. Students model the cell as the basic unit of a living system. They realize that all functions that sustain life act within a single cell and cells differentiate into specialized cells, tissues, organs, and organ systems.
MS-LS1-2. Develop and use models to describe the parts, functions, and basic processes of cells.	3-Identical in Intent	8.1.1. Students model the cell as the basic unit of a living system. They realize that all functions that sustain life act within a single cell and cells differentiate into specialized cells, tissues, organs, and organ systems.
MS-LS1-3. Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.	2-The proposed standard requires argument from evidence to model the cell	8.1.1. Students model the cell as the basic unit of a living system. They realize that all functions that sustain life act within a single cell and cells differentiate into specialized cells, tissues, organs, and organ systems.
MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.	2-The proposed standard requires argument from evidence with scientific reasoning rather than description	8.1.2. Students describe reproduction as a characteristic of all living systems, which is essential to the continuation of species, and identify and interpret traits, patterns of inheritance, and the interaction between genetics and environment.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Life Science	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Life Science
Middle School cont.		Middle School cont.
MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.	2-The proposed standard requires explanation from evidence while the current standard requires description, identification and interpretation	8.1.2. Students describe reproduction as a characteristic of all living systems, which is essential to the continuation of species, and identify and interpret traits, patterns of inheritance, and the interaction between genetics and environment.
MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	0-New Benchmark	No current applicable standard
MS-LS1-7. Develop a model to describe how food molecules (sugar) are rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.	0-New Benchmark	No current applicable standard
MS-LS1-8. Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.	0-New Benchmark	No current applicable standard
MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	0-New Benchmark	No current applicable standard
MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	0-New Benchmark	No current applicable standard
MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	0-New Benchmark	No current applicable standard

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Life Science		Life Science
Middle School cont.		Middle School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	0-New Benchmark	No current applicable standard
MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	0-New Benchmark	No current applicable standard
MS-LS3-1. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.	2-The proposed standard requires explanation from evidence while the current standard requires description, identification and interpretation	8.1.2. Students describe reproduction as a characteristic of all living systems, which is essential to the continuation of species, and identify and interpret traits, patterns of inheritance, and the interaction between genetics and environment.
MS-LS3-2. Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.	2-The proposed standard requires development and explanation with a model while the current standard requires description, identification and interpretation	8.1.2. Students describe reproduction as a characteristic of all living systems, which is essential to the continuation of species, and identify and interpret traits, patterns of inheritance, and the interaction between genetics and environment.
MS-LS4-1. Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.	2-The proposed standard requires analysis and interpretation and the current standard utilized explanation and application	SC8.1.3. Students explain evolution as a theory and apply the theory to the diversity of species, which results from natural selection and the acquisition of unique characteristics through biological adaptation. SC8.1.9. Students systematize the Earth's history in terms of geologic evidence, comparing past and present Earth processes and identifying catastrophic events and fossil evidence.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Life Science		Life Science
Middle School cont.		Middle School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.	3-Identical in intent	SC8.1.3. Students explain evolution as a theory and apply the theory to the diversity of species, which results from natural selection and the acquisition of unique characteristics through biological adaptation. SC8.2.1 Students research scientific information and present findings through appropriate means.
<p><b>Rationale for removal of MS-LS4-3:</b> The Recapitulation Theory (Biogenetic Principle) is no longer scientifically valid.  <a href="http://evolution.berkeley.edu/evolibrary/article/history_15">http://evolution.berkeley.edu/evolibrary/article/history_15</a>).</p> <ul style="list-style-type: none"> <li>The standard was written in a way that overlapped with curricular decisions.</li> <li>Developmental appropriateness for younger middle-school students is questionable.</li> <li>Removal does not affect the learning progressions.</li> </ul>		SC8.1.2. Students describe reproduction as a characteristic of all living systems, which is essential to the continuation of species, and identify and interpret traits, patterns of inheritance, and the interaction between genetics and environment.
MS-LS4-4. Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.	2-The proposed standard requires explanation based on evidence	SC8.1.6. Students illustrate populations of organisms and their interconnection within an ecosystem, identifying relationships among producers, consumers, and decomposers.
MS-LS4-5. Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.	3-Identical in intent	SC8.2.4. Students recognize the relationship between science and technology in meeting human needs. 8.3.1
MS-LS4-6. Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.	3-Identical in intent	SC8.2.4. Students recognize the relationship between science and technology in meeting human needs

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>Middle School</b>		<b>Middle School</b>
MS-PS1-1. Develop models to describe the atomic composition of simple molecules and extended structures.	0-New Benchmark	No current applicable standard
MS-PS1-2. Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	2-The proposed standard requires analysis and interpretation not just identification and understanding	SC8.1.11. Students evaluate chemical and physical changes, recognizing that chemical change forms compounds with different properties and that physical change alters the appearance but not the composition of a substance.
MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.	1-The proposed standard requires concluding from evidence and societal impact	SC8.1.11. Students evaluate chemical and physical changes, recognizing that chemical change forms compounds with different properties and that physical change alters the appearance but not the composition of a substance.
MS-PS1-4. Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.	1-The proposed standard requires model development, description and analysis not just identification and understanding	SC8.1.11. Students evaluate chemical and physical changes, recognizing that chemical change forms compounds with different properties and that physical change alters the appearance but not the composition of a substance.
MS-PS1-5. Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.	1-The proposed standard requires model development, description and analysis not just identification and understanding	SC8.1.13. Students identify supporting evidence to explain conservation of matter and energy, indicating that matter or energy cannot be created or destroyed but is transferred from one object to another.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science		Physical Science
Middle School cont.		Middle School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
MS-PS1-6. Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.	1-The proposed standard requires design development, testing, and modification not just identification and understanding	SC8.1.11. Students evaluate chemical and physical changes, recognizing that chemical change forms compounds with different properties and that physical change alters the appearance but not the composition of a substance.
MS-PS2-1. Apply Newton’s Third Law to design a solution to a problem involving the motion of two colliding objects.	1-The proposed standard requires greater specificity (Newton’s 3 <sup>rd</sup> Law)	SC8.1.14. Students describe motion of an object by position, direction, and speed, and identify the effects of force and inertia on an object.
MS-PS2-2. Plan an investigation to provide evidence that the change in an object’s motion depends on the sum of the forces on the object and the mass of the object.	1-The proposed standard requires investigating with evidence	SC8.1.14. Students describe motion of an object by position, direction, and speed, and identify the effects of force and inertia on an object.
MS-PS2-3. Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	1-The proposed standard has greater specificity	SC8.1.12. Students investigate energy as a property of substances in a variety of forms with a range of uses.
MS-PS2-4. Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.	1-The proposed standard requires argumentation and evidence	SC8.1.7. Students describe Earth as the third planet in the Solar System and understand the effects of the sun as a major source of energy, gravitational forces, and motions of objects in the Solar System.
MS-PS2-5. Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.	1-The proposed standard requires investigating with evidence	SC8.1.14. Students describe motion of an object by position, direction, and speed, and identify the effects of force and inertia on an object.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science		Physical Science
Middle School cont.	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Middle School cont.
MS-PS3-1. Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.	2-The proposed standards requires construction and interpretation	SC8.1.14. Students describe motion of an object by position, direction, and speed, and identify the effects of force and inertia on an object.
MS-PS3-2. Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	1-The proposed standard requires model development, description and analysis not just identification and understanding	SC8.1.14. Students describe motion of an object by position, direction, and speed, and identify the effects of force and inertia on an object.
MS-PS3-3. Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	0-New Benchmark	No current applicable standard
MS-PS3-4. Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.	1-The proposed standard requires greater specificity regarding relationships and energy	SC8.1.13. Students identify supporting evidence to explain conservation of matter and energy, indicating that matter or energy cannot be created or destroyed but is transferred from one object to another.
MS-PS3-5. Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	1-The proposed standard requires argumentation and evidence	SC8.1.13. Students identify supporting evidence to explain conservation of matter and energy, indicating that matter or energy cannot be created or destroyed but is transferred from one object to another.
MS-PS4-1. Use mathematical representations to describe a simple model for waves, which includes how the amplitude of a wave is related to the energy in a wave.	0-New Benchmark	No current applicable standard

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science		Physical Science
Middle School cont.		Middle School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
MS-PS4-2. Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.	0-New Benchmark	No current applicable standard
MS-PS4-3. Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.	0-New Benchmark	No current applicable standard

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science		Earth & Space Science
Middle School	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Middle School
MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.	3–Similar in intent but the proposed standard utilizes a model to describe and understand	SC8.1.7. Students describe Earth as the third planet in the Solar System and understand the effects of the sun as a major source of energy, gravitational forces, and motions of objects in the Solar System.
MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.	3–Similar in intent but the proposed standard utilizes a model to describe and understand	SC8.1.7. Students describe Earth as the third planet in the Solar System and understand the effects of the sun as a major source of energy, gravitational forces, and motions of objects in the Solar System.
MS-ESS1-3. Analyze and interpret data to determine scale properties of objects in the solar system.	2–The proposed standard requires analysis and interpretation not just description	SC8.1.7. Students describe Earth as the third planet in the Solar System and understand the effects of the sun as a major source of energy, gravitational forces, and motions of objects in the Solar System.
MS-ESS1-4. Construct a scientific explanation based on evidence from rocks and rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.	1-The proposed standard requires a scientific explanation	SC8.1.9. Students systematize the Earth's history in terms of geologic evidence, comparing past and present Earth processes and identifying catastrophic events and fossil evidence.
MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.	2–The proposed standard requires the development of a model to describe not just identification and recognition	SC8.1.8. Students examine the structure of the Earth, identifying layers of the Earth, considering plate movement and its effect, and recognizing landforms resulting from constructive and destructive forces.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Earth & Space Science
Middle School cont.		Middle School cont.
MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth’s surface at varying time and spatial scales.	2–The proposed standard requires the development of a model to describe not just identification and recognition	SC8.1.8. Students examine the structure of the Earth, identifying layers of the Earth, considering plate movement and its effect, and recognizing landforms resulting from constructive and destructive forces.
MS-ESS2-3. Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.	2–The proposed standard requires the development of a model to describe not just identification and recognition	SC8.1.8. Students examine the structure of the Earth, identifying layers of the Earth, considering plate movement and its effect, and recognizing landforms resulting from constructive and destructive forces.
MS-ESS2-4. Develop a model to describe the cycling of water through Earth’s systems driven by energy from the sun and the force of gravity.	1-The proposed standard requires model development and the water cycle	SC8.1.7. Students describe Earth as the third planet in the Solar System and understand the effects of the sun as a major source of energy, gravitational forces, and motions of objects in the Solar System.
MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.	0-New Benchmark	No current applicable standard
MS-ESS2-6. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.	0-New Benchmark	No current applicable standard
MS-ESS3-1. Construct a scientific explanation based on evidence for how the uneven distributions of Earth’s mineral, energy, and groundwater resources are the result of past and current geoscience processes.	1-The proposed standards requires a scientific explanation based on evidence	SC8.1.8. Students examine the structure of the Earth, identifying layers of the Earth, considering plate movement and its effect, and recognizing landforms resulting from constructive and destructive forces.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science		Earth & Space Science
Middle School cont.		Middle School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
MS-ESS3-2. Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.	0-New Benchmark	No current applicable standard
MS-ESS3-3. Apply scientific principles to design a method for monitoring, evaluating, and managing a human impact on the environment.	1-The proposed standard requires dealing specifically with human impact	SC8.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>Ask questions that lead to conducting an investigation.</li> <li>Collect, organize, and analyze and appropriately represent data.</li> <li>Draw conclusions based on evidence and make connections to applied scientific concepts.</li> </ul> Clearly and accurately communicate the result of the investigations.
MS-ESS3-4. Construct an argument supported by evidence for how changes in human population and per-capita consumption of natural resources impact Earth's systems.	0-New Benchmark	No current applicable standard
MS-ESS3-5. Ask questions to clarify evidence of the factors that have caused changes in global temperatures over time.	0-New Benchmark	No current applicable standard

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Middle School</b>		<b>Middle School</b>
MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	1-The proposed standard requires successful design of a problem	SC8.2.4. Students recognize the relationship between science and technology in meeting human needs. SC8.3.2 Students explore how scientific information is used to make decisions.
MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	1-The proposed standard requires successful design of a problem	SC8.3.2 Students explore how scientific information is used to make decisions.
MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	1-The proposed standard requires successful design of a problem	SC8.2.3 Students clearly and accurately communicate the result of their own work, as well as information obtained from other sources. SC8.2.4 Students recognize the relationship between science and technology in meeting human needs.
MS-ETS1-4. Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	1-The proposed standard requires successful design of a problem	SC8.2.5 Students properly use appropriate scientific and safety equipment, recognize hazards and safety symbols, and observe standard safety procedure.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>Middle School</b>		<b>Middle School</b>
MS-ETS2-1. Ask questions about a common household appliance, collect data to reverse-engineer the appliance and learn how it's design has evolved, describe how scientific discoveries, technological advances, and engineering design played significant roles in its development, and explore how science, engineering and technology might be used together or individually in producing improved versions of the appliance.		1-The proposed standard requires successful design of a problem
MS-ETS2-2. Develop a model defining and prioritizing the impacts of human activity on a particular aspect of the environment, identifying positive and negative consequences of the activity, both short and long-term, and investigate and explain how the ethics and integrity of scientists and engineers and respect for individual property rights might constrain future development.	1-The proposed standard requires successful design of a problem	SC8.2.4. Students recognize the relationship between science and technology in meeting human needs. SC8.3.2 Students explore how scientific information is used to make decisions

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School</b>		<b>High School</b>
HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	2-Proposed standard requires an explanation based on evidence	SC11.1.2. Demonstrate an understanding that organisms ensure species continuity by passing genetic information from parent to offspring. Utilize genetic information to make predictions about possible offspring. Apply concepts of molecular biology (DNA and genes) to recent discoveries. SC11.2.1 Students use research and scientific information to present findings through appropriate means.
HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.	2-Proposed standard requires development of a model	SC11.1.5. Describe the need of living systems for a continuous input of energy to maintain chemical and physical stability. Explain the unidirectional flow of energy and organic matter through a series of trophic levels in living systems. Investigate the distribution and abundance of organisms in ecosystems, which are limited by the availability of matter and energy and the ability of the living system to recycle materials.
HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	3-Essentially the same	SC11.1.5. Describe the need of living systems for a continuous input of energy to maintain chemical and physical stability. Explain the unidirectional flow of energy and organic matter through a series of trophic levels in living systems. Investigate the distribution and abundance of organisms in ecosystems, which are limited by the availability of matter and energy and the ability of the living system to recycle materials.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Life Science	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Life Science
High School cont.		High School cont.
HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	2-Proposed standard requires development of a model	SC11.1.1. Explain the processes of life, which necessitates an understanding of relationships between structure and function of the cell and cellular differentiation. Identify activities taking place in an organism related to metabolic activities in cells, including growth, regulation, transport, and homeostasis. Differentiate between asexual and sexual reproduction.
HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	0-New Benchmark	No current applicable standard
HS-LS1-6. Construct explanations and revise, as needed, based on evidence for 1) how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules, and 2) how other hydrocarbons may also combine to form large carbon-based molecules.	1-Proposed standard requires analysis and revision for a specific process	SC11.2.1. Students use research and scientific information to present findings through appropriate means.
HS-LS1-7. Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of sugar molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.	1-Proposed standard requires use of a model of a specific process	SC11.1.1. Explain the processes of life, which necessitates an understanding of relationships between structure and function of the cell and cellular differentiation. Identify activities taking place in an organism related to metabolic activities in cells, including growth, regulation, transport, and homeostasis. Differentiate between asexual and sexual reproduction.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	1-Proposed standard requires computational support for an explanation	SC11.1.5. Describe the need of living systems for a continuous input of energy to maintain chemical and physical stability. Explain the unidirectional flow of energy and organic matter through a series of trophic levels in living systems. Investigate the distribution and abundance of organisms in ecosystems, which are limited by the availability of matter and energy and the ability of the living system to recycle materials.
HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	1-Proposed standard requires computational support for an explanation	SC11.1.5. Describe the need of living systems for a continuous input of energy to maintain chemical and physical stability. Explain the unidirectional flow of energy and organic matter through a series of trophic levels in living systems. Investigate the distribution and abundance of organisms in ecosystems, which are limited by the availability of matter and energy and the ability of the living system to recycle materials.
HS-LS2-3. Construct an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions and revise, as needed.	2-Proposed standard requires an explanation based on evidence	SC11.1.4. Investigate the interrelationships and interdependence of organisms, including the ecosystem concept, energy flow, competition for resources, and human effects on the environment. SC11.2.1. Students use research and scientific information to present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Life Science		Life Science
High School cont.		High School cont.
HS-LS2-4. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.	2 Proposed standard requires computational support for an explanation	SC11.1.4. Investigate the interrelationships and interdependence of organisms, including the ecosystem concept, energy flow, competition for resources, and human effects on the environment.
HS-LS2-5. Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	1-Proposed standard requires use of a model of a specific process	SC11.1.5. Describe the need of living systems for a continuous input of energy to maintain chemical and physical stability. Explain the unidirectional flow of energy and organic matter through a series of trophic levels in living systems. Investigate the distribution and abundance of organisms in ecosystems, which are limited by the availability of matter and energy and the ability of the living system to recycle materials.
HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex biotic and abiotic interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a modified ecosystem.	2-Proposed standard requires evaluation and explanation	SC11.1.4. Investigate the interrelationships and interdependence of organisms, including the ecosystem concept, energy flow, competition for resources, and human effects on the environment. SC11.2.1. Students use research and scientific information to present findings through appropriate means.
HS-LS2-7. Evaluate and assess impacts on the environment and biodiversity in order to refine or design a solution for detrimental impacts or enhancement for positive impacts.	2-Proposed standard requires design and synthesis for a specific situation	SC11.1.4. Investigate the interrelationships and interdependence of organisms, including the ecosystem concept, energy flow, competition for resources, and human effects on the environment.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	2-Proposed standard requires evaluation and explanation	SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	3-The proposed standard is essentially embedded in the two current standards	SC11.1.2. Demonstrate an understanding that organisms ensure species continuity by passing genetic information from parent to offspring. Utilize genetic information to make predictions about possible offspring. Apply concepts of molecular biology (DNA and genes) to recent discoveries. SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS3-2. Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	2-The proposed standard requires defense of a claim based on evidence	SC11.1.2. Demonstrate an understanding that organisms ensure species continuity by passing genetic information from parent to offspring. Utilize genetic information to make predictions about possible offspring. Apply concepts of molecular biology (DNA and genes) to recent discoveries. SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification. SC11.2.1. Students use research and scientific information to present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.	1-Proposed standard requires computational support for an explanation	SC11.1.2. Demonstrate an understanding that organisms ensure species continuity by passing genetic information from parent to offspring. Utilize genetic information to make predictions about possible offspring. Apply concepts of molecular biology (DNA and genes) to recent discoveries. SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	3-The proposed standard is embedded in the current standards	SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification. SC11.2.1. Students use research and scientific information to present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	2-Proposed standard requires an explanation based on evidence	SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification.  SC11.1.6. Examine behavior as the sum of responses of an organism to stimuli in its environment, which evolves through adaptation, increasing the potential for species survival. Identify adaptations as characteristics and behaviors of an organism that enhance the chance for survival and reproductive success in a particular environment.  SC11.2.1. Students use research and scientific information to present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS4-3. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	1-Proposed standard requires computational support for an explanation	SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	2-Proposed standard requires an explanation based on evidence	SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification. SC11.1.6. Examine behavior as the sum of responses of an organism to stimuli in its environment, which evolves through adaptation, increasing the potential for species survival. Identify adaptations as characteristics and behaviors of an organism that enhance the chance for survival and reproductive success in a particular environment. SC11.2.1. Students use research and scientific information to present findings through appropriate means.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	2-Proposed standard requires an explanation based on evidence	SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification. SC11.1.6. Examine behavior as the sum of responses of an organism to stimuli in its environment, which evolves through adaptation, increasing the potential for species survival. Identify adaptations as characteristics and behaviors of an organism that enhance the chance for survival and reproductive success in a particular environment. SC11.2.1. Students use research and scientific information to present findings through appropriate means.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Life Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Life Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-LS4-6. Create and/or use a simulation to evaluate the impacts of human activity on biodiversity.	1-Proposed standard requires design and synthesis for a specific situation	SC11.1.6. Examine behavior as the sum of responses of an organism to stimuli in its environment, which evolves through adaptation, increasing the potential for species survival. Identify adaptations as characteristics and behaviors of an organism that enhance the chance for survival and reproductive success in a particular environment. SC11.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>Collect, organize, analyze and appropriately represent data.</li> <li>Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the result of the investigation.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>High School</b>		<b>High School</b>
HS-PS1-1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	3- Standards are essentially the same	SC11.1.10. Describe the atomic structure of matter, including subatomic particles, their properties, and interactions. Recognize that elements are organized into groups in the periodic table based on their outermost electrons and these groups have similar properties. Explain chemical bonding in terms of the transfer or sharing of electrons between atoms. Describe physical states of matter and phase changes. Differentiate between chemical and physical properties, and chemical and physical changes.
HS-PS1-2. Construct an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties, and revise, as needed.	2-Proposed standard requires analysis and revision of an explanation	SC11.1.10. Describe the atomic structure of matter, including subatomic particles, their properties, and interactions. Recognize that elements are organized into groups in the periodic table based on their outermost electrons and these groups have similar properties. Explain chemical bonding in terms of the transfer or sharing of electrons between atoms. Describe physical states of matter and phase changes. Differentiate between chemical and physical properties, and chemical and physical changes. SC11.1.11. Recognize that chemical reactions take place all around us. Realize that chemical reactions may release or consume energy, occur at different rates. Identify the factors that affect reaction rates and result in the formation of different substances.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Physical Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Physical Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
<p>HS-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at the macroscopic scale to infer the strength of electrical forces between particles.</p>	<p>3-Proposed standard is embedded in the two current standards</p>	<p>SC11.1.10. Describe the atomic structure of matter, including subatomic particles, their properties, and interactions. Recognize that elements are organized into groups in the periodic table based on their outermost electrons and these groups have similar properties. Explain chemical bonding in terms of the transfer or sharing of electrons between atoms. Describe physical states of matter and phase changes. Differentiate between chemical and physical properties, and chemical and physical changes.</p> <p>SC11.2.2. Students use inquiry to conduct scientific investigations.</p> <ul style="list-style-type: none"> <li>• Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>• Collect, organize, analyze and appropriately represent data.</li> <li>• Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> <p>Clearly and accurately communicate the result of the investigation.</p>

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science		Physical Science
High School cont.		High School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
HS-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	1-Proposed standard requires use of a model for a specific process	SC11.1.11. Recognize that chemical reactions take place all around us. Realize that chemical reactions may release or consume energy, occur at different rates. Identify the factors that affect reaction rates and result in the formation of different substances.
HS-PS1-5. Apply scientific principles and use evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	3-Proposed standard is embedded in the two current standard	SC11.1.11. Recognize that chemical reactions take place all around us. Realize that chemical reactions may release or consume energy, occur at different rates. Identify the factors that affect reaction rates and result in the formation of different substances. SC11.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>Collect, organize, analyze and appropriately represent data.</li> <li>Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the result of the investigation.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science		Physical Science
High School cont.		High School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
HS-PS1-6. Evaluate the design of a chemical system by changing conditions to produce increased amounts of products at equilibrium, and refine the design, as needed.	1-Proposed standard requires design and synthesis for a specific situation	SC11.1.11. Recognize that chemical reactions take place all around us. Realize that chemical reactions may release or consume energy, occur at different rates. Identify the factors that affect reaction rates and result in the formation of different substances. SC11.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>• Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>• Collect, organize, analyze and appropriately represent data.</li> <li>• Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the results of the investigation.
HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.	2-Proposed standard requires computational support	SC11.1.12. Demonstrate and understanding of the laws of conservation of mass and energy within the context of physical and chemical changes. Realize the tendency for systems to increase in disorder.
HS-PS1-8. Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	1-Proposed standard requires use of a model for a specific process	SC11.1.12. Demonstrate and understanding of the laws of conservation of mass and energy within the context of physical and chemical changes. Realize the tendency for systems to increase in disorder.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science		Physical Science
High School cont.		High School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
HS-PS2-1. Analyze data to support the claim that Newton’s second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.	2-Proposed standard requires computational support for an explanation	SC11.1.14. Develop a conceptual understanding of Newton’s Laws of Motion, gravity, electricity, and magnetism.
HS-PS2-2. Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.	1-Proposed standard requires computational support for an explanation	SC11.1.12. Demonstrate and understanding of the laws of conservation of mass and energy within the context of physical and chemical changes. Realize the tendency for systems to increase in disorder.
HS-PS2-3. Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	1-Proposed standard requires design and synthesis for a specific situation	SC11.1.14. Develop a conceptual understanding of Newton’s Laws of Motion, gravity, electricity, and magnetism. SC11.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>• Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>• Collect, organize, analyze and appropriately represent data.</li> <li>• Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the result of the investigation.
HS-PS2-4. Use mathematical representations to predict the gravitational and/or electrostatic forces between objects using Newton’s Law of Gravitation and/or Coulomb’s Law, respectively.	1-Proposed standard requires computational support for an explanation	SC11.1.14. Develop a conceptual understanding of Newton’s Laws of Motion, gravity, electricity, and magnetism.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science		Physical Science
High School cont.		High School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
HS-PS2-5. Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.	2-Proposed standard has greater specificity about magnetism	SC11.1.14. Develop a conceptual understanding of Newton’s Laws of Motion, gravity, electricity, and magnetism. SC11.2..2 Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>Collect, organize, analyze and appropriately represent data.</li> <li>Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the result of the investigation.
HS-PS2-6. Communicate scientific and technical information about why the molecular-level structure is important in the functioning of materials.	2-Proposed standard has greater specificity about materials	SC11.2.1. Students use research and scientific information to present findings through appropriate means.
HS-PS3-1. Create or apply a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	1-Proposed standard requires computational support for an explanation	SC11.1.13. Demonstrate an understanding of types of energy, energy transfer and transformations, and the relationship between mass and energy.
HS-PS3-2. Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).	1-Proposed standard requires use of a model for a specific process	SC11.1.13. Demonstrate an understanding of types of energy, energy transfer and transformations, and the relationship between mass and energy.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Physical Science
High School cont.		High School cont.
HS-PS3-3. Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.	1-Proposed standard requires design and synthesis for a specific situation	SC11.1.13. Demonstrate an understanding of types of energy, energy transfer and transformations, and the relationship between mass and energy.
HS-PS3-4. Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system.	2-Proposed standard requires evidence for a specific situation regard the second law of thermodynamics	SC11.1.13. Demonstrate an understanding of types of energy, energy transfer and transformations, and the relationship between mass and energy. SC11.1.10. Describe the atomic structure of matter, including subatomic particles, their properties, and interactions. Recognize that elements are organized into groups in the periodic table based on their outermost electrons and these groups have similar properties. Explain chemical bonding in terms of the transfer or sharing of electrons between atoms. Describe physical states of matter and phase changes. Differentiate between chemical and physical properties, and chemical and physical changes.
HS-PS3-5. Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.	1-Proposed standard requires use of a model of a specific process	SC11.1.13. Demonstrate an understanding of types of energy, energy transfer and transformations, and the relationship between mass and energy.
HS-PS4-1. Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	0-New benchmark	No current applicable standard
HS-PS4-2. Evaluate the advantages and disadvantages of using digital transmission and storage of information.	0-New benchmark	No current applicable standard

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Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Physical Science	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Physical Science
High School cont.		High School cont.
HS-PS4-3. Evaluate the evidence behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.	1 Proposed standard requires an explanation based on evidence	SC11.2.1. Students use research and scientific information to present findings through appropriate means.
HS-PS4-4 was removed. The evaluated validity and reliability of claims in a variety of materials. * See HS-ETS1-5 pg. 64.	1-Proposed standard requires computational support for an explanation	SC11.2.1. Students use research and scientific information to present findings through appropriate means.
HS-PS4-5. Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.	1-Proposed standard deals specifically with technology	SC11.2.3. Students clearly and accurately communicate the results of their own work as well as information from other sources.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>High School</b>		<b>High School</b>
HS-ESS1-1. Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun’s core to release energy that eventually reaches Earth in the form of radiation.	2-Proposed standard requires a model based on evidence	SC11.1.9. Examine evidence for the Big Bang Theory and recognize the immense time scale involved in comparison to human-perceived time. Describe the process of star and planet formation, planetary and stellar evolution, including the fusion process, element formation, and dispersion.
HS-ESS1-2. Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	3-Proposed standard is embedded in the two current standards	SC11.1.9. Examine evidence for the Big Bang Theory and recognize the immense time scale involved in comparison to human-perceived time. Describe the process of star and planet formation, planetary and stellar evolution, including the fusion process, element formation, and dispersion. SC11.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>• Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>• Collect, organize, analyze and appropriately represent data.</li> <li>• Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the results of the investigation.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science		Earth & Space Science
High School cont.		High School cont.
HS-ESS1-3. Communicate scientific ideas about the way stars, over their life cycle, produce elements.	3-Proposed standard is embedded in the two current standards	SC11.1.9. Examine evidence for the Big Bang Theory and recognize the immense time scale involved in comparison to human-perceived time. Describe the process of star and planet formation, planetary and stellar evolution, including the fusion process, element formation, and dispersion. SC11.2.1. Students use research and scientific information to present findings through appropriate means.
HS-ESS1-4. Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	1- Proposed standard requires computational support for an explanation	SC11.1.8. Investigate geologic time through comparing rock sequences, the fossil record, and decay rates of radioactive isotopes.
HS-ESS1-5. Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	2-Proposed standard requires evaluation of evidence	SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems: <ul style="list-style-type: none"> <li>• Geosphere</li> <li>• Hydrosphere</li> <li>• Atmosphere</li> <li>• Biosphere</li> </ul> Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics.

# Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science	Earth & Space Science	Earth & Space Science
High School cont.	High School cont.	High School cont.
<p>HS-ESS1-6. Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth’s formation and early history.</p>	<p>2-Proposed standard requires greater specificity</p>	<p>SC11.1.8. Investigate geologic time through comparing rock sequences, the fossil record, and decay rates of radioactive isotopes.</p> <p>SC11.2.2. Students use inquiry to conduct scientific investigations.</p> <ul style="list-style-type: none"> <li>• Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>• Collect, organize, analyze and appropriately represent data.</li> <li>• Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> <p>Clearly and accurately communicate the results of the investigation.</p>
<p>HS-ESS2-1. Develop a model to illustrate how Earth’s internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.</p>	<p>2-Proposed standard requires use of a model for a specific process</p>	<p>SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems:</p> <ul style="list-style-type: none"> <li>• Geosphere</li> <li>• Hydrosphere</li> <li>• Atmosphere</li> <li>• Biosphere</li> </ul> <p>Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics</p>

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth’s surface can create feedbacks that cause changes to other Earth systems.	3-Proposed standard is embedded in the current standards	SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems: <ul style="list-style-type: none"> <li>• Geosphere</li> <li>• Hydrosphere</li> <li>• Atmosphere</li> <li>• Biosphere</li> </ul> Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics.                     SC11.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>• Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>• Collect, organize, analyze and appropriately represent data.</li> <li>• Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the results of the investigation.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Earth & Space Science
High School cont.		High School cont.
HS-ESS2-3. Develop a model based on evidence of Earth’s interior to describe the cycling of matter by thermal convection.	2-Proposed standard requires an explanation based on evidence and modeling	SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems: <ul style="list-style-type: none"> <li>• Geosphere</li> <li>• Hydrosphere</li> <li>• Atmosphere</li> <li>• Biosphere</li> </ul> Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics
HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth’s systems result in changes in climate.	2-Proposed standard requires use of a model of a specific process	SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems: <ul style="list-style-type: none"> <li>• Geosphere</li> <li>• Hydrosphere</li> <li>• Atmosphere</li> <li>• Biosphere</li> </ul> Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.	2-Proposed standard requires greater specificity regarding water	SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems: <ul style="list-style-type: none"> <li>Geosphere</li> <li>Hydrosphere</li> <li>Atmosphere</li> <li>Biosphere</li> </ul> Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics.                     SC11.2.2. Students use inquiry to conduct scientific investigations. <ul style="list-style-type: none"> <li>Pose problems and identify questions and concepts to design and conduct an investigation.</li> <li>Collect, organize, analyze and appropriately represent data.</li> <li>Give priority to evidence in drawing conclusions and making connections to scientific concepts.</li> </ul> Clearly and accurately communicate the results of the investigation.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-ESS2-6. Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	1-Proposed standard requires computational support for an explanation	SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems: <ul style="list-style-type: none"> <li>• Geosphere</li> <li>• Hydrosphere</li> <li>• Atmosphere</li> <li>• Biosphere</li> </ul> Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Earth &amp; Space Science</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-ESS2-7. Construct an argument based on evidence about the simultaneous coevolution of Earth’s systems and life on Earth.	2-Proposed standard requires an explanation based on evidence	SC11.1.9. Examine evidence for the Big Bang Theory and recognize the immense time scale involved in comparison to human-perceived time. Describe the process of star and planet formation, planetary and stellar evolution, including the fusion process, element formation, and dispersion. SC11.1.3. Explain how species evolve over time. Understand that evolution is the consequence of various interactions, including the genetic variability of offspring due to mutation and recombination of genes, and the ensuing selection by the environment of those offspring better able to survive and leave additional offspring. Discuss natural selection and that its evolutionary consequences provide a scientific explanation for the great diversity of organisms as evidenced by the fossil record. Examine how different species are related by descent from common ancestors. Explain how organisms are classified based on similarities that reflect their evolutionary relationships, with species being the most fundamental unit of classification. SC11.1.8. Investigate geologic time through comparing rock sequences, the fossil record, and decay rates of radioactive isotopes. SC11.2.1. Students use research and scientific information to present findings through appropriate means.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Earth & Space Science	Earth & Space Science	Earth & Space Science
High School cont.	High School cont.	High School cont.
	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	
HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	2-Proposed standard requires an explanation based on evidence	SC11.2.1. Students use research and scientific information to present findings through appropriate means. SC11.2.4. Students investigate the relationships between science and technology and the role of technological design in meeting human needs.
HS-ESS3-2. Evaluate competing design solutions for developing, managing, and using energy and mineral resources based on cost-benefit ratios.	1-Proposed standard requires evaluation of design solutions	SC11.3.2. Students examine how scientific information is used to make decisions. <ul style="list-style-type: none"> <li>Interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.</li> <li>The role of science in solving personal, local, national, and global problems.</li> </ul> The origins, limitations, and conservation of natural resources, including Wyoming examples.
HS-ESS3-3. Use computational tools to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.	1-Proposed standard requires computational support for an explanation	SC11.3.2. Students examine how scientific information is used to make decisions. <ul style="list-style-type: none"> <li>Interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.</li> <li>The role of science in solving personal, local, national, and global problems.</li> </ul> The origins, limitations, and conservation of natural resources, including Wyoming examples.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	<b>Earth &amp; Space Science</b>	<b>Earth &amp; Space Science</b>
<b>High School cont.</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>High School cont.</b>
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.	3-Proposed standard is embedded in the current standards	SC11.3.2. Students examine how scientific information is used to make decisions. <ul style="list-style-type: none"> <li>Interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.</li> <li>The role of science in solving personal, local, national, and global problems.</li> </ul> The origins, limitations, and conservation of natural resources, including Wyoming examples. SC11.2.4 Students investigate the relationships between science and technology and the role of technological design in meeting human needs.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Earth &amp; Space Science</b>	<b>Earth &amp; Space Science</b>	<b>Earth &amp; Space Science</b>
<b>High School cont.</b>	<b>High School cont.</b>	<b>High School cont.</b>
HS-ESS3-5. Analyze data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional change in climate and associated future impacts to Earth systems.	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment  1-Proposed standard requires use of evidence to forecast impact	SC11.1.7. Describe the Earth as a closed system and demonstrate a conceptual understanding of the following systems: <ul style="list-style-type: none"> <li>Geosphere</li> <li>Hydrosphere</li> <li>Atmosphere</li> <li>Biosphere</li> </ul> Explain the role of energy in each of these systems, such as weather patterns, global climate, weathering, and plate tectonics. SC11.3.2. Students examine how scientific information is used to make decisions. <ul style="list-style-type: none"> <li>Interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.</li> <li>The role of science in solving personal, local, national, and global problems.</li> </ul> The origins, limitations, and conservation of natural resources, including Wyoming examples.
HS-ESS3-6. Use the results of a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	1-Proposed standard requires computational support for an explanation	SC11.2.4. Students investigate the relationships between science and technology and the role of technological design in meeting human needs.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
Engineering Design	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	Science Standards
High School		High School
HS-ETS1-1. Analyze a local, regional, or global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.		1-Proposed standard requires computational support (both quantitative and qualitative) for an explanation
HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	1-Proposed standard requires specific design activities and engineering	SC11.2.4. Students investigate the relationships between science and technology and the role of technological design in meeting human needs. SC11.3.2. Students examine how scientific information is used to make decisions. <ul style="list-style-type: none"> <li>Interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.</li> <li>The role of science in solving personal, local, national, and global problems.</li> </ul> The origins, limitations, and conservation of natural resources, including Wyoming examples.

## Science Crosswalk Between 2016 Proposed and 2008 Current Wyoming Content & Performance Standards

Proposed Content & Performance Standard	Alignment Rating with Comment(s)	Current Wyoming Content & Performance Standard
<b>Engineering Design</b>	0 = No alignment 1 = Weak alignment 2 = Partial alignment 3 = Strong alignment	<b>Science Standards</b>
<b>High School cont.</b>		<b>High School cont.</b>
HS-ETS1-3. Evaluate a solution to a real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.	2-Proposed standard requires evaluation of a complex solution	SC11.2.4. Students investigate the relationships between science and technology and the role of technological design in meeting human needs. SC11.3.2 Students examine how scientific information is used to make decisions. <ul style="list-style-type: none"> <li>• Interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.</li> <li>• The role of science in solving personal, local, national, and global problems.</li> </ul> The origins, limitations, and conservation of natural resources, including Wyoming examples.
HS-ETS1-4. Use a computer simulation to model the impact of proposed solutions to a real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.	1-Proposed standard requires computational support for an explanation	SC11.2.4. Students investigate the relationships between science and technology and the role of technological design in meeting human needs.
HS-ETS1-5. Evaluate the validity and reliability of claims in a variety of materials.	2-Proposed standard requires evaluation of a complex solution	SC11.3.2 Students examine how scientific information is used to make decisions. <ul style="list-style-type: none"> <li>• Interdisciplinary connections of the sciences and connections to other subject areas and career opportunities.</li> <li>• The role of science in solving personal, local, national, and global problems.</li> </ul> The origins, limitations, and conservation of natural resources, including Wyoming examples.

## **CHAPTER 10 WYOMING CONTENT AND PERFORMANCE STANDARDS STATEMENT OF REASONS**

Pursuant to Wyo. Stat. § 21-2-304(a)(iii), the Wyoming State Board of Education must prescribe uniform student content and performance standards for the common core of knowledge specified by Wyo. Stat. § 21-9-101(b)(i). The common core of knowledge includes reading/language arts, social studies, mathematics, science, fine and performing arts, physical education, health and safety, humanities, career/vocational education, foreign cultures and languages, applied technology, and government and civics.

After careful consideration, and with support from members of the Science Standards Review Committee and input from the public at large, the Wyoming State Board of Education approved proposing the following on May 20, 2016.

The Board is promulgating revised rules for the Wyoming Content and Performance Standards for Science. These standards define the knowledge and skills students should know and be able to do throughout their K-12 education so they can graduate from high school able to succeed in college and career. Also being promulgated are the ELA Extended Standards for students with significant cognitive disabilities.

In developing the science standards, the Wyoming Department of Education (WDE), on the Board's behalf, convened a standards review committee composed of 42 members, which included educators, professors, scientists, parents, and business/community members. The Department held 5 community input meetings to inform the public of the upcoming review process and to solicit information for the

standards review committee's consideration. The WDE also held 5 public input hearings to inform the public and gather feedback from the public for the Board's consideration when voting whether or not to adopt the proposed science standards.

As for the ELA Extended Standards, a study group, which included 5 educators who work with students with significant cognitive disabilities, was convened to look at grades K-1 only. Revisions were made to address technical issues and ensure proper alignment to the general ELA Content and Performance Standards.

Additional changes to these rules include the following, which will ultimately reduce the length of these rules:

- Additional language for definitions to make them more clear.
- Removing the grade levels for benchmarks for each content area. The grade levels and benchmarks are clear in the standards documents, so their presence in the main body of the rules is redundant.
- Removing of past dates of approval to reflect most current standards. Past revision dates are irrelevant and potentially confusing to readers. The date that the standards were developed is more salient for users.
- Removing the implementation dates in this and future standards adoptions. The dates are clear in the standards document, so their presence in the main body of the rules is redundant.
- Changing how standards are identified. Previously, they were identified in the rules by date of amendment. Moving forward, it is simpler and clearer to appropriately title the standards document being incorporated and identify the matter by its title. For example, the most recent social studies

standards are identified as the “2014 Wyoming Social Studies Content and Performance Standards.” The agency believes this is more logical and accessible to the public.

The Board previously revised the process for compiling public comments to more adequately inform the public of the nature of the comments and the reasons for either adopting or rejecting the comment. This process includes articulating comments separately even if they were part of a single submission that addressed several topics, grouping substantially identical comments together with a single response, and organizing the comments and responses into comment, discussion, and changes sections. These changes should make it easier to understand the comments received and the agency's response to those comments.

These rules meet the minimum substantive state statutory requirements and are within the Board and Department’s statutory authority. No part of this action should be interpreted as any attempt to dictate curriculum at the local or state level.



# Notice of Intent to Adopt Rules

Revised July 2014

## 1. General Information

a. Agency/Board Name		
b. Agency/Board Address	c. City	d. Zip Code
e. Name of Contact Person	f. Contact Telephone Number	
g. Contact Email Address		
h. Date of Public Notice	i. Comment Period Ends	
j. Program		

## 2. Rule Type and Information: For each chapter listed, indicate if the rule is New, Amended, or Repealed.

a. If "New," provide the Enrolled Act numbers and years enacted:

b. Provide the Chapter Number, Short Title, and Rule Type of Each Chapter being Created/Amended/Repealed

*Please use the Additional Rule Information form for more than 10 chapters, and attach it to this certification.*

Chapter Number:	Chapter Name:	<input type="checkbox"/> New	<input type="checkbox"/> Amended	<input type="checkbox"/> Repealed
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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c.  The Statement of Reasons is attached to this Notice and, in compliance with *Tri-State Generation and Transmission Association, Inc. v. Environmental Quality Council*, 590 P.2d 1324 (Wyo. 1979), includes a brief statement of the substance or terms of the rule and the basis and purpose of the rule.

	Indicate one (1): <input type="checkbox"/> These rules <u>do not</u> differ from the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-102. <input type="checkbox"/> These rules differ from the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-102 (see Statement of Reasons).
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d.  N/A  In consultation with the Attorney General's Office, the Agency's Attorney General representative concurs that strike and underscore is not required as the proposed amendments are pervasive (Section 5 of the Rules on Rules).

e. A copy of the proposed rules\* may be obtained:

By contacting the Agency at the physical and/or email address listed in Section 1 above.

At the following URL: \_\_\_\_\_

\* If Item "d" above is not checked, the proposed rules shall be in strike and underscore format.

**3. Public Comments and Hearing Information**

a. A public hearing on the proposed rules has been scheduled.  Yes  No

	If "Yes:"	Date:	Time:	City:	Location:

b. What is the manner in which interested persons may present their views on the rulemaking action?  
 By submitting written comments to the Agency at the physical and/or email address listed in Section 1 above.  
 At the following URL: \_\_\_\_\_

A public hearing will be held if requested by 25 persons, a government subdivision, or by an association having not less than 25 members. Requests for a public hearing may be submitted:  
 To the Agency at the physical and/or email address listed in Section 1 above.  
 At the following URL: \_\_\_\_\_

c. Any person may urge the Agency not to adopt the rules and request the Agency to state its reasons for overruling the consideration urged against adoption. Requests for an agency response must be made prior to, or within thirty (30) days after adoption, of the rule, addressed to the Agency and Contact Person listed in Section 1 above.

**4. Federal Law Requirements**

a. These rules are created/amended/revoked to comply with federal law or regulatory requirements.  Yes  No

	If "Yes:"	Applicable Federal Law or Regulation Citation:

Indicate one (1):  
 The proposed rules meet, but do not exceed, minimum federal requirements.  
 The proposed rules exceed minimum federal requirements.

Any person wishing to object to the accuracy of any information provided by the Agency under this item should submit their objections prior to final adoption to:  
 To the Agency at the physical and/or email address listed in Section 1 above.  
 At the following URL: \_\_\_\_\_

**5. State Statutory Requirements**

a. Indicate one (1):  
 The proposed rule change *MEETS* minimum substantive statutory requirements.  
 The proposed rule change *EXCEEDS* minimum substantive statutory requirements. Please attach a statement explaining the reason that the rules exceed the requirements.

b. Indicate one (1):  
 The Agency has complied with the requirements of W.S. 9-5-304. A copy of the assessment used to evaluate the proposed rules may be obtained:  
 By contacting the Agency at the physical and/or email address listed in Section 1 above.  
 At the following URL: \_\_\_\_\_  
 Not Applicable.

**6. Authorization**

a. I certify that the foregoing information is correct.

<i>Printed Name of Authorized Individual</i>	
<i>Title of Authorized Individual</i>	
<i>Date of Authorization</i>	

Distribution List:

- Attorney General and LSO: Hard copy of Notice of Intent; Statement of Reasons; clean copy of the rules; and strike-through and underline version of rules (if applicable). Electronic copies (PDFs) of all items noted (in addition to hard copies) may be emailed to LSO at [Criss.Carlson@wyoleg.gov](mailto:Criss.Carlson@wyoleg.gov).
- Secretary of State: Electronic version of Notice of Intent sent to [Rules@wyo.gov](mailto:Rules@wyo.gov).

## Wyoming Department of Education

### Chapter 10

#### Wyoming Content and Performance Standards

Section 1. **Authority.** These rules and regulations are promulgated pursuant to W.S. 21-2-304(a)(i), (ii), (iii), and (iv).

Section 2. **Applicability.** These rules and regulations pertain to the uniform student content and performance standards for the common core of knowledge and the common core of skills specified under W.S. 21-9-101(b).

#### Section 3. **Definitions.**

“Common Core of Knowledge” – means areas of knowledge each student is expected to acquire at levels established by the state board of education. W.S. 21-9-101(b)(i) This includes the nine content areas listed in subsection (c) and Health and Safety, Humanities, Applied Technology, and Government and Civics.

“Common Core of Skills” – means skills each student is expected to demonstrate at levels established by the state board of education. W.S. 21-9-101(b)(iii). These skills may be integrated into the uniform student content and performance standards for the Common Core of Knowledge. This includes Problem Solving, Interpersonal Communications, Keyboarding and Computer Applications, Critical Thinking, Creativity, and Life Skills.

“Content and Performance Standards” – means standards that include the K-12 content standards, benchmark standards, and the performance standards level descriptors established for the Common Core of Knowledge and Common Core of Skills. W.S. 21-2-304(a)(iii) The nine content areas are as follows:

- (i) English/Language Arts (ELA)
- (ii) Mathematics
- (iii) Science
- (iv) Social Studies
- (v) Health
- (vi) Physical Education
- (vii) Foreign Language
- (viii) Career & Vocational Education

(ix) Fine & Performing Arts

“Wyoming Standards Extensions” – means standards for students with the most significant cognitive disabilities that show a clear link to the content standards for the grade in which the student is enrolled, although the grade-level content may be reduced in complexity or modified to reflect pre-requisite skills.

**Section 4. Uniform Student Content and Performance Standards.**

(a) Uniform student content and performance standards, including standards for graduation, are hereby incorporated by reference pursuant to W.S. 16-3-103(h) and include the following:

(i) [Wyoming Language Arts Content and Performance Standards](#) as approved by the Wyoming State Board of Education on April 27, 2012;

(A) Wyoming Language Arts Content and Performance Standards approved on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The 2014 Language Arts Performance Level Descriptors, as incorporated by reference, shall be the Wyoming Language Arts Performance Standards for the 2012 Wyoming Language Arts Content Standards.

(C) The 2014 Wyoming Language Arts Standards Extensions for students with significant cognitive disabilities, as incorporated by reference, shall be fully implemented on or before the first day of the 2017-18 school year.

(D) The Wyoming Language Arts Content and Performance Standards, Performance Level Descriptors, and Standards Extensions are available at <http://edu.wyoming.gov/educators/standards/language-arts>.

(ii) [Wyoming Mathematics Content and Performance Standards](#) as approved by the Wyoming State Board of Education on April 27, 2012;

(A) Wyoming Mathematics Content and Performance Standards approved on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The 2014 Mathematics Performance Level Descriptors, as incorporated by reference, shall be the Wyoming Mathematics Performance Standards for the 2012 Wyoming Mathematics Content Standards.

(C) The 2014 Wyoming Mathematics Standards Extensions for students with significant cognitive disabilities, as incorporated by reference, shall be fully implemented on or before the first day of the 2017-18 school year.

(D) The Wyoming Mathematics Content and Performance Standards, Performance Level Descriptors, and Standards Extensions are available at <http://edu.wyoming.gov/educators/standards/mathematics>.

(iii) **2016 Wyoming Science Content and Performance Standards** are available at <http://edu.wyoming.gov/educators/standards/science>.

(iv) [2014 Wyoming Social Studies Content and Performance Standards](http://edu.wyoming.gov/educators/standards/social-studies) are available at <http://edu.wyoming.gov/educators/standards/social-studies>.

(v) [Wyoming Health Content and Performance Standards](http://edu.wyoming.gov/educators/standards/health-education) as approved by the Wyoming State Board of Education on April 27, 2012;

(A) Wyoming Health Content and Performance Standards approved on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The Wyoming Health Content and Performance Standards are available at <http://edu.wyoming.gov/educators/standards/health-education>.

(vi) [2014 Wyoming Physical Education Content and Performance Standards](http://edu.wyoming.gov/educators/standards/physical-education) are available at <http://edu.wyoming.gov/educators/standards/physical-education>.

(vii) [Wyoming Foreign Language Content and Performance Standards](http://edu.wyoming.gov/educators/standards/foreign-language) as approved by the Wyoming State Board of Education on May 8, 2013;

(A) Wyoming Foreign Language Content and Performance Standards amended on May 8, 2013 shall be fully implemented on or before the first day of the 2016-2017 school year.

(B) The Wyoming Foreign Language Content and Performance Standards are available at <http://edu.wyoming.gov/educators/standards/foreign-language>.

(viii) [2014 Wyoming Career/Vocational Education Content and Performance Standards](http://edu.wyoming.gov/educators/standards/career-vocational) are available at <http://edu.wyoming.gov/educators/standards/career-vocational>.

(ix) [Wyoming Fine and Performing Arts Content and Performance Standards](http://edu.wyoming.gov/educators/standards/arts) as approved by the Wyoming State Board of Education on May 8, 2013.

(A) Wyoming Fine and Performing Arts Content and Performance Standards amended on May 8, 2013 shall be fully implemented on or before the first day of the 2016-2017 school year.

(B) The Wyoming Fine and Performing Arts Content and Performance Standards are available at <http://edu.wyoming.gov/educators/standards/arts>.

(b) The above-referenced content and performance standards are available at the

Wyoming Department of Education website at <http://edu.wyoming.gov> or at cost of production from the Wyoming Department of Education, 2300 Capitol Avenue, Hathaway Building, 2nd Floor, Cheyenne, WY, 82002.

(c) The above-referenced content and performance standards are the most current editions.

(d) The above performance standards that are incorporated by reference do not include any amendments to or editions of the standards since the effective date of this rule.

**Wyoming Department of Education**  
**Chapter 10**  
**Wyoming Content and Performance Standards**

Section 1. **Authority.**           

~~(a) These rules and regulations are promulgated pursuant to the Wyoming Education Code of 1969 (as amended 2002) [W.S. 21-2-304 (a)-(i), (ii), (iii), and (iv)].~~

Section 2. **Applicability.**           

~~(a) These rules and regulations pertain to the uniform student content and performance standards for the common core of knowledge and the common core of skills specified under W.S. 21-9-101(b).~~

~~**Section 3. Promulgation, Amendment, or Repeal of Rules.**~~

~~(a) These rules and any amendments thereof shall become effective as provided by the Wyoming Administrative Procedures Act. (W.S. 16-3-101 through 16-3-115).~~

Section ~~4~~3. **Definitions.**

~~(a) “Common Core of Knowledge” – means – Areas of knowledge each student is expected to acquire at levels established by the state board of education. [W.S. 21-9-101-(b)(i)] This includes the nine content areas listed in subsection (c) and Health and Safety, Humanities, Applied Technology, and Government and Civics.~~

~~(b) “Common Core of Skills” – means – Skills each student is expected to demonstrate at levels established by the state board of education. [W.S. 21-9-101-(b)(iii)]. These skills may be integrated into the uniform student content and performance standards for the Common Core of Knowledge. This includes Problem Solving, Interpersonal Communications, Keyboarding and Computer Applications, Critical Thinking, Creativity, and Life Skills.~~

~~“Content and Performance Standards” – means – Standards which that include the K-12 content standards, benchmark standards, and the performance standards level descriptors established for the Common Core of Knowledge and Common Core of Skills. [W.S. 21-2-304 (a)(iii)] The nine content areas are as follows:~~

~~(e) – The grade levels for benchmark standards for each content area are listed below:~~

~~(i) English/Language Arts (ELA) – grades K, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11-12~~

~~(ii) Math – grades K, 1, 2, 3, 4, 5, 6, 7, 8, HS~~

- (iii) Science ~~—grades 4, 8, 11~~
- (iv) Social Studies ~~—grades 2, 5, 8, 12~~
- (v) Health ~~—grades 2, 4, 6, 8, 12~~
- (vi) Physical Education ~~—grades 2, 5, 8, 12~~
- (vii) Foreign Language ~~—no grade levels; benchmarked among 6 performance level~~
- (viii) Career & Vocational Ed. ~~—grades 5, 8, 11~~
- (ix) Fine & Performing Arts ~~—grades 4, 8, 11~~

~~(x)~~ “Wyoming Standards Extensions” ~~— means. —~~ standards for students with the most significant cognitive disabilities that show a clear link to the content standards for the grade in which the student is enrolled, although the grade-level content may be reduced in complexity or modified to reflect pre-requisite skills.

~~Section 5. Wyoming Statutes.~~

~~(a) All public school districts, and the schools and personnel within those districts, must comply with the applicable statutes of the State of Wyoming.~~

~~Section 6. Wyoming State Board of Education Policies and Regulations.~~

~~(a) All public school districts, and the schools and personnel within those districts, must comply with applicable state board policies and regulations. (W.S. 21-2-304)~~

Section ~~74~~. **Uniform Student Content and Performance Standards.**

(a) Uniform student content and performance standards, including standards for graduation, are hereby incorporated by reference pursuant to W.S. 16-3-103(h) and include the following:

(i) Wyoming Language Arts Content and Performance Standards as approved by the Wyoming State Board of Education ~~on June 8, 1998, amended on July 7, 2003, amended on November 19, 2008, and amended~~ on April 27, 2012;

(A) Wyoming Language Arts Content and Performance Standards ~~amended~~ approved on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The 2014 Language Arts Performance Level Descriptors, as

incorporated by reference, shall be the Wyoming Language Arts Performance Standards for the 2012 Wyoming Language Arts Content Standards.

(C) The 2014 Wyoming Language Arts Standards Extensions for students with significant cognitive disabilities, as incorporated by reference, shall be fully implemented on or before the first day of the 2017-18 school year.

(D) The Wyoming Language Arts Content and Performance Standards, Performance Level Descriptors, and Standards Extensions are available at <http://edu.wyoming.gov/educators/standards/language-arts.->

(ii) Wyoming Mathematics Content and Performance Standards as approved by the Wyoming State Board of Education on ~~June 8, 1998, amended on July 7, 2003, amended on November 19, 2008, and amended on~~ April 27, 2012;

(A) Wyoming Mathematics Content and Performance Standards ~~amended-~~approved on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The 2014 Mathematics Performance Level Descriptors, as incorporated by reference, shall be the Wyoming Mathematics Performance Standards for the 2012 Wyoming Mathematics Content Standards.

(C) The 2014 Wyoming Mathematics Standards Extensions for students with significant cognitive disabilities, as incorporated by reference, shall be fully implemented on or before the first day of the 2017-18 school year.

(D) The Wyoming Mathematics Content and Performance Standards, Performance Level Descriptors, and Standards Extensions are available at <http://edu.wyoming.gov/educators/standards/mathematics.->

~~(E) 2016 Wyoming Science Content and Performance Standards as approved by the Wyoming State Board of Education on June 9, 1999, amended on July 7, 2003, and amended on November 19, 2008;~~

~~(F)(iii) \_\_\_\_\_ The Wyoming Science Content and Performance Standards are available at <http://edu.wyoming.gov/educators/standards/science.->~~

~~(G) 2014 Wyoming Social Studies Content and Performance Standards as approved by the Wyoming State Board of Education on June 9, 1999, amended on July 7, 2003 amended on November 19, 2008, and amended on October 9, 2014;~~

~~(H) Wyoming Social Studies Content and Performance Standards amended on October 9, 2014 shall be fully implemented on or before the first day of the 2017-2018 school year.~~

~~(D)(iv) The Wyoming Social Studies Content and Performance Standards~~ are available at <http://edu.wyoming.gov/educators/standards/social-studies.> ;

~~(iii)(v) Wyoming Health Content and Performance Standards~~ as approved by the Wyoming State Board of Education on ~~June 6, 2000, amended on July 7, 2003, amended on November 19, 2008, and amended on~~ April 27, 2012;

(A) Wyoming Health Content and Performance Standards ~~amended~~ approved on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The Wyoming Health Content and Performance Standards are available at <http://edu.wyoming.gov/educators/standards/health-education.> ;

~~(C) 2014 Wyoming Physical Education Content and Performance Standards as approved by the Wyoming State Board of Education on June 6, 2000, amended on July 7, 2003, amended on November 19, 2008, and amended on October 9, 2014~~

~~(D) Wyoming Physical Education Content and Performance Standards amended on October 9, 2014 shall be fully implemented on or before the first day of the 2017-2018 school year.~~

~~(E)(vi) The Wyoming Physical Education Content and Performance Standards~~ are available at <http://edu.wyoming.gov/educators/standards/physical-education.> ;

~~(iv)(vii) Wyoming Foreign Language Content and Performance Standards~~ as approved by the Wyoming State Board of Education on ~~June 6, 2000, amended on July 7, 2003, amended on November 19, 2008, and amended on~~ May 8, 2013;

(A) Wyoming Foreign Language Content and Performance Standards amended on May 8, 2013 shall be fully implemented on or before the first day of the 2016-2017 school year.

(B) The Wyoming Foreign Language Content and Performance Standards are available at <http://edu.wyoming.gov/educators/standards/foreign-language.> ;

~~(C) 2014 Wyoming Career/Vocational Education Content and Performance Standards as approved by the Wyoming State Board of Education on June 6, 2001, amended on July 7, 2003, amended on November 19, 2008, and amended on October 9, 2014;~~

~~(D) Wyoming Career/Vocational Education Content and Performance Standards amended on October 9, 2014 shall be fully implemented on or before the first day of the 2017-2018 school year.~~

~~(E)(viii)~~ ~~The Wyoming Career/Vocational Education Content and Performance Standards~~ are available at <http://edu.wyoming.gov/educators/standards/career-vocational>.

~~(v)(ix)~~ ~~Wyoming Fine and Performing Arts Content and Performance Standards~~ as approved by the Wyoming State Board of Education on ~~June 6, 2001, amended on July 7, 2003, amended on November 19, 2008, and amended on~~ May 8, 2013.

(A) Wyoming Fine and Performing Arts Content and Performance Standards amended on May 8, 2013 shall be fully implemented on or before the first day of the 2016-2017 school year.

(B) The Wyoming Fine and Performing Arts Content and Performance Standards are available at <http://edu.wyoming.gov/educators/standards/arts>.

~~(E)(b)~~ The above-referenced content and performance standards are available at the Wyoming Department of Education website at <http://edu.wyoming.gov> -or at cost of production from— the Wyoming Department of Education, 2300 Capitol Avenue, Hathaway Building, 2nd Floor, Cheyenne, WY, 82002.

~~(D)(c)~~ The above-referenced content and performance standards ~~dated November 19, 2008, April 27, 2012, May 8, 2013, and October 9, 2014~~ are the most current editions.

~~(E)(d)~~ The above performance standards that are incorporated by reference do not include any amendments to or editions of the standards since the effective date of this rule.

**ACTION SUMMARY SHEET  
STATE BOARD OF VOCATIONAL EDUCATION**

**DATE:** May 20, 2016

**ISSUE:** Approval of Agenda

**BACKGROUND:**

**SUGGESTED MOTION/RECOMMENDATION:**

To approve the Agenda for the May 20, 2016 meeting.

**SUPPORTING INFORMATION ATTACHED:**

- Agenda

**PREPARED BY:** *Chelsie Oaks*  
Chelsie Oaks, Executive Assistant

**APPROVED BY:** \_\_\_\_\_

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**

May 20, 2016 University of Wyoming College of Education, Room 117 Laramie, Wyoming		
8:00 a.m.- 9:00 a.m.	<b>State Board of Vocational Education</b> <ul style="list-style-type: none"> <li>• Roll Call</li> </ul>	
	<ul style="list-style-type: none"> <li>• Approval of Agenda</li> </ul>	Tab K
	<ul style="list-style-type: none"> <li>• Minutes-March 18, 2016</li> </ul>	Tab L
8:10 a.m.- 9:00 a.m.	<u>Discussion Items:</u> <ul style="list-style-type: none"> <li>• T.A. - RTI &amp; Marzano REL Projects- Guy Jackson</li> <li>• WyCTE Assessment System (NOCTI) – Loralyn O’Kief</li> <li>• Career Development Facilitator Course/UW Echo Project – Tonya Gerharter</li> <li>• Roadmap to STEM Conference - Tonya Gerharter and Loralyn O’Kief</li> </ul>	Tab M Tab N Tab O Tab P
9:15 a.m.	Reconvening of the <b>State Board of Education</b>	
9:15 a.m. – 10:00 a.m.	SBE Committee Reports	
10:00 a.m. – 10:30 a.m.	Digital Learning/NGA Policy Academy-Laurel Ballard	Tab Q
10:30 a.m.- 11:30 a.m.	<u>Action Items:</u> <ul style="list-style-type: none"> <li>• Alternative Schedules- Julie Magee</li> <li>• Revised ELA K-1 Standards- Laurie Hernandez</li> <li>• 2016 Science Standards- Laurie Hernandez</li> <li>• SBE Meeting Schedule</li> </ul>	Tab R Tab S Tab T Tab U
	Other issues, concerns, discussion, public comment:	
	Adjourn	

**ACTION SUMMARY SHEET  
STATE BOARD OF VOCATIONAL EDUCATION**

**DATE: May 20, 2016**

**ISSUE:** Approval of Minutes

**BACKGROUND:**

**SUGGESTED MOTION/RECOMMENDATION:**

To approve the minutes from the March 18, 2016 meeting.

**SUPPORTING INFORMATION ATTACHED:**

- Minutes from March 18, 2016

**PREPARED BY:** *Chelsie Oaks*  
Chelsie Oaks, Executive Assistant

**APPROVED BY:** \_\_\_\_\_

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**

WYOMING STATE BOARD OF VOCATIONAL EDUCATION

March 18, 2016  
Hulett Community Center  
401 Sager Street  
Hulett, Wyoming

Wyoming State Board of Education members present: Pete Gosar, Kathy Coon, Ken Rathbun, Jillian Balow, Sue Belish, Nate Breen, Scotty Ratliff, Robin Schamber, Kathryn Sessions, Walt Wilcox and Belenda Willson (by phone)

Members absent: Hugh Hageman and Jim Rose

Also present: Chelsie Oaks, WDE; Brent Young, WDE; Paige Fenton Hughes, SBE Coordinator; Mackenzie Williams, Attorney General's Office (AG); Shelly Andrews, WDE; Laurie Hernandez, WDE; Monica Mosier, WDE; Joel Dvorak, WDE; Brent Bacon, WDE; and Kathy Scheurman, WEA

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CALL TO ORDER

Chairman Pete Gosar called the meeting to order at 8:04 a.m.

Chelsie Oaks conducted roll call and established that a quorum was present.

APPROVAL OF AGENDA

Kathryn Sessions moved to approve the agenda, seconded by Scotty Ratliff; the motion carried.

APPROVAL OF MINUTES

Minutes from the February 22, 2016 State Board of Vocational Education meeting were presented for approval.

Sue Belish moved to approve the minutes as presented, seconded by Kathy Coon. Robin Schamber obtained; the motion carried.

PERKINS ANNUAL GRANT LETTER

The annual letter for the Perkins grant was presented by Brent Bacon. The board agreed unanimously to approval the submission to U.S. Department of Education.

The State Board of Vocational Education adjourned at 8:07 a.m.

## REL-MARZANO WYOMING CTE PROJECT SUGGESTIONS

### **Validate a District Self-Evaluation Instruments that Assesses the Quality of CTE Career Pathways**

#### 6.1 Examine the influence of indicators of CTE career pathway quality on student outcomes

- WY will be asking districts/schools to complete a self-evaluation rubric to assess the quality of their CTE career pathways (rubric was developed in collaboration with RTI). WY has also initiated a system to collect data to support Perkins grants accountability, including course placement, course completion, and student achievement.
- REL Central will provide analytic support to validate their career pathway rubric. This correlational study will examine the extent to which scores on the career pathway rubric relate to student outcome measures. This will include assessing student course taking to determine the degree students follow/complete their career pathway and post-graduation outcomes.
- This work will also support the planned multi-state validation of the ACTE CTE program quality framework.

### **Support the Development of a CTE Career Pathway Evaluation Process**

#### 5.2 Collaborate with WDE to develop a process to evaluate their statewide computer science pilot program

- Participate in planning meetings to establish an evaluation approach for the pilot program. This will include assessment of both student and teacher outcomes, industry partnerships, and student post-graduation career trajectories. The evaluation approach will also include data-based decision-making strategic planning to inform program improvement.
- Develop common evaluation/data collection instruments.

#### 5.3 Dissemination of Pathway Evaluation Instruments

- Develop instruments that can be used to evaluate multiple career pathways (not just computer science), conduct interviews/focus groups with 9 or fewer individual to inform revisions
- Publish report

### **Conduct Cost-Effectiveness Study of District CTE Models in WY**

#### 6.1 Cost-Effectiveness Study

- As WY is facing current and anticipated budget cuts to CTE programing, several districts, BOCES, and community colleges are pooling resources and collaborating to provide CTE. WDE has asked for assistance in examining different funding solutions. REL Central proposes to conduct a cost-effectiveness study of the various CTE models in WY.
- Research questions:

1. What is the base cost of providing CTE services in Wyoming district by district, knowing that districts vary significantly across the state? What does it cost each year to operate a statewide system using this model to provide CTE services?
2. What are alternative models for effectively providing CTE services in the state? Models vary by subjects covered and partners included.
  1. List existing and proposed models.
  2. Identify their critical cost components and / or ingredients.
  3. Interview the critical partners to understand the costs of the alternatives models.
3. What are the strengths and weaknesses of each model? How do the cost associated with each model compare to the traditional model of every school district providing its own CTE services?

Area	Sample Measures/Indicators for CTE Program Review and Evaluation
<b>Student engagement</b>	<ol style="list-style-type: none"> <li>1. Number of program participants</li> <li>2. Number of program concentrators</li> <li>3. Proportion of participants/concentrators</li> <li>4. Proportion of underrepresented students (nontraditional by gender, underrepresented racial/ethnic groups)</li> <li>5. Proportion CTE concentrators participating in CTSOs</li> <li>6. Proportion of CTE concentrators participating in work-based learning</li> <li>7. Program has strategies in place for recruiting and retaining nontraditional students</li> <li>8. Program maintains a minimum/maximum student/teacher ratio</li> <li>9. Program meets the needs of special population students</li> </ol>
<b>Facilities and Equipment</b>	<ol style="list-style-type: none"> <li>10. Program equipment is up-to-date and meets current industry standards</li> <li>11. Equipment is in good working order and meets safety requirements</li> <li>12. Adequate classroom and/or workshop space is available</li> <li>13. Program conducts appropriate safety training</li> </ol>
<b>Student Assessment</b>	<ol style="list-style-type: none"> <li>14. Proportion of CTE concentrators earning the National Career Readiness Certification (NCRC)</li> <li>15. Proportion of concentrators in each program attempting a credential</li> <li>16. Of those who attempted, proportion who earned a credential</li> <li>17. Student performance on end of course examinations</li> </ol>
<b>Counseling and Guidance</b>	<ol style="list-style-type: none"> <li>18. Student participation in guidance activities (creation of graduation plan, etc.)</li> </ol>
<b>Curriculum and Program Design</b>	<ol style="list-style-type: none"> <li>19. Program has evidence that course standards are aligned with the knowledge and skills needed by industry and/or state CTE standards</li> <li>20. Program has a documented pathway or program of study that can be shared with students and parents</li> <li>21. Program has a true sequence of courses that move from introductory to higher levels</li> <li>22. Courses are designed to attract a full representation of students in the school or district.</li> <li>23. Program includes foundational, academic, and capstone courses</li> <li>24. Program offers opportunities for students to obtain industry certifications</li> <li>25. Program has articulation agreements with postsecondary institutions</li> </ol>
<b>High School completion</b>	<ol style="list-style-type: none"> <li>26. Proportion of concentrators earning a high school diploma in 4 years (“on time” graduation)</li> <li>27. Proportion of concentrators earning a high school diploma Career Endorsement</li> <li>28. Proportion of concentrators earning a high school diploma College Endorsement or Academic Endorsement</li> </ol>
<b>Instructors</b>	<ol style="list-style-type: none"> <li>29. Proportion of instructors certified in their teaching field</li> <li>30. Proportion of instructors with industry certification/credentials relevant to the subject they teach</li> <li>31. Instructors participate in CTE conferences, professional development or other trainings</li> <li>32. New teachers complete specialized CTE professional development programs</li> </ol>
<b>Postsecondary Preparation</b>	<ol style="list-style-type: none"> <li>33. Proportion of CTE concentrators attempting to earn postsecondary credits in CTE (or other) fields</li> <li>34. Proportion of students earning any postsecondary credits in high school</li> <li>35. Proportion of students earning postsecondary credits in high school in CTE fields</li> <li>36. Proportion of students/concentrators earning community college certificates in their career field</li> </ol>

Area	Sample Measures/Indicators for CTE Program Review and Evaluation
	37. Proportion of program concentrators who enroll in a public institution of higher education who require developmental education  38. Proportion of CTE concentrators who enroll in postsecondary education within a year of high school graduation
<b>Connections with Business and Industry</b>	39. Advisory council members represent employers in state or regional in-demand fields 40. Advisory committee meets 2 or more times per year 41. Program is aligned with in-demand fields (e.g., courses and topics reflect employer needs in these fields) 42. Student recruitment efforts include information about in-demand fields 43. Program partners with employers to design work-based learning opportunities
<b>Other</b>	44. Program administrators have access to and know how to review program and student data to identify trends and areas needing improvement

Wyoming

**WYOMING**  
DEPARTMENT OF EDUCATION



# CAREER DEVELOPMENT FACILITATOR COURSE

*Navigation Tools for Career Success*



# CAREER DEVELOPMENT FACILITATOR COURSE

**WHO:** school staff, counselors, administrators and teachers whose roles will include coordinating career development and exploration programming in their respective schools.

**WHAT:** course provides a complete set of best practices for facilitating career development in multiple settings and for all ages. Course completers receive a certificate of completion and are eligible to apply for the Global Career Development Facilitator Credential.

**WHEN:** courses will be offered twice annually. First course will launch in November 2016.

**WHERE:** courses will be delivered in a blended format (in-person and online). The three day in-person portion of the course launching in November 2016 will take place in Casper.

**WHY:** to support the implementation of more robust career development programs in all Wyoming schools and to ensure consistency in the delivery of content and best practices in career development.

## GOAL

At least one staff member at every Wyoming school (K-12) will have received the CDF course by 2020.

The CDF course content focuses on twelve career-related competencies, developed by a national team of experts and practitioners through the **National Career Development Association**.



# CAREER DEVELOPMENT FACILITATOR COURSE

<b>Helping Skills</b>	Be proficient in the basic career facilitating process.
<b>Labor Market Information and Resources</b>	Understand labor market and occupational information and trends; use current resources.
<b>Working with Diverse Populations</b>	Recognize special needs of various groups and adapting services to meet their needs.
<b>Technology and Career Development</b>	Comprehend and use career development computer applications.
<b>Ethical and Legal Issues</b>	Follow the CDF code of ethics, scope of practice, and know current legislative regulations.
<b>Employability Skills</b>	Know job search strategies and placement techniques, especially in working with specific groups.
<b>Consultation/Supervision</b>	Accept suggestions for performance improvement and referrals from consultants or supervisors.
<b>Training Clients and Peers</b>	Prepare and develop materials for career training programs and presentations.
<b>Career Development Theories and Models</b>	Understand frameworks with which to utilize to facilitate an individual's career development.
<b>Program Management and Implementation</b>	Understand career development programs and assist in the steps related to their development.
<b>Assessment</b>	Comprehend and use (under supervision) both formal and informal career development assessments with emphasis on relating appropriate ones to the population served.
<b>Promotion and Public Relations</b>	Knowing how to market and promote career development programs with staff and supervisors.



*inspiring wonder*



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Take a personal voyage of discovery and develop your STEM classroom skills.

Inspire wonder in your students by attending the 2016

# ROADMAP to STEM



## Speakers:

- Jason Latimer's captivating illusions and live effects transports audiences by melding magic and STEM.
- Buddy Berry has ignited instructional models to create the next generation of Dream Schools.
- Wyoming entrepreneur Megan Grassell's Yellowberry journey began with a sketch and a summer job.

**Sessions:** Explore a Doppler on Wheels, Seedskadee National Wildlife Refuge, and Build a Bot. All that and much more!

**REGISTER AT [EDU.WYOMING.GOV/STEM/](http://EDU.WYOMING.GOV/STEM/)**

# Wyoming Connectivity Report

## K-12 Broadband and Digital Learning Policy Academy

March 31, 2016



# Our Mission

EducationSuperHighway

To upgrade the Internet access in every public school classroom in America so that all students can take advantage of the promise of digital learning.

# Three issues may limit classroom connectivity in Wyoming

WY has done a great job delivering 200 kbps/student to districts, but teachers report connectivity issues in the classroom.

## So where's the bottleneck?

### Three possible issues

1. Is 200 kbps sufficient? 50% of districts are buying bandwidth outside of ETS
2. WAN only delivers 200 kbps/student to 50% of schools\* and 2%-19% of schools may need fiber upgrades
3. Schools need Wi-Fi upgrades, and it's unclear why some schools upgrade without support from School Facilities Department and if E-rate is optimized

Affordability doesn't appear to be a barrier for most

### Next steps

- Talk to districts buying additional Internet access to determine why
- Identify which schools not on fiber and ensure they can upgrade if required
- Determine which districts need WAN upgrades to deliver 200 kbps/student
- Assess Wi-Fi upgrade needs and identify gaps in district support

# Governor Matthew Mead



Increasing broadband in Wyoming has been one of my highest priorities... In 2011, just two Wyoming counties had Ethernet speeds – today those speeds are available in every county and all 48 school districts in the state. This is a monumental increase that benefits Wyoming in many ways including diversifying our economy through technology and giving our students the best chance to succeed.

# Wyoming demographic summary

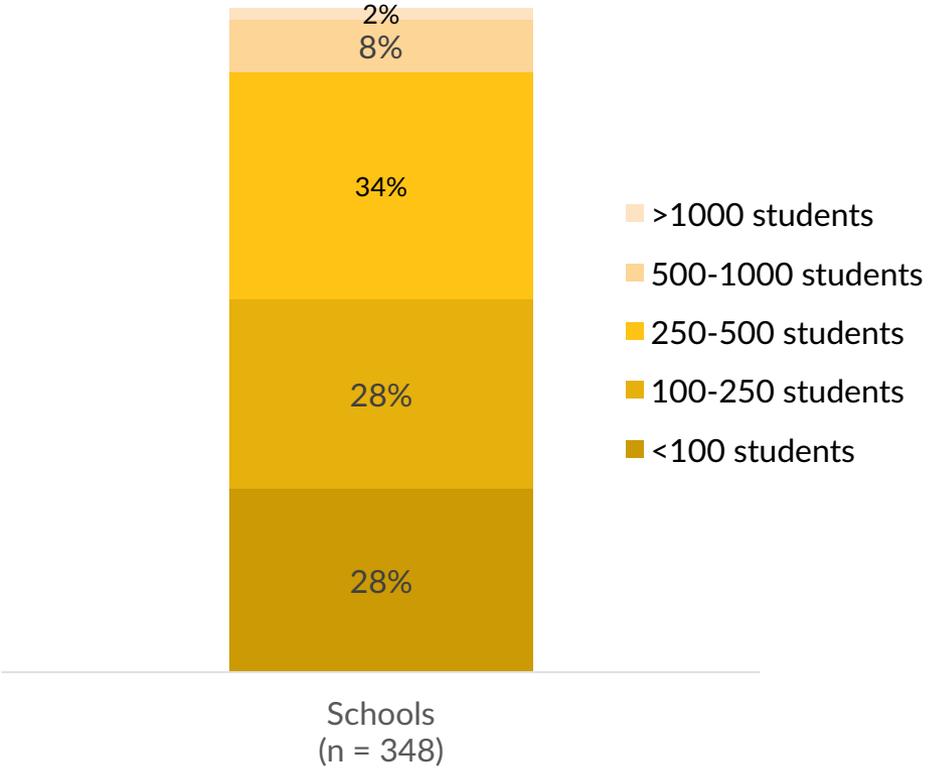
48 districts

348 schools

~90,000 students

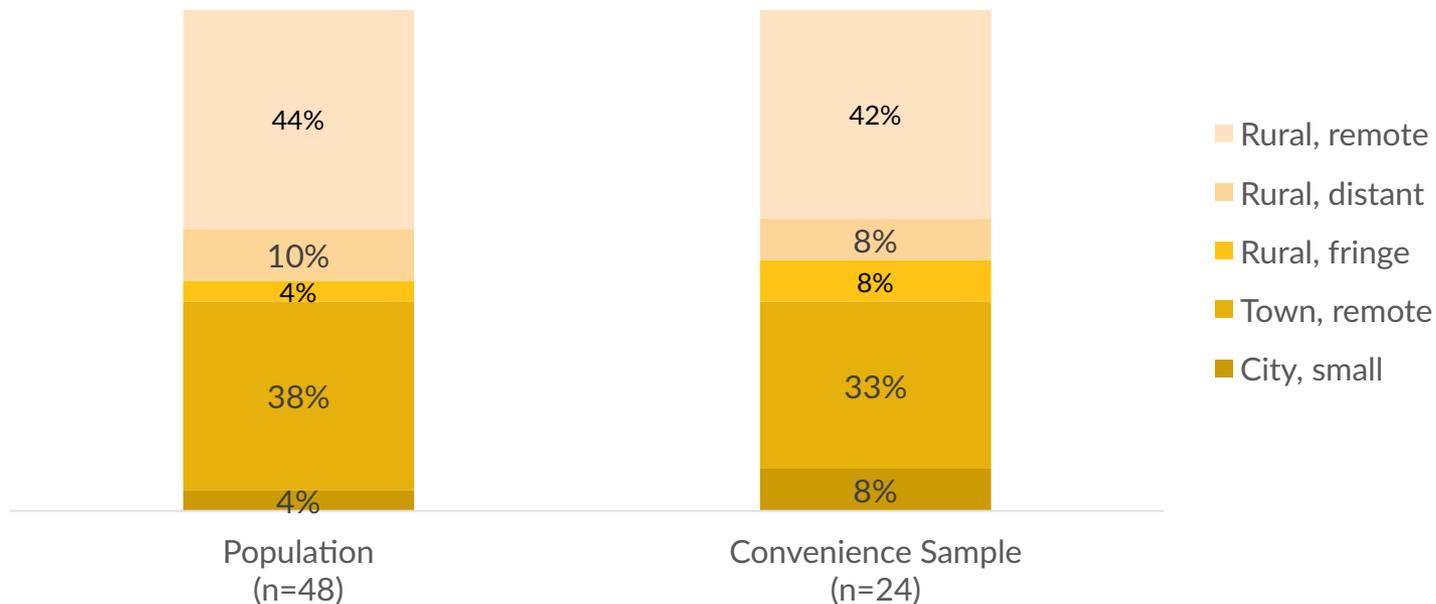
94% of districts are in Rural or Small Town locales

72% of schools have more than 100 students



# Our sample is a good representation of the population

- Is a convenience sample of 24 ESH-verified districts
- Based on E-rate funding requests for 2015-16
- Does not include charter, private, or BIE schools



# National goals can guide action and promote equity

- FCC goals can be used as a benchmark
- The 2014 goal represents a **minimum threshold** for every school
- Once minimum thresholds are met, we suggest monitoring utilization and prepare to increase bandwidth as much as 50% per year

## FCC Goals by Purpose

**Purpose:** Internet Access

**Goal:** 100 kbps per student/staff

**Purpose:** District Transport (WAN)

**Goal:** 1 Gbps per school\*

# Bandwidth needs to be scalable above 100 kbps/student to meet future demand

## Individual Classroom Technology Use

- Classroom technology use is variable and typically driven by individual teachers; devices are primarily in labs and on carts.
- Basic network infrastructure for the school is in place to facilitate online assessments or classroom use, but not all classrooms at the same time.

### Moderate Bandwidth

100 kbps per student Internet bandwidth

## Everyday 1:1 Technology Use

- Technology is widely available; most students interact with a computing device most school days.
- Digital curriculum, but not necessarily rich media, is a major part of one or more subject areas.

### High Bandwidth

1 Mbps per student Internet bandwidth

## Everyday Media-rich 1:1 Technology Use

- Every student has a technology-enabled learning experience during the school day.
- Video and other rich media are used as a central part of the everyday experience.

### Very High Bandwidth

1+ Mbps per student Internet bandwidth



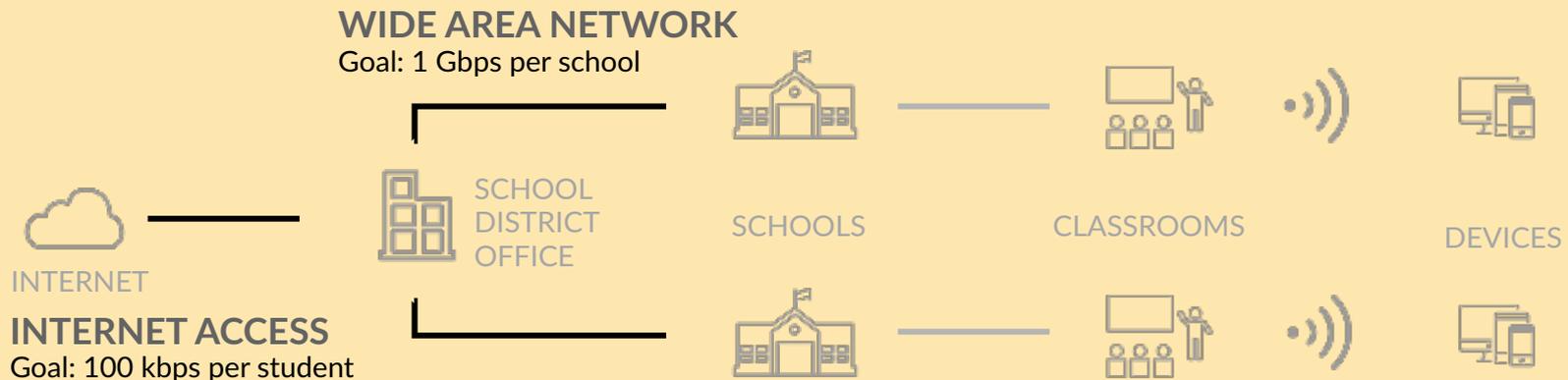
# Goals

# Are school districts meeting FCC connectivity goals?



**100%** of school districts receive 200 kbps/student

**50%** of WAN circuits can deliver 200 kbps/student

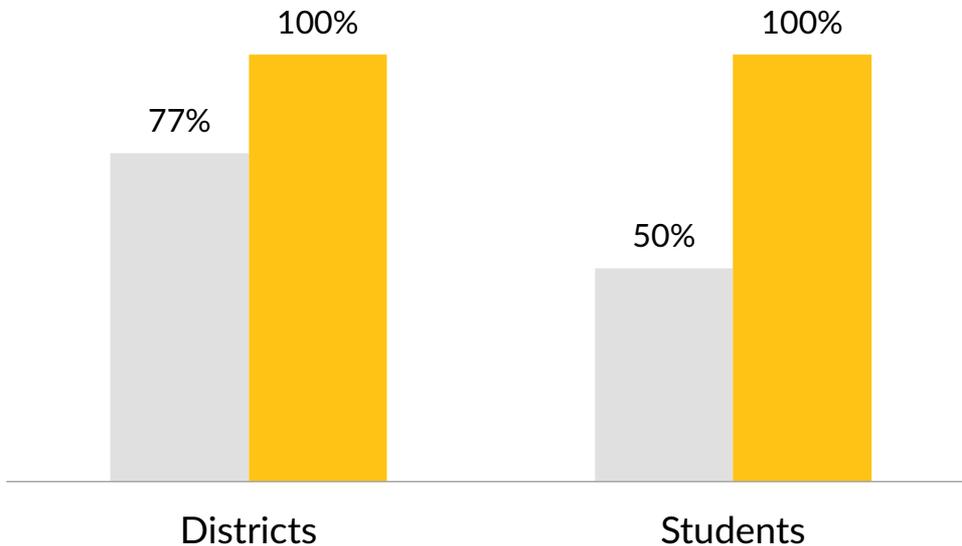


# All districts in WY exceed the 2014 IA goal



Percent of districts and students meeting  
100 kbps/student goal

■ National ■ Wyoming



**#1 in US!**

Currently, all districts in Wyoming are receiving at least 200 kbps/student

But do districts need more?

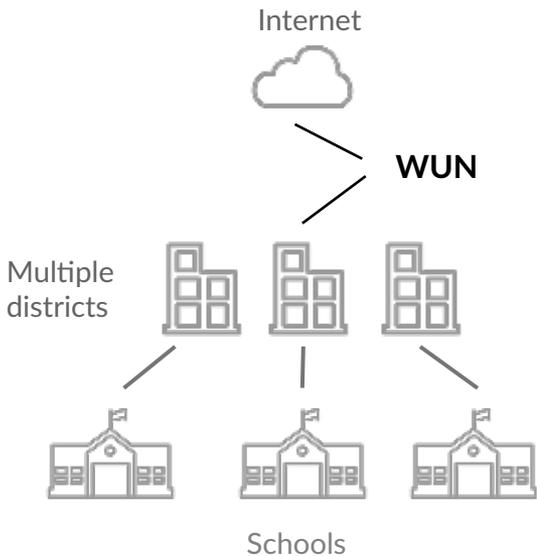
# Issue 1: 50% of districts buy Internet access in addition to WUN bandwidth



Goals

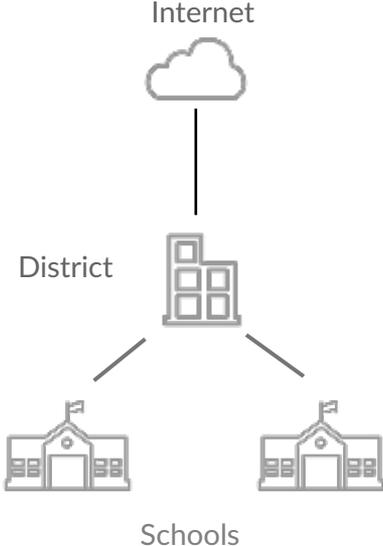
**A** Districts and schools access the Internet through the **Wyoming Unified Network (WUN)**

**100%**



**B** Districts **self-procure additional** Internet services

**50%**



# One possibility: Districts cannot access sufficient connectivity via WUN



“

At this time 100% Internet utilization is a regular occurrence and the district is unable to bring in any more. The [WUN-] provided bandwidth is accessible primarily through a fiber metropolitan network hosted by Centurylink. Supplemental bandwidth from RT and Charter is provided through a direct connection to the school.

Drew Walker, Director of Technology Services  
Natrona County School District #1

October 28, 2015 minutes of Select Committee

## Issue 2: WAN capacity limits some schools' connectivity



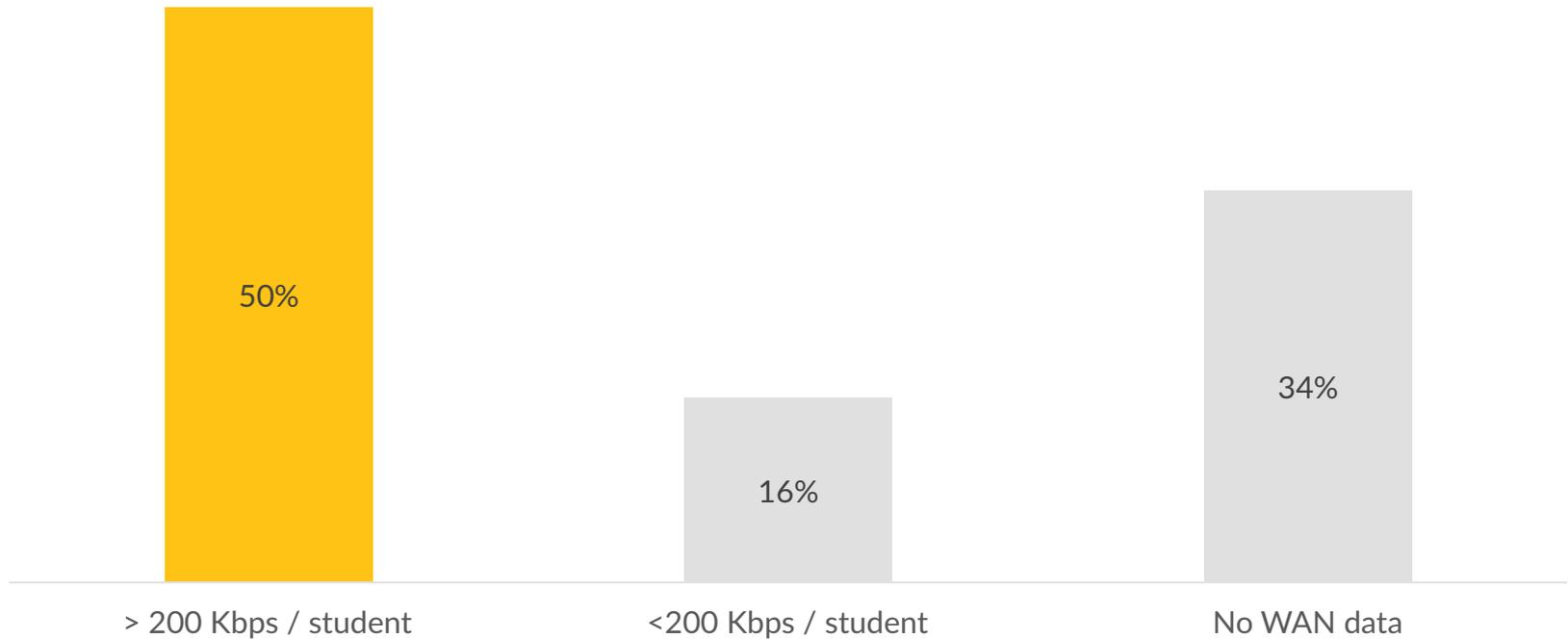
“

Capacity at individual schools ranges from 100 [Mbps] for the two largest high schools to 3 [Mbps] at one of our most distant rural schools. While the district believes there is an acute need for faster Internet at all of our schools, **there are infrastructure constraints.... [faster Internet] is not available at every school site.**

Drew Walker, Director of Technology Services  
Natrona County School District #1

October 28, 2015 minutes of Select Committee

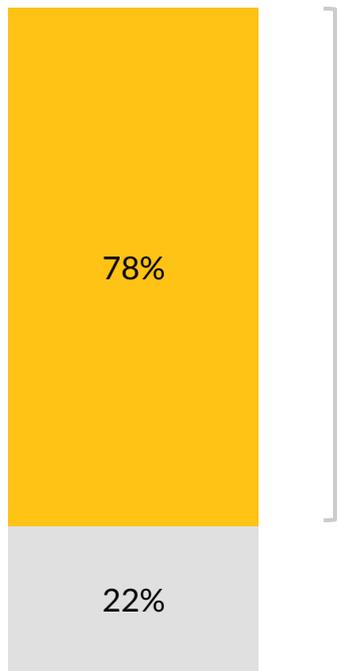
# WANs may be incorrectly sized for WUN IA in 50% of schools



# 78% of schools will need 1 Gbps WAN – only 11% have it today

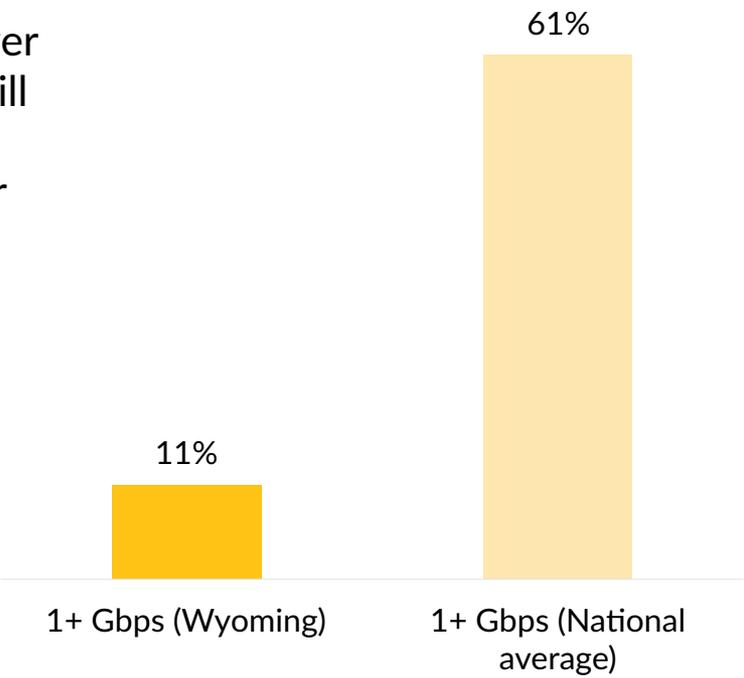


School Size Distribution



Schools with over 100 students will require WAN circuits of 1G or more

Prevalence of 1+ Gbps WAN circuits



Schools in Districts with WAN (n=180)

■ <100 Students    ■ >=100 Students

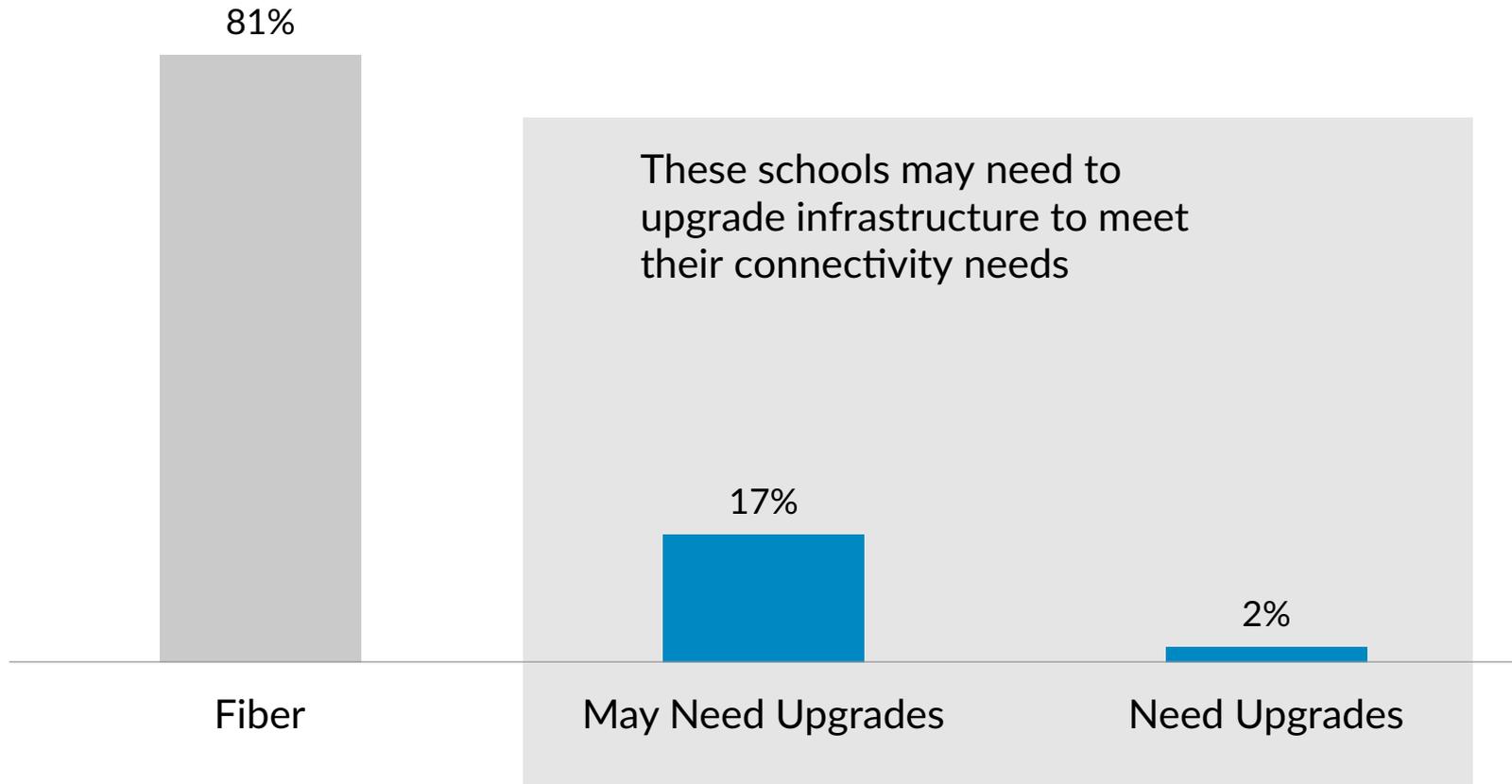


**Fiber**

# Up to 19% of schools may need infrastructure upgrades



## Distribution of Schools by Infrastructure Type



# Opportunity through E-rate to upgrade all schools



E-rate modernization has created an unprecedented opportunity for states to assist schools that need fiber construction

- **Additional 10% E-rate discount if state has a matching fund**
- \$500 K cap has been suspended on construction costs
- More flexibility to pay non-discounted portion of construction costs
- Could help service providers build out their networks

**This opportunity is only guaranteed until 2018 E-rate cycle**

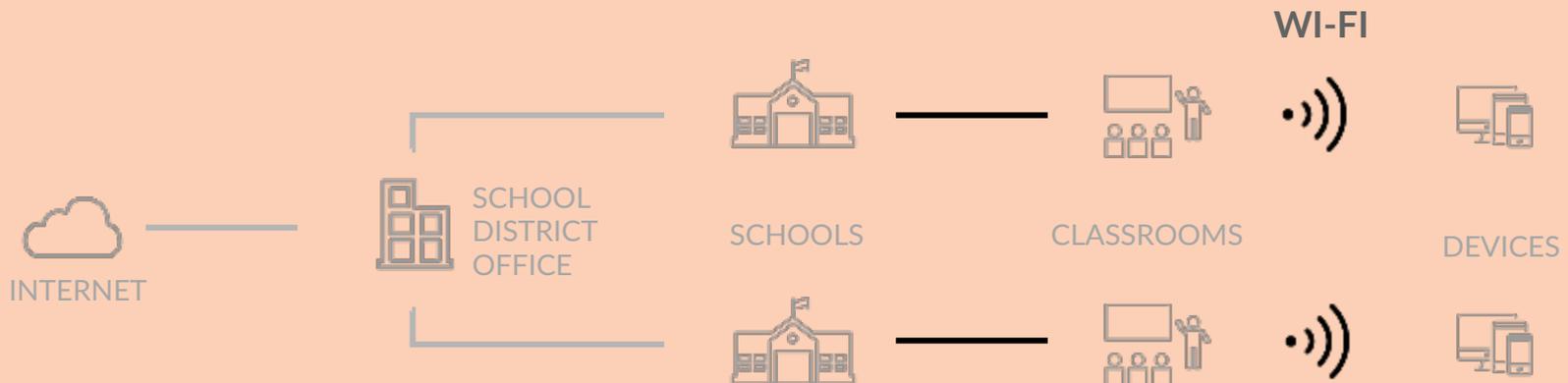


**Wi-Fi**

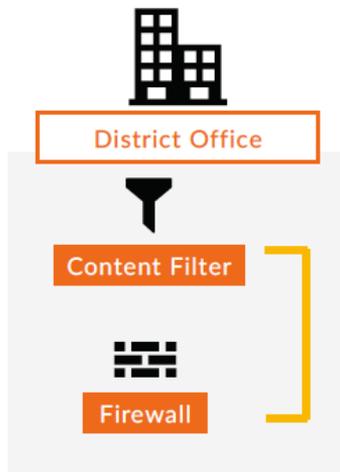
# Issue 3: Do districts need to upgrade Wi-Fi and internal connections?



- The School Facilities Department provides LAN/Wi-Fi equipment, but some schools are buying equipment on their own and may struggle to buy what they need within their E-rate budget
- Need to ensure E-rate is fully leveraged and optimized between state and district applicants



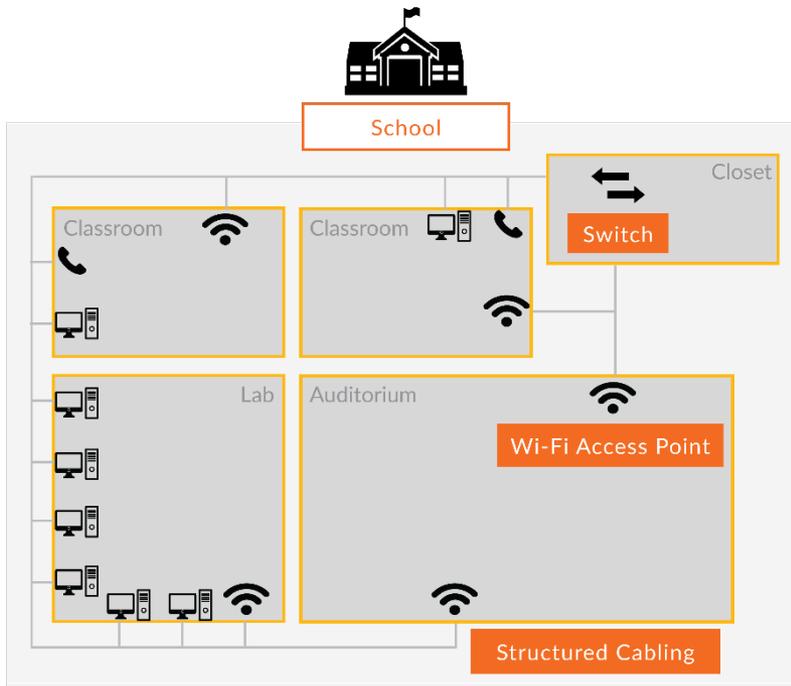
# Overview: Required equipment for school LAN/Wi-Fi



## School district core equipment

- Content Filter
  - Only allows access to web content consistent with district policy
- Firewall
  - Stops unauthorized access to your network from the Internet

# Overview: Required equipment for school LAN/Wi-Fi



## School LAN/Wi-Fi

- Switch
  - Connects all cables together to form a single network
- Structured Cabling
  - Cables in walls connecting classrooms to the switch
- Access Point
  - Allows wireless devices to connect to the school's network
- Content Filter (cannot E-rate)

# WY School Facilities Department



WI-FI

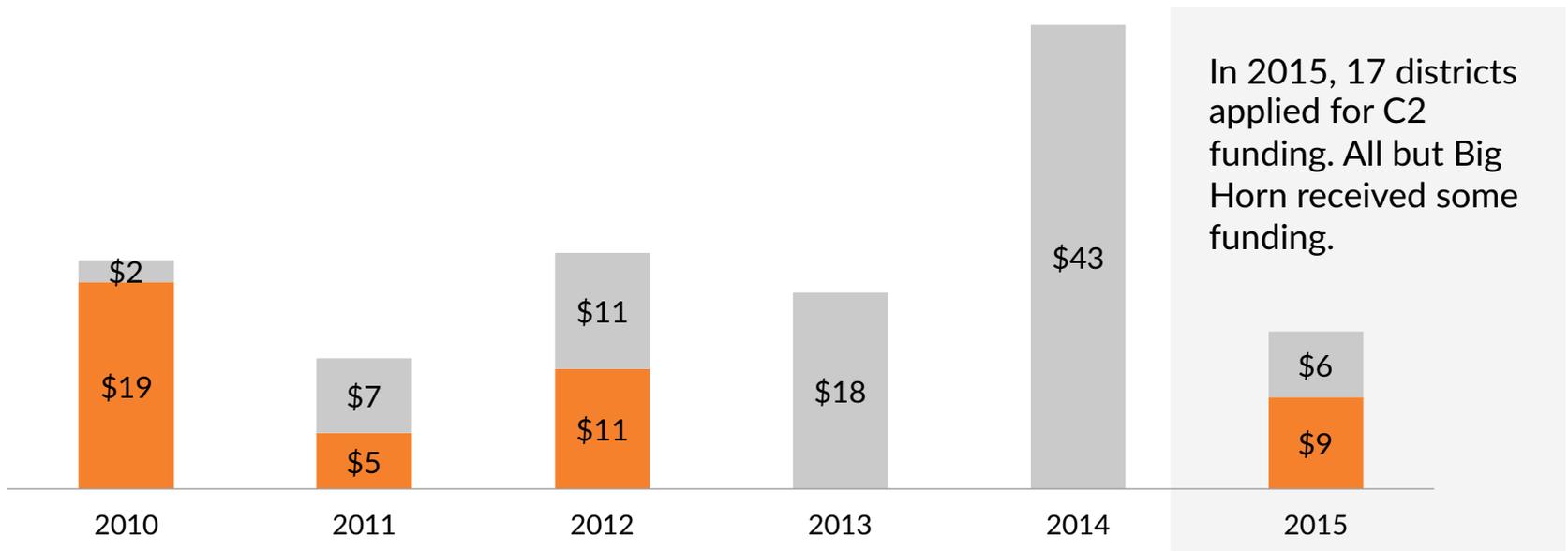
- Responsible for building and maintaining all K-12 public schools in WY
- This includes technology infrastructure, including LAN/Wi-Fi equipment
- Collects substantial site level information that can help LAN/Wi-Fi assessment and planning
- SFD does not E-rate Cat 2 equipment

# Districts need internal connections



## Category 2 funding (in \$ Millions)

■ Funded ■ Not Funded

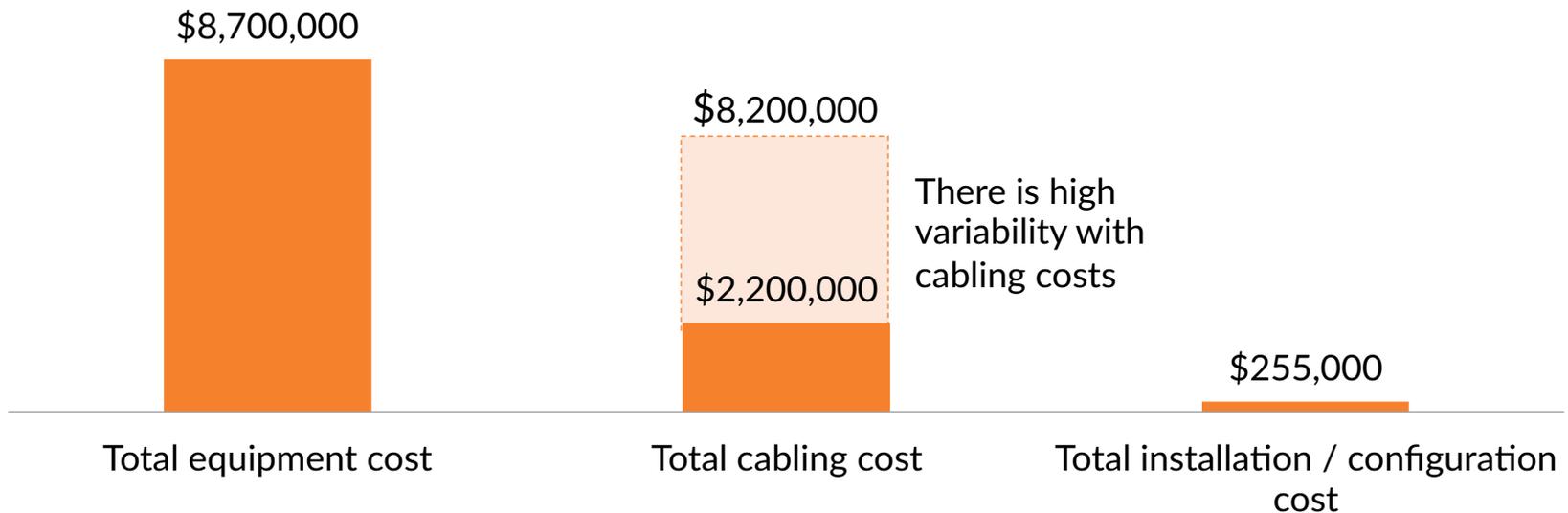


Note: 2013-2014 USAC disbursed virtually no Cat 2 funds

# Wi-Fi upgrade cost can vary depending on cabling



WY Category 2 Cost for next 5 years



# Sizeable Category 2 opportunity remains



WI-FI

## Wyoming by the numbers:

**\$7.1 million**

of \$8.6 million of the state's five year E-rate budget for wired and wireless networks in the building is still available

**35%**

of districts have received Category 2 funding

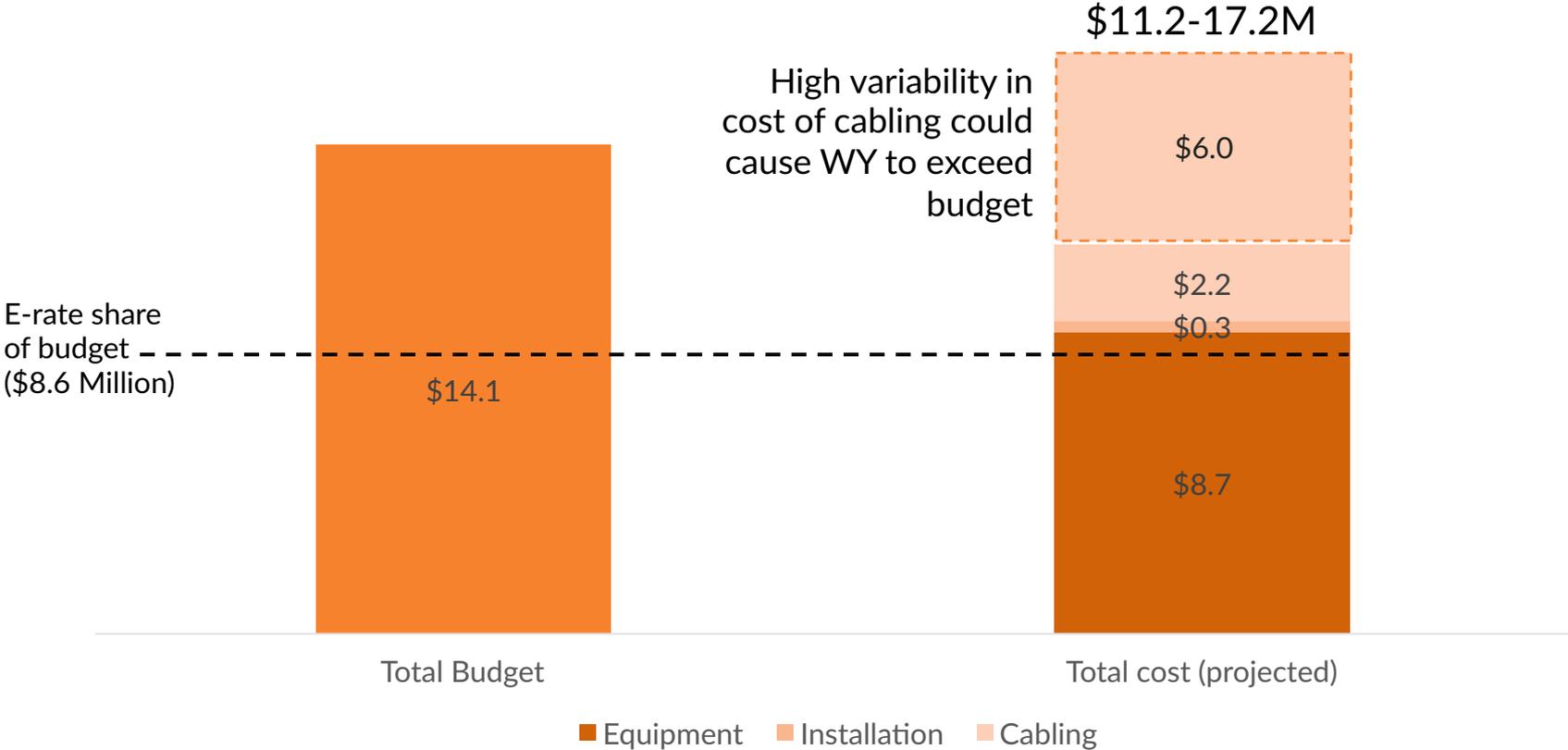
**8%**

of districts have utilized their full \$150/student budget

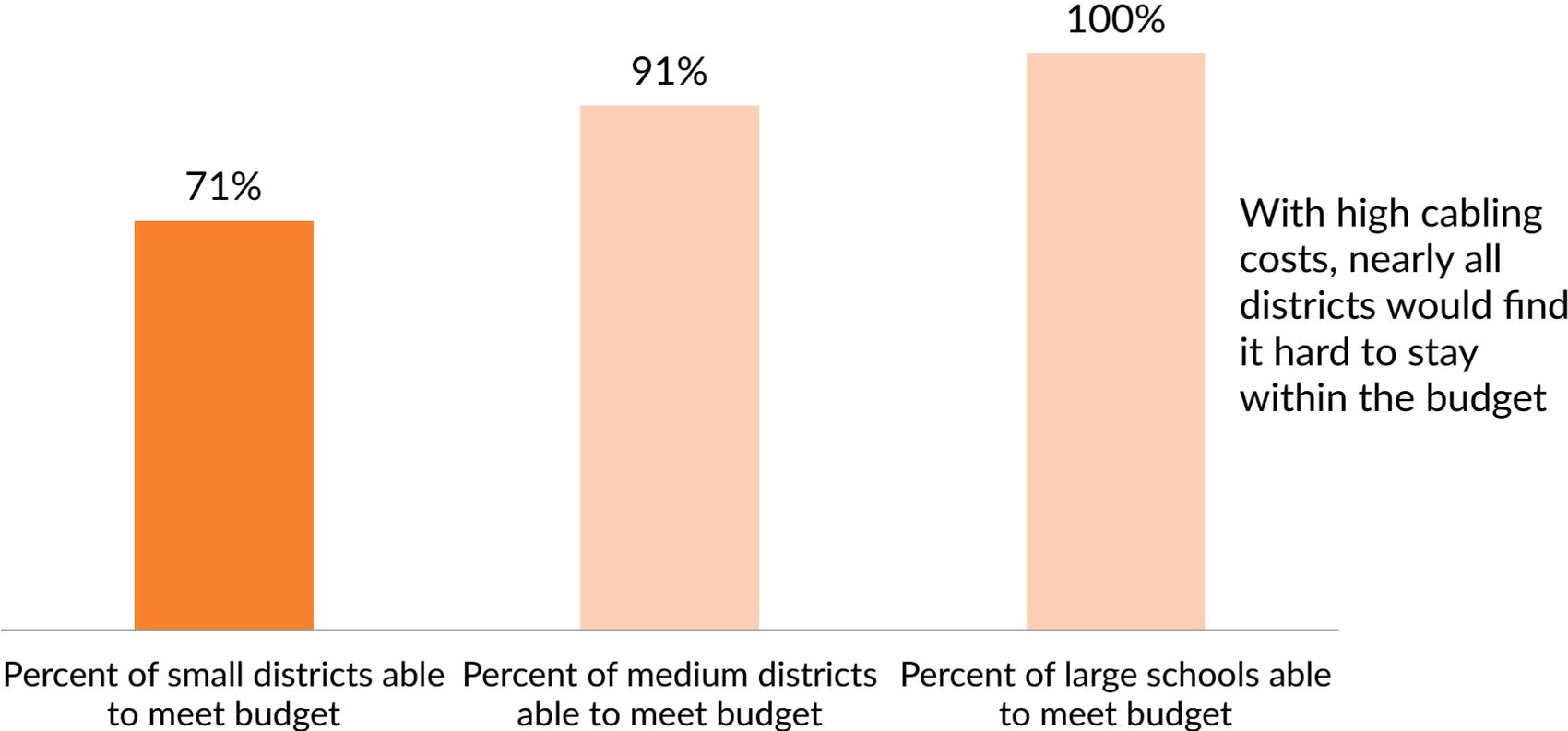
# If cabling costs run high, districts will struggle to stay within their Category 2 budgets



Category 2 budget vs. projected cost (in \$ Millions)



# Small districts will find it harder to stay within the Category 2 budget – and nearly half (43%) of WY districts are small





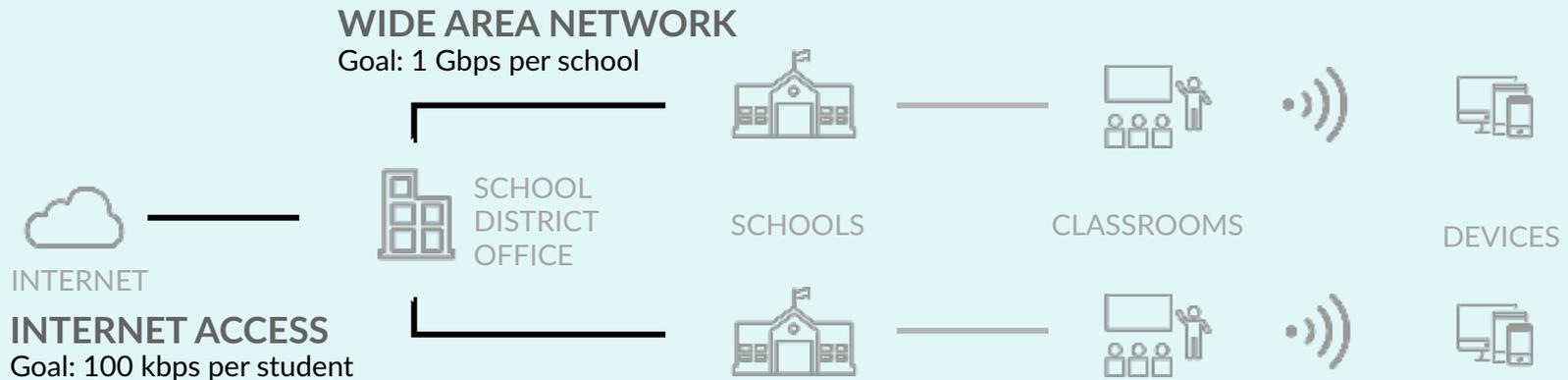
**Affordability**

# Is K-12 broadband affordable for all districts?



Affordability

## Pricing looks reasonable for ETS Internet access and WAN

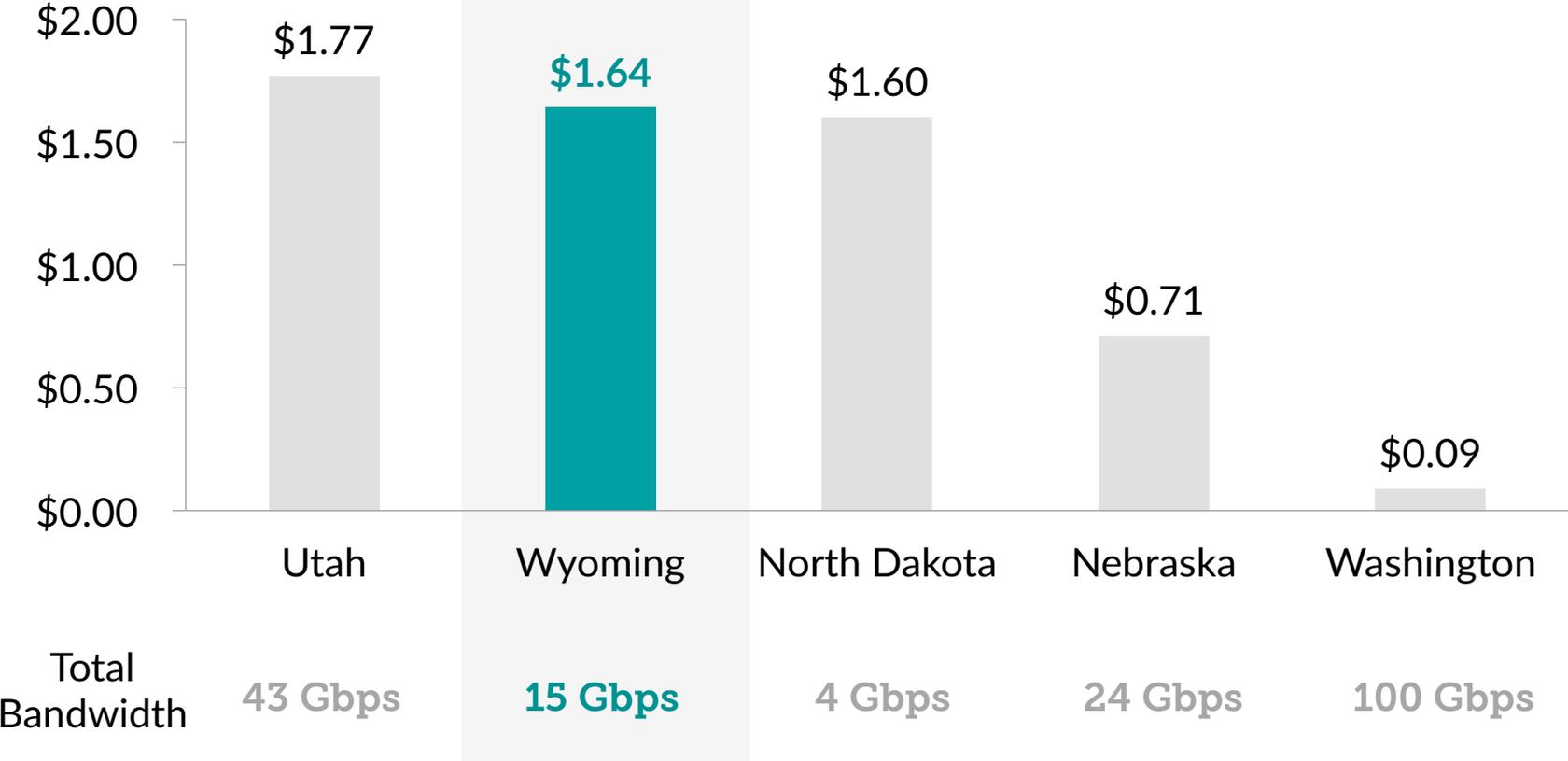


# WUN Internet access spend on par with similar state networks



Affordability

Cost per Mbps of State Networks



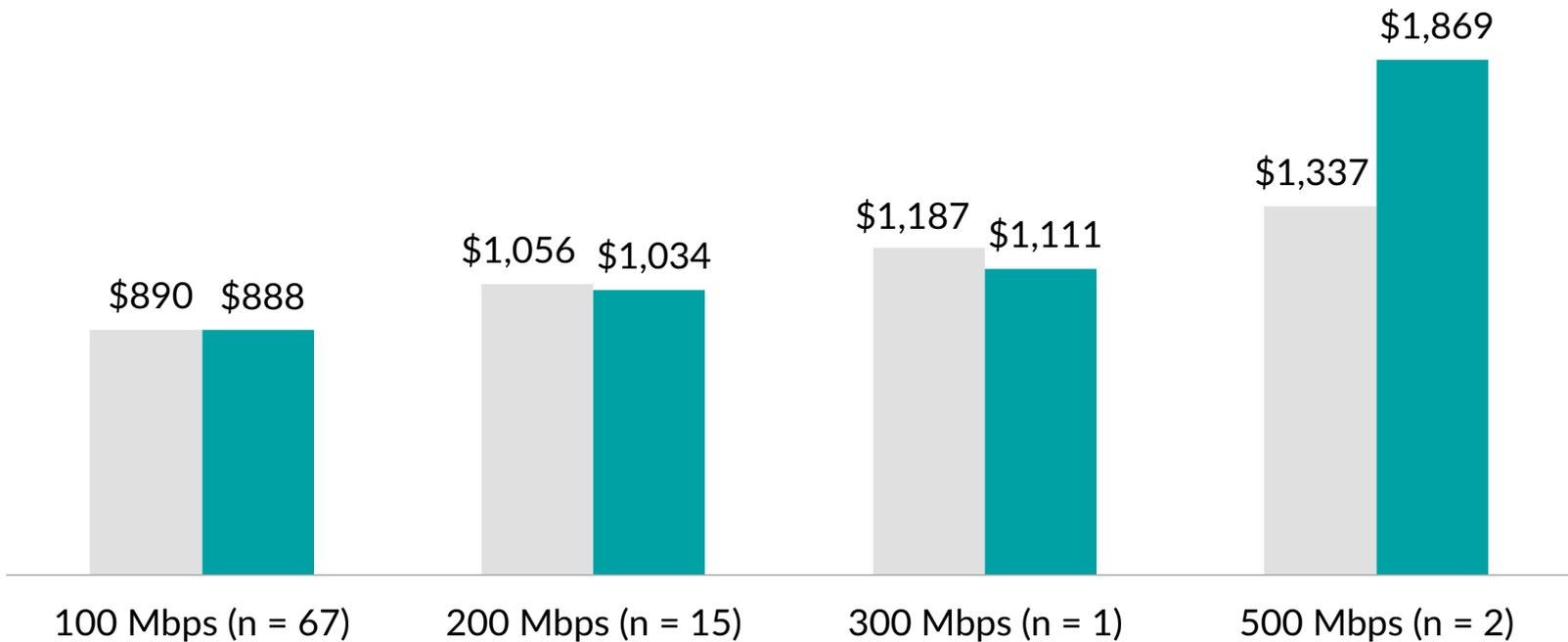
# WAN pricing in WY is on par with national pricing



Affordability

## WAN cost per circuit

■ National ■ Wyoming

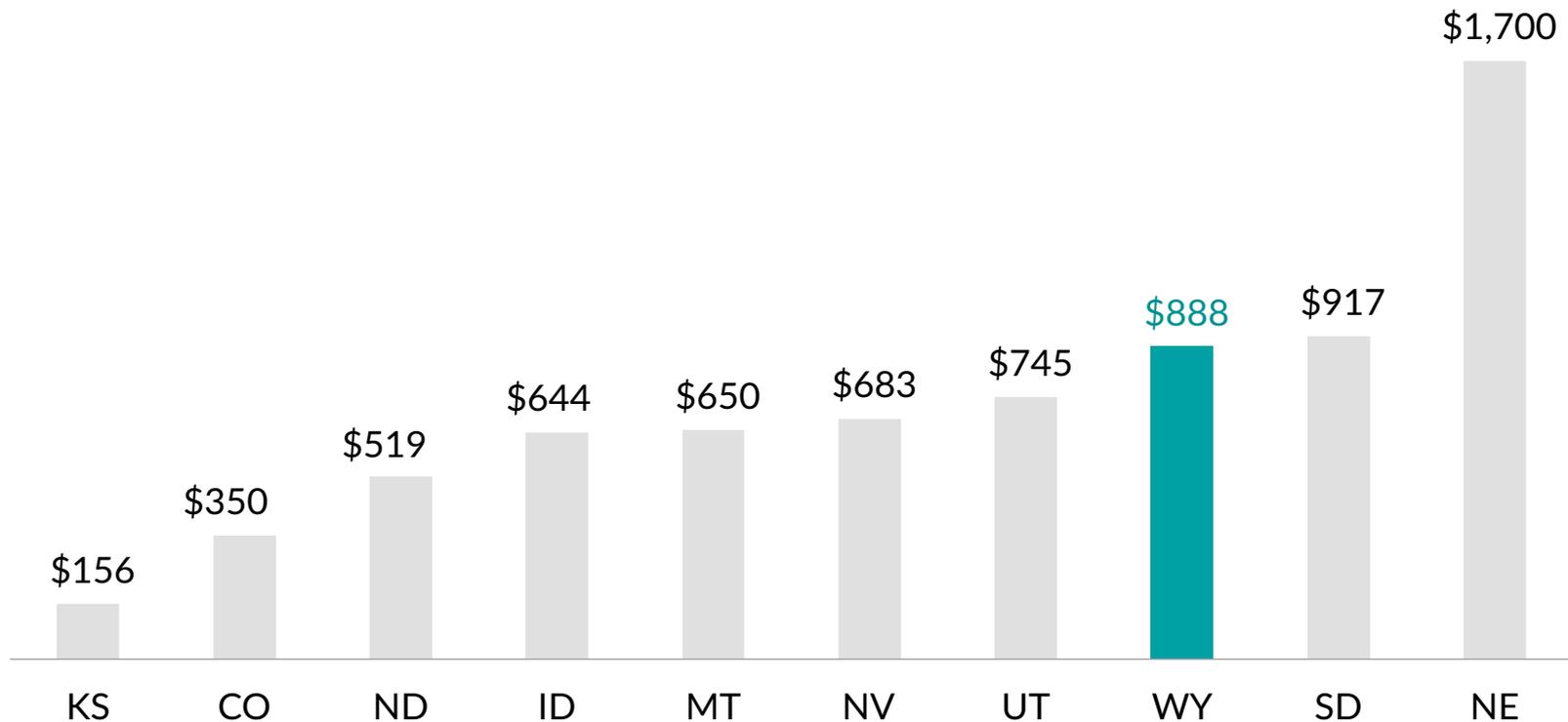


# WAN circuit costs are similar to nearby states



Affordability

WAN cost per circuit for 100 Mbps lit fiber connections



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# Conclusion

# Assess status & confirm districts who need help

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In summary, three issues to investigate:

1. Is 200 kbps sufficient? (50% of districts are buying additional bandwidth outside of ETS )
2. WAN only delivers 200 kbps/student to 50% of schools, and 2%-19% of schools may need fiber upgrades
3. Schools need Wi-Fi upgrades. Unclear why some schools upgrade without support from School Facilities Department and whether E-rate is optimized

## Next steps

- Talk to districts buying additional Internet access
- Identify which schools not on fiber and ensure they can upgrade if required
- Identify which districts need WAN upgrades
- Assess Wi-Fi upgrade needs and identify gaps in district support

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# **From Assessment to Action:**

## **A Framework for Leveraging the Connectivity Report**

# From Assessment to Action: Close the Fiber Gap

FIBER	EDUCATION SUPERHIGHWAY OFFERINGS
1 Identify all schools in the state without fiber using existing information or data collection efforts	<b>Fiber Program</b> dedicated 4-person consulting teams help connect schools through technical and procurement support
2 Assess available funding for state match	<b>Fiber Toolkit</b> online tool that provides guidance to districts on upgrading their network, funding, purchasing, and implementation
3 Reach out to school districts to verify their data and help them understand the need for fiber	
4 Develop and present options for districts to upgrade to fiber	
5 Support procurement of fiber	
6 Monitor implementation of the new fiber solution	

# From Assessment to Action: Ensure Wi-Fi in Classrooms

WI-FI	EDUCATION SUPERHIGHWAY OFFERINGS
1 Identify and define what districts need related to internal connections	<b>Surveys</b> tools to collect data on
2 Assess available resources and capabilities at the state and district level	Category 2 needs from a tech lead and teacher perspective
3 Decide the optimal level of state support (aggregate or support districts), and develop a plan to execute	<b>School Wi-Fi Buyer's Guide</b> vendor-neutral Wi-Fi guide that helps school districts maximize their E-rate budgets
4 Support procurement of Wi-Fi and LAN equipment for each school	<b>Wi-Fi Training and Support</b> webinars to help technology directors with procurement decisions
5 Provide ongoing support	

# From Assessment to Action: Improve Affordability

## AFFORDABILITY

- 1 Identify school districts that are on scalable infrastructure and need to increase their bandwidth to meet goals
- 2 Build awareness around the need for more bandwidth
- 3 Help districts to decide their best course of action by arming them with tools and pricing data
- 4 Support procurement to ensure districts are getting more bandwidth for their budgets

## EDUCATIONSUPERHIGHWAY OFFERINGS

**Compare & Connect K-12**  
data transparency tool to help districts get more bandwidth

**Convenings**  
meetings to share data and support district action for upgrades

---

# Methods

# Sampling methodology



Methods

**UNIT OF ANALYSIS** All analyses were conducted using line item or district-level records as the primary unit. Only those districts whose line item records were verified through EducationSuperHighway’s data management processes were determined to be fit for analysis.

- Each line item in the data sample represents one distinct service reported in a district’s Form 471. School districts often submit multiple funding requests and each funding request may contain multiple line items. A single line item may also contain multiple circuits.
- Since cost and bandwidth data is at the line item level, and a large portion of our analysis involves understanding the relationships between these variables and district connectivity, many analyses in this report required the aggregation of services to the school district level.

**ESH  
CONVENIENCE  
SAMPLE OF  
DISTRICTS**

Districts were considered fit for analysis if:

- 1) all of its line items were determined to be fit for analysis;
- 2) the district itself was cleared of data quality indicators; and
- 3) the district was considered to be a “regular school district” by NCES.

EducationSuperHighway chose not to analyze data relating to public charter schools, private schools, libraries, non-instructional facilities, and schools administered by the Bureau of Indian Education (BIE). The procurement patterns, as well as market dynamics, that impact broadband purchases for these entities may not be similar to those that affect traditional public school districts. These areas represent opportunities for future research.

# Goals calculations



Methods

## **PERCENT OF DISTRICTS / STUDENTS MEETING THE 2014 FCC INTERNET ACCESS GOAL (100 KBPS / STUDENT)**

Each district's total bandwidth was compared to the 2014 FCC target of 100 kbps per student. Districts were classified as either "Meeting 2014 FCC goal" (greater than or equal to 100 kbps per student) or "Not meeting 2014 FCC goal" (less than 100 kbps per student).

# Fiber calculations



Methods

## PERCENT OF SCHOOLS ON SCALABLE CONNECTIONS

For each district, the total number of campuses (accounting for the sharing of services among schools) was compared to the number of scalable circuits received by schools in that district. Circuits received by Non-instructional facilities or charter schools were not included. Percent of schools on scalable connections is calculated by dividing the number of scalable circuits/campuses by the total number of campuses.

### Assumptions:

- All circuits go directly to campuses, unless they have been identified as backbone or middle mile
- Medium, large and mega districts without reported WAN have dark fiber WAN
- Tiny and small districts with more campuses than circuits received have potentially non-scalable circuits

### Scalable technologies are defined as:

- Scalable: lit fiber, dark fiber, OCN, Ethernet >100 Mbps for WAN and >150 Mbps for Internet, broadband over power lines, standalone internet access, etc.
- Potentially scalable: fixed wireless, cable
- Non-scalable: Copper (T1/T3), DSL

# Affordability calculations



Methods

## INTERNET ACCESS COST PER MBPS

Unless otherwise indicated, cost per Mbps was calculated as a weighted average, agnostic of connection speed and connection type.

## CIRCUIT PLANNING

Unless otherwise indicated, circuit pricing is calculated at the line item level, agnostic of connection speed and connect type.

- Internet access circuit pricing includes all bundled Internet line items received by districts.
- WAN circuit pricing includes all WAN line items received by districts.

# Category 2 (C2) calculations



Methods

## STATE CATEGORY 2 FUNDING STILL AVAILABLE

The theoretical maximum amount of funding was calculated by multiplying the number of students in the sample by \$150, the 5-year Category 2 cap. The cost of all Category 2 services applied for during the present funding cycle was later subtracted and the remainder multiplied by the statewide average discount rate (across all applicants) to determine the remaining available funding.

## PERCENT OF DISTRICTS IN A STATE THAT STILL HAVE THE OPPORTUNITY TO USE THEIR \$150/STUDENT BUDGET

The number of districts that are listed to receive funding for any Category 2 services within the funding year, divided by the total number of districts in the state.

## PERCENT OF DISTRICTS IN A STATE THAT HAVE RECEIVED C2 FUNDING

The percent of districts in a state that are listed to receive funding for any Category 2 services within the funding year which accumulate to be equal to or greater than \$150 per student. Note that the C2 total costs included in this calculation are only for those going to district recipients.

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# Appendix

# Why are these districts buying additional bandwidth?



District	Primary Service Type	Total Bandwidth	Aggregate Cost per Mbps	Provider
Carbon County #1	Lit Fiber	2011.5	\$13.20	Fatbeam LLC
Washakie County #1	Lit Fiber	2000	\$0.48	Fatbeam LLC
Weston County #1	Lit Fiber	400	\$1.06	RT Communications
Carbon County #2	Lit Fiber	210	\$13.00	Union Telephone Co.
Park County	Lit Fiber	200	\$12.10	TCT West
Big Horn County #1	Lit Fiber	125	\$3.84	TCT West
Big Horn County #2	Lit Fiber	110	\$10.87	TCT West
Fremont County #14	Fixed Wireless	150	\$51.81	Advanced Comm.
Fremont County #21	Lit Fiber	100	\$19.14	Advanced Comm.
Unita County #6	Lit Fiber	100	\$15.30	Union Telephone Co.
Albany County	Unknown	65	\$1.68	Charter Comm
Fremont County #2	DSL	60	\$1.88	Dubois Telephone Ex.

# Why are these districts buying additional bandwidth?

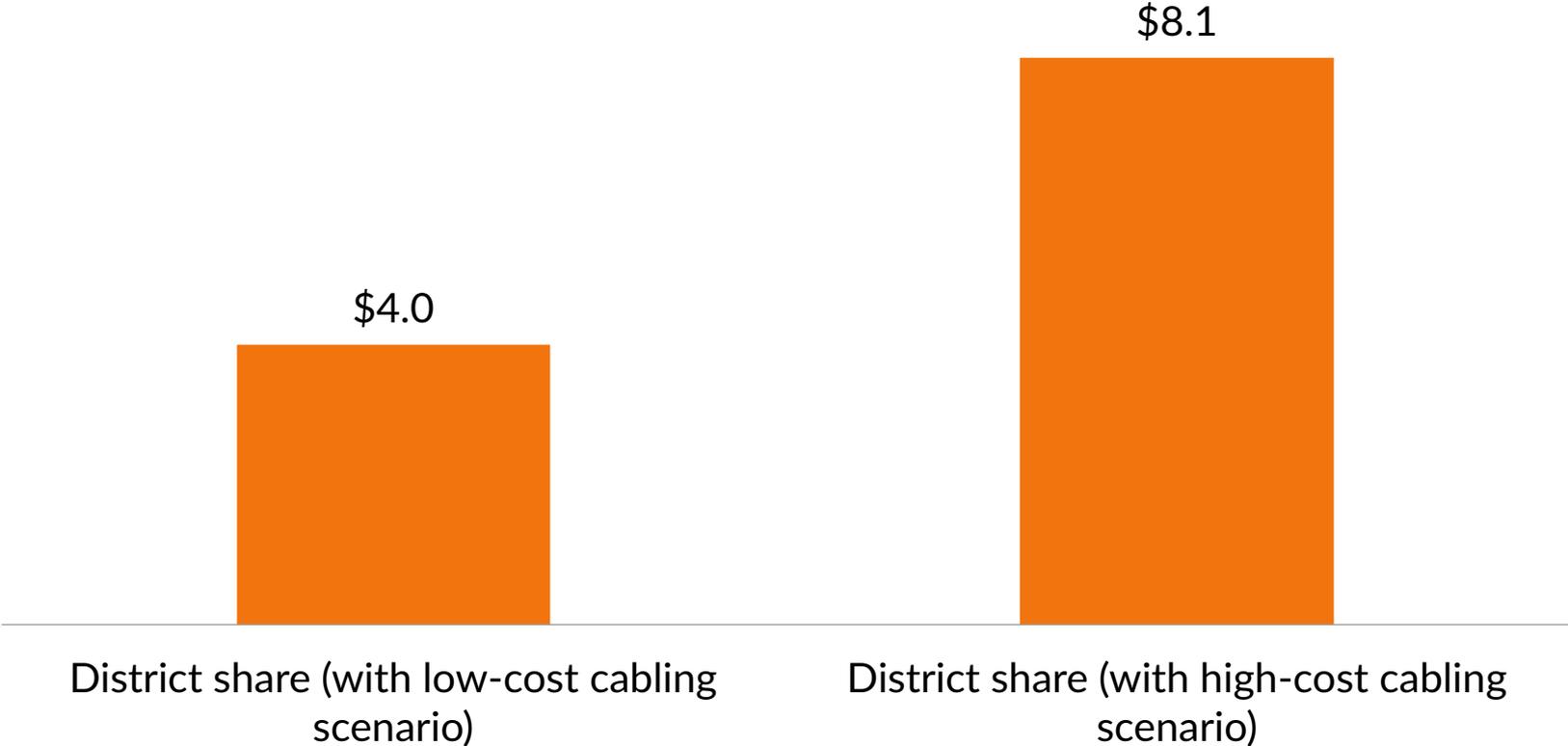


District	Service Type	Bandwidth	Cost per Mbps	Provider
Sheridan County #3	Lit Fiber	50	\$58.69	Range Telephone Coop.
Niobara County	DSL	27	\$7.91	CenturyLink Qwest
Fremont County #24	DSL	21	\$8.27	RT Communications
Johnson County	DSL	20	\$4.64	Visionary Comm.
Laramie County	Unknown	20	\$7.47	RT Communications
Washakie County #2	DSL	20	\$2.30	Tri County Telephone
Unita County #4	DSL	24	\$65.32	Union Telephone Co.
Sublette County	DSL	10	\$7.23	CenturyLink Qwest
Sweetwater County	Fixed Wireless	3.2	\$120.29	Hughes Network
Converse County	T-1	1.5	\$33.30	OrbitCom
Teton County	T-1	1.5	\$35.34	CenturyLink Qwest
Big Horn County #3	Lit Fiber	-	n/a	TCT West

# High-cost scenarios result in exceeded budgets, and therefore districts have to pay \$4-8M to upgrade all schools



District share of Category 2 cost (in \$ Millions)



# About Us

EducationSuperHighway

EducationSuperHighway is the leading non-profit focused on upgrading the Internet access in every public school classroom in America. We believe that digital learning has the potential to provide all students with equal access to educational opportunity and that every school requires high-speed broadband to make that opportunity a reality.

EducationSuperHighway's data-driven programs accelerate upgrades in America's schools. We help school districts and state leaders develop strategies to upgrade their K-12 networks, get fiber to schools that need it, provide guidance for effective Wi-Fi purchases, and make broadband more affordable. Our work served as a catalyst for the modernization of the Federal Communications Commission's \$3.9 billion E-rate program, earning our CEO the 2015 Visionary of the Year award from the San Francisco Chronicle. To learn more about our programs and services for governors, state partners, and school districts, visit our website at [www.educationsuperhighway.org](http://www.educationsuperhighway.org).

# Wyoming Statewide Digital Learning Plan

## Listening Tour Sessions Major Themes

### Listening Tour Summary Input

Everyone agreed that it is imperative to provide our students with the best digital learning experiences possible to increase their engagement in learning and to ensure they are prepared for life after they graduate.

### Internet Access Within Schools

Despite the increase in broadband across the state, there are still schools with limited internet access.

### Infrastructure and Hardware

The necessary infrastructure to support effective digital learning initiatives is lacking. This includes

- Lack of technical support (staff is limited)
- Lack of implementation (may have, but not use)

Devices are in limited supply or are outdated and poorly maintained

### Leadership and Change Management

- Consistent direction
- Prioritize funding and ed tech integration
- Support learning opportunities for teachers
- Support risk taking

### Educator Development

Many participants stressed the need for professional development opportunities so that teachers can become

- Accustomed to their changing role within digital learning environments and
- Comfortable with seamlessly integrating technology

A need for better preservice preparation for teachers was also expressed

### Learner Development

Participants reiterated the importance of facilitating students' transformation into

- Autonomous digital citizens,
- Able to research and critically examine questions independently,
- Effectively communicate and collaborate with others through both digital and face-to-face mediums, and
- Apply the technological experiences and training they are receiving

### **Connectivity Outside of School**

- Many students come from homes with no access to internet and stress the need for public infrastructure to provide connectivity to their communities (e.g., libraries, after school lab hours, etc...).

### **Rural Opportunities**

- Need for students in remote areas to access myriad opportunities for online coursework and learning resources that would not otherwise be available.

### **Statewide Framework**

Setting clear standards for digital learning and provide:

- Professional development opportunities
- Opportunities for educators across the state to network, connect and exchange best practices
- Guidelines for implementation/integration
- Communication structures

## Statewide Digital Learning Plan Advisory Panel Members

Partner	Role	Representative(s)
Classroom Teacher/Instructional Technology Integrator	Collaborative Partner	Scott Mecca
Department of Enterprise Technology Services	Collaborative Partner	Troy Babbitt
Public Service Commission	Collaborative Partner	Tom Wilson
School District Boards of Trustees	Collaborative Partner	Brian Farmer
School District Curriculum Coordinators	Collaborative Partner	R.J. Kost
School District Superintendents	Collaborative Partners	Jon Abrams Dustin Hunt Bruce Thoren
School District Technology Directors	Collaborative Partners	Jaraun Dennis Joshua Jerome James Kapptie
School Librarians	Collaborative Partners	Jennifer Markus Melissa Sipe
State Board of Education	Collaborative Partner	Paige Fenton-Hughes
University of Wyoming	Collaborative Partners	Christi Boggs Tonia Dousay Jeff Miller
Wyoming Distance Education Consortium	Collaborative Partner	Les Balsiger
Wyoming Community College Commission	Collaborative Partner	Andy Corbin
Wyoming Department of Education	Lead Agency	Laurel Ballard Lori Kimbrough Alicia Kearns Aaron Roberts
Wyoming Department of Transportation	Collaborative Partner	Ken Shultz
Wyoming State Library	Collaborative Partners	Jamie Markus Brian Greene

NORTH CAROLINA

# DIGITAL LEARNING PLAN

## Digital Learning Progress Rubric

Version 2

Prepared by the Friday Institute for Educational Innovation



## Introduction

The North Carolina Digital Learning Progress Rubric is a strategic planning tool, or “roadmap,” intended to support North Carolina’s educators and communities in the transition to digital-age teaching and learning. The rubric is designed to help school district teams reflect on the current stage of their transition, plan next steps, and track their progress moving forward.

This rubric contains five main areas: *Leadership*; *Technology and Infrastructure*; *Content and Instruction*; *Professional Learning*; and *Data and Assessment*. Each main area is broken down into three to seven key elements (e.g., “Shared Vision,” “Professional Development Format,” “Access to Digital Content,” etc.).

## Guide for Use

Members of a district leadership team can work individually or together to rate their district’s progress on each of the 25 key elements. They may rate the progress as either “Early” (the least advanced ranking), “Developing,” “Advanced,” or “Target” (the most achieved ranking). A district may consider having different individuals or groups determine ratings separately, and then schedule a time for all parties to come together and form consensus for each key element score. The more data (quantitative or qualitative, formal or informal, etc.) that can be used to inform the ranking process, the more accurate and effective the strategic planning process will be. A glossary of terms used throughout the rubric may be found in Appendix A.

To make the scoring system the most effective, the following rule should be used: all indicators (sub-bullets) within a particular cell should be marked as “achieved” for a district to give itself the particular ranking assigned to that cell (Early, Developing, Advanced, or Target). For example, if the district has achieved two of three indicators listed in the Advanced cell, then the district should rank itself as Developing. The district can rank itself as Advanced once it has achieved all three indicators listed. A scoring sheet may be found in Appendix B.

Once a self-assessment on the rubric has been completed, the user should reflect on the results and identify priority areas for improvement. The user might ask, “What are one to three action steps that can be taken to move closer to achieving the desired goals?” A guide for data interpretation and transition planning may be found in Appendix C.

**NOTE: Every school and district in North Carolina must identify and comply with all relevant federal (e.g., FERPA, CIPA), state, and local laws related to digital teaching and learning.**

LEADERSHIP				
	Early	Developing	Advanced	Target
L1 Shared Vision	<ul style="list-style-type: none"> <li><input type="checkbox"/> A district leadership team is being created for the purposes of planning and leading digital teaching and learning.</li> <li><input type="checkbox"/> A vision for digital teaching and learning has not yet been created.</li> <li><input type="checkbox"/> A planned effort to discuss the eventual vision for digital teaching and learning with faculty, staff, and other stakeholders has not yet been put in place.</li> <li><input type="checkbox"/> There is no consistent effort to have district and school leaders consistently communicate about digital teaching and learning practices.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A district leadership team, consisting of a <i>few</i> individuals, collaboratively crafts <i>the vision</i> for digital teaching and learning.</li> <li><input type="checkbox"/> A <i>vision</i> for digital teaching and learning <i>guides district digital education activities</i>.</li> <li><input type="checkbox"/> District and school leadership <i>annually</i> promote the district vision for digital teaching and learning <i>to faculty and staff</i>.</li> <li><input type="checkbox"/> School leaders <i>communicate about digital teaching and learning practices but do not model effective use of digital resources</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A district leadership team, consisting of <i>many</i> individuals, collaboratively crafts <i>the vision, goals, and strategies</i> for digital teaching and learning.</li> <li><input type="checkbox"/> The <i>vision, goals, and strategies</i> for digital teaching and learning <i>exist as a self-contained initiative</i>.</li> <li><input type="checkbox"/> District and school leadership <i>occasionally</i> promote the district vision for digital teaching and learning <i>to all stakeholders, including faculty, staff, students, parents, and community members</i>.</li> <li><input type="checkbox"/> School leaders <i>serve as lead learners for digital teaching and learning practices, modeling effective use of high quality digital resources</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A <i>diverse, representative</i> district leadership team, <i>consisting of district and school administrators, teachers, students, parents, and community members</i>, collaboratively crafts <i>the vision, goals, and strategies</i> for digital teaching and learning.</li> <li><input type="checkbox"/> The <i>vision, goals, and strategies</i> for digital teaching and learning <i>are integrated as core components of the district's strategic plans and other high-level guiding frameworks</i>.</li> <li><input type="checkbox"/> District and school leadership <i>consistently</i> promote the district vision for digital teaching and learning <i>to all stakeholders, including faculty, staff, students, parents, and community members</i>.</li> <li><input type="checkbox"/> <i>District and school leaders serve as lead learners for digital teaching and learning practices, modeling effective use of high quality digital resources</i>.</li> </ul>
L2 Personnel	<ul style="list-style-type: none"> <li><input type="checkbox"/> District schools require teacher leaders and other faculty to lead, learn, and share together about digital teaching and learning in meetings before or after school.</li> <li><input type="checkbox"/> Schools within the district do not yet make digital teaching and learning skills a requirement or priority for any teaching position.</li> <li><input type="checkbox"/> District schools do not yet identify teacher-leaders for digital teaching and learning.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Every school within the district has <i>at least one part-time instructional coach for technology or at least one full-time certified school library media coordinator</i>.</li> <li><input type="checkbox"/> Schools within the district recruit, hire, and develop <i>a few</i> teachers on their faculty to have high quality digital teaching and learning skills.</li> <li><input type="checkbox"/> Every district school has <i>informal pathways to identify current teacher-leaders</i> for digital teaching and learning.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Every school within a district has <i>at least one full-time instructional coach for technology and at least one full-time certified school library media coordinator</i>.</li> <li><input type="checkbox"/> Schools within the district recruit, hire, and develop <i>many</i> teachers on their faculty to have high quality digital teaching and learning skills.</li> <li><input type="checkbox"/> Every district school has <i>informal pathways to identify and develop current and future teacher-leaders</i> for digital teaching and learning.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Every school within the district has <i>at least one full-time instructional technology facilitator and at least one full-time certified school library media coordinator</i>.</li> <li><input type="checkbox"/> Schools within the district recruit, hire, and develop <i>all</i> teachers on their faculty to have high quality digital teaching and learning skills.</li> <li><input type="checkbox"/> Every district school has <i>formal pathways to identify and develop current and future teacher-leaders</i> for digital teaching and learning.</li> </ul>

LEADERSHIP				
	Early	Developing	Advanced	Target
L3 Communication & Collaboration	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital tools are <i>rarely</i> used to provide just-in-time information about important district activities and to connect parents, community members, and other stakeholders to the district using two-way communication.</li> <li><input type="checkbox"/> School leaders do not yet maintain a digital culture within their schools, in which the collaborative, transparent, free-flow exchange of information takes place among sub-groups of school faculty and staff.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital tools are <i>occasionally</i> used to provide just-in-time information about important district activities and to connect parents, community members, and other stakeholders to the district using two-way communication.</li> <li><input type="checkbox"/> <i>Few</i> school leaders maintain a digital culture within their school, in which the collaborative, transparent, free-flow exchange of information takes place among sub-groups of school faculty and staff.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital tools are <i>consistently</i> used to provide just-in-time information about important district activities and to connect parents, community members, and other stakeholders to the district using two-way communication.</li> <li><input type="checkbox"/> <i>Many</i> school leaders maintain a digital culture within their school, in which the collaborative, transparent, free-flow exchange of information takes place among sub-groups of school faculty and staff.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital tools are <i>continuously</i> used to provide just-in-time information about important district activities and to connect parents, community members, and other stakeholders to the district using ongoing, two-way communication.</li> <li><input type="checkbox"/> <i>All</i> school leaders maintain a collaborative, transparent digital culture within their school, in which the free-flow exchange of school information takes place among all school faculty and staff.</li> </ul>
L4 Sustainability	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district has not yet considered a sustainability and scalability plan for maintaining and expanding digital services for more students in more contexts.</li> <li><input type="checkbox"/> The district has not yet developed a long-term funding plan for digital teaching and learning.</li> <li><input type="checkbox"/> The district leadership team <i>is not yet considering</i> options for supporting digital teaching and learning through managed services.</li> <li><input type="checkbox"/> The district <i>is not yet considering</i> efficiency, effectiveness, or the total cost of ownership for services to be purchased.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district <i>is considering developing</i> a sustainability and scalability plan for maintaining and expanding digital services for more students in more contexts, <i>but has not yet studied financial projections or budget items.</i></li> <li><input type="checkbox"/> The district has a long-term funding plan that <i>provides ongoing funding for digital teaching and learning with discretionary funds and accommodates for refresh cycles.</i></li> <li><input type="checkbox"/> The district leadership team <i>is exploring</i> options for supporting digital teaching and learning through managed services.</li> <li><input type="checkbox"/> The district <i>is building their capacity to evaluate</i> efficiency, effectiveness, or the total cost of ownership for services to be purchased.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district <i>has</i> a sustainability and scalability plan for maintaining and expanding digital services for more students in more contexts <i>that is updated with new financial projections, budget items, and priority areas every couple years.</i></li> <li><input type="checkbox"/> The district has a long-term funding plan that <i>includes: ongoing funding for digital teaching and learning as a core operating cost; leverages at least one external funding source; and accommodates for refresh cycles.</i></li> <li><input type="checkbox"/> The district leadership <i>has identified</i> options for supporting digital teaching and learning through managed services.</li> <li><input type="checkbox"/> The district <i>occasionally evaluates</i> efficiency, effectiveness, or the total cost of ownership for services to be purchased.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district <i>has</i> a sustainability and scalability plan for maintaining and expanding digital services for more students in more contexts <i>that is continually updated with new financial projections, budget items, and priority areas and is aligned to the district improvement plan.</i></li> <li><input type="checkbox"/> The district has a comprehensive long-term funding plan that <i>includes: ongoing funding to fully fund digital teaching and learning; leverages multiple external funding sources; and accommodates for refresh cycles, product upgrades, and expansion of services.</i></li> <li><input type="checkbox"/> The district <i>uses</i> options for supporting digital teaching and learning through managed services.</li> <li><input type="checkbox"/> The district <i>consistently evaluates</i> efficiency, effectiveness, or the total cost of ownership for services to be purchased.</li> </ul>

LEADERSHIP				
	Early	Developing	Advanced	Target
L5 Policy	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-specific Terms of Use agreements including policies for data privacy and confidentiality <i>are not yet in place.</i></li> <li><input type="checkbox"/> District and school digital technology policies include language for an Acceptable Use policy, but have not been updated within the past two years and do not yet have a systematic process for consistent policy updates.</li> <li><input type="checkbox"/> District leaders <i>have not yet considered</i> policies that enable and support: 24/7 access to devices and content, student-owned mobile devices in the school setting, flexible uses of time, and alternative assessments.</li> <li><input type="checkbox"/> School and district digital technology policies <i>are not yet aligned</i> to the district improvement plan and <i>do not mention</i> the role of digital technology in furthering the district toward the goals outlined in the improvement plan.</li> <li><input type="checkbox"/> School and district policies do not yet mention the role of digital technology in a student-centered learning environment.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-specific Terms of Use agreements including policies for data privacy and confidentiality <i>have been discussed by leadership and are in the process of being created.</i></li> <li><input type="checkbox"/> District and school digital technology policies <i>include an Acceptable Use policy, but do not have a systematic process for consistent or continual policy updates.</i></li> <li><input type="checkbox"/> District leaders <i>are considering</i> policies that enable and support: 24/7 access to devices and content, student-owned mobile devices in the school setting, flexible uses of time, and alternative assessments.</li> <li><input type="checkbox"/> School and district digital technology policies <i>are in the process of being aligned</i> to the district improvement plan and <i>do not mention</i> the role of digital technology in furthering the district toward the goals outlined in the improvement plan.</li> <li><input type="checkbox"/> School and district leaders <i>are discussing</i> the role of digital technology in a student-centered learning environment.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-specific Terms of Use agreements include policies for data privacy and confidentiality <i>have been adopted by the district.</i></li> <li><input type="checkbox"/> District and school digital technology policies <i>have shifted from an Acceptable Use policy to Responsible Use guidelines, but do not have a systematic process for consistent or continual policy updates.</i></li> <li><input type="checkbox"/> District leaders <i>have adopted policies that enable or support at least one of the following:</i> 24/7 access to devices and content, student-owned mobile devices in the school setting, flexible uses of time, and alternative assessments.</li> <li><input type="checkbox"/> School and district digital technology policies <i>have been aligned</i> to the district improvement plan and <i>do not mention</i> the role of digital technology in furthering the district toward the goals outlined in the improvement plan.</li> <li><input type="checkbox"/> School and district leaders <i>have adopted policy regarding</i> the role of digital technology in a student-centered learning environment.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-specific Terms of Use agreements include policies for data privacy and confidentiality <i>have been communicated (e.g. public forums, parent information nights, media sent home with students, faculty memos, etc.) with all stakeholder groups, and serve as a guide for purchasing and service agreements for new product acquisition.</i></li> <li><input type="checkbox"/> District and school digital technology policies <i>incorporate Responsible Use guidelines that encourage proactive, positive behavior with digital technologies and have a systematic process for consistent or continual policy updates.</i></li> <li><input type="checkbox"/> District leaders <i>have adopted and communicated policies to enable and support:</i> 24/7 access to devices and content, student-owned mobile devices in the school setting, flexible uses of time, and alternative assessments.</li> <li><input type="checkbox"/> School and district digital technology policies <i>have been aligned</i> to the district improvement plan and <i>explicitly delineate</i> the role of digital technology in furthering the district toward the goals outlined in the improvement plan.</li> <li><input type="checkbox"/> School and district leaders <i>have worked with a variety of stakeholder groups to create and adopt policy</i> regarding the role of digital technology in a student-centered learning environment <i>and have a systematic process in place to continuously advocate for this policy with relevant stakeholder groups.</i></li> </ul>

**LEADERSHIP**

	<b>Early</b>	<b>Developing</b>	<b>Advanced</b>	<b>Target</b>
<b>L6 Continuous Improvement</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district <i>is not yet considering</i> continuous improvement plans for digital learning initiatives.</li> <li><input type="checkbox"/> Continuous improvement systems have not yet been identified or established.</li> <li><input type="checkbox"/> Data is not yet being used or collected related to digital learning initiatives.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District leaders <i>are considering</i> continuous improvement plans for digital learning initiatives.</li> <li><input type="checkbox"/> <i>Digital learning initiatives are seen as separate from the rest of the teaching-and-learning process and little effort is given regarding overall evaluation.</i></li> <li><input type="checkbox"/> <i>Limited data</i> are being used to continuously improve the implementation of digital teaching and learning.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District leaders <i>have begun to develop</i> continuous improvement plans for digital learning initiatives.</li> <li><input type="checkbox"/> <i>Digital learning initiatives are improved every 1-2 years based upon summative results of continuous improvement data</i> (e.g., based on findings professional development is adjusted; schedules are changed; content access protocols are improved; policies are updated; etc.).</li> <li><input type="checkbox"/> <i>Mostly high-level data</i> (e.g. student grades and test scores) are being used to continuously improve the implementation of digital teaching, <i>but district leaders are beginning to develop plans for the collection of more nuanced, informative data.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>A team of stakeholders that includes district leadership and representatives of some other groups such as, school administrators, teachers, parents, students, and/or community members have developed</i> continuous improvement plans for digital learning initiatives aligned to the district improvement plan.</li> <li><input type="checkbox"/> <i>Digital learning initiatives are continuously improved based on results of the ongoing data collection</i> (e.g., based on findings professional development is adjusted; schedules are changed; content access protocols are improved; policies are updated; etc.).</li> <li><input type="checkbox"/> <i>Multiple and varied sources of data</i> (e.g., student performance data, classroom observation data, web analytics, participation tracking, survey data, etc.) are being used to continuously improve the implementation and impact of digital teaching and learning.</li> </ul>
<b>L7 Procurement</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-procured digital content is purchased <i>as a package.</i></li> <li><input type="checkbox"/> The accessibility and usability of digital content is not addressed.</li> <li><input type="checkbox"/> Procured licenses for each student and teacher and are not transferrable between individuals as needed.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-procured digital content is purchased <i>by course.</i></li> <li><input type="checkbox"/> Accessibility and usability of digital content for all students with disabilities or special needs <i>is partially addressed by at least asking the vendor to provide assurances.</i></li> <li><input type="checkbox"/> Procured licenses are <i>based on enrollment count, and are not licensed to individual students and teachers.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-procured digital content is purchased <i>by unit.</i></li> <li><input type="checkbox"/> Accessibility and usability of digital content for all students with disabilities or special needs <i>is addressed by providing alternatives for inaccessible content.</i></li> <li><input type="checkbox"/> Procured licenses are <i>based on a flexible licensing model on the number of concurrent users.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-procured digital content is purchased <i>by topic, enabling teachers to customize content from multiple sources and create curriculum tailored to their standards.</i></li> <li><input type="checkbox"/> All digital content is accessible and useable by all students with disabilities or special needs.</li> <li><input type="checkbox"/> Procured licenses are <i>based on a flexible licensing model that allows for transferability among users, or on the total enrollment of the school.</i></li> </ul>

## TECHNOLOGY INFRASTRUCTURE & DEVICES

	Early	Developing	Advanced	Target
T1 School Networks	<ul style="list-style-type: none"> <li><input type="checkbox"/> Network and Internet connection bandwidth are <i>not yet sufficient to support average district access needs.</i></li> <li><input type="checkbox"/> Wireless access points are <i>not yet</i> managed by a central controller.</li> <li><input type="checkbox"/> Wireless network is <i>not yet available in all classrooms, or is not yet sufficient to meet demand.</i></li> <li><input type="checkbox"/> Wireless connectivity is <i>not yet sufficient</i> to support one device per student with some performance degradation during average use.</li> <li><input type="checkbox"/> Network performance monitoring is <i>not yet in place.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Network and Internet connection bandwidth are <i>sufficient to meet average district access needs (though not peak demand).</i></li> <li><input type="checkbox"/> Some wireless access points are managed by a central controller.</li> <li><input type="checkbox"/> Wireless network access is <i>generally available in computer labs and classrooms; wireless access is available in some common spaces.</i></li> <li><input type="checkbox"/> Wireless connectivity is <i>sufficient to support one device per student with some performance degradation during average use.</i></li> <li><input type="checkbox"/> Network performance monitoring is <i>in place at MDF and core switching equipment.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Network and Internet connection bandwidth are <i>sufficient to support all district access needs with some performance degradation at peak access times.</i></li> <li><input type="checkbox"/> All wireless access points are managed by a central controller.</li> <li><input type="checkbox"/> Wireless access is <i>available in all instructional and indoor common areas.</i></li> <li><input type="checkbox"/> Wireless connectivity is <i>sufficient to support one device per student without performance degradation during average use.</i></li> <li><input type="checkbox"/> Network performance monitoring is <i>in place for the wired and wireless networks including individual access points.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Network and Internet connection bandwidth <i>support all district access needs without performance degradation even during times of maximum use.</i></li> <li><input type="checkbox"/> All wireless access points are managed by a central controller <i>with redundancy and traffic routing.</i></li> <li><input type="checkbox"/> Wireless access is <i>available and reliable in all instructional spaces and indoor/outdoor common areas.</i></li> <li><input type="checkbox"/> Wireless connectivity is <i>sufficient to support two or more devices per student without performance degradation during average use.</i></li> <li><input type="checkbox"/> Network performance monitoring is <i>in place for the wired wireless network and can measure usage at the device level.</i></li> </ul>
T2 End-User Devices	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-owned devices are available <i>in a fixed location on a limited or scheduled basis for teacher and learner use.</i></li> <li><input type="checkbox"/> District-owned devices are <i>not yet configured for remote management or update.</i></li> <li><input type="checkbox"/> Standards for the alignment of district-owned devices to instructional programs (e.g. NC Test Specifications) <i>do not yet exist.</i></li> <li><input type="checkbox"/> District does <i>not yet allow students to bring their own devices.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-owned devices are available <i>to entire classes on a rotating basis in the classroom for teacher and learner use.</i></li> <li><input type="checkbox"/> Some district-owned devices are <i>configured for remote management or update.</i></li> <li><input type="checkbox"/> Some <i>district-owned devices</i> meet standards for the alignment of district-owned devices to instructional programs (e.g. NC Test Specifications, modern LMS, instructional applications).</li> <li><input type="checkbox"/> District <i>allows students to bring any devices.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-owned devices are available <i>to all students and teachers during the school day.</i></li> <li><input type="checkbox"/> District-owned devices are <i>configured for remote management or update at the school.</i></li> <li><input type="checkbox"/> <i>Most district-owned devices</i> meet standards for the alignment of district-owned devices to instructional programs (e.g. NC Test Specifications, modern LMS, instructional applications).</li> <li><input type="checkbox"/> District <i>provides support for schools to implement a "Bring Your Own Device" (BYOD) program.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-owned devices are available <i>to all students and teachers 24/7.</i></li> <li><input type="checkbox"/> District-owned devices are <i>configured for remote management or update across the district.</i></li> <li><input type="checkbox"/> <i>All district-owned devices</i> meet standards for the alignment of district-owned devices to instructional programs (e.g. NC Test Specifications, modern LMS, instructional applications).</li> <li><input type="checkbox"/> District <i>requires BYOD, student-owned devices used on campus to meet specifications that ensure they can be used for core learning applications.</i></li> </ul>

## TECHNOLOGY & INFRASTRUCTURE

	Early	Developing	Advanced	Target
T3 Learning Environments	<ul style="list-style-type: none"> <li><input type="checkbox"/> All instructional spaces <i>do not yet have a dedicated large display.</i></li> <li><input type="checkbox"/> Classrooms have <i>fewer than five power receptacles available for student use.</i></li> <li><input type="checkbox"/> Peripheral devices (e.g., document cameras, 3-D printers, assistive/adaptive devices, etc.) are not yet available in the classroom, or do not function.</li> <li><input type="checkbox"/> Learning spaces are <i>not yet</i> designed and furnished to provide flexibility for students to work individually and collaboratively.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> All instructional spaces <i>have a large display system that is hard-wired to a single device.</i></li> <li><input type="checkbox"/> Classrooms have <i>enough receptacles to allow students to rotate for access to power.</i></li> <li><input type="checkbox"/> Peripheral devices are available <i>for use in the classroom, are functional, but are only for teacher use.</i></li> <li><input type="checkbox"/> A <i>few</i> learning spaces are designed and furnished to provide flexibility for students to work individually and collaboratively.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> All instructional spaces <i>have a large fixed display system that is hard wired to a single device.</i></li> <li><input type="checkbox"/> Classrooms have <i>sufficient power receptacles available, but are not conveniently located for student use.</i></li> <li><input type="checkbox"/> Peripheral devices are available <i>in the classroom and can be used by students.</i></li> <li><input type="checkbox"/> <i>Many</i> learning spaces are designed and furnished to provide flexibility for students to work individually and collaboratively.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> All instructional spaces <i>have a large display system with the ability to show teacher and student screens wirelessly.</i></li> <li><input type="checkbox"/> Classrooms have <i>sufficient power receptacles available, located in positions that allow students to charge devices.</i></li> <li><input type="checkbox"/> Peripheral devices are available <i>in the classroom and controlled by both teacher and student devices.</i></li> <li><input type="checkbox"/> <i>All</i> learning spaces are designed and furnished to provide flexibility for students to work individually and collaboratively.</li> </ul>
T4 Technical Support	<ul style="list-style-type: none"> <li><input type="checkbox"/> Technical support <i>response time is a barrier to instructional delivery and normal business operations.</i></li> <li><input type="checkbox"/> Technical support <i>response time is typically more than four days.</i></li> <li><input type="checkbox"/> Technical support is <i>provided primarily by Instructional personnel</i> (e.g., instructional technology facilitators, coaches, or other instructional positions).</li> <li><input type="checkbox"/> <i>No defined technical support procedures exist yet.</i></li> <li><input type="checkbox"/> Technical support requests are <i>not yet tracked.</i></li> <li><input type="checkbox"/> <i>Inventory</i> of digital technology assets (i.e. counts of devices) <i>has been formalized.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Technical support <i>responses are sometimes a barrier to instructional delivery and normal business operations.</i></li> <li><input type="checkbox"/> Technical support is <i>available within two to three business days, in most cases.</i></li> <li><input type="checkbox"/> Instructional <i>personnel provide "first level" technical support.</i></li> <li><input type="checkbox"/> A technical support procedure exists only at the individual school level.</li> <li><input type="checkbox"/> Technical support <i>requests are tracked, but are not reviewed for trends.</i></li> <li><input type="checkbox"/> <i>Inventory and tracking</i> of portable digital technology assets is <i>cataloged and linked to individuals.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Technical support <i>responses are rarely a barrier to instructional delivery and normal business operations.</i></li> <li><input type="checkbox"/> Technical support is <i>available within 24 hours, in most cases.</i></li> <li><input type="checkbox"/> Instructional <i>personnel serve as back-up technical support.</i></li> <li><input type="checkbox"/> A well-defined technical <i>support procedure is in place, but is not consistently enforced.</i></li> <li><input type="checkbox"/> Technical support <i>requests are tracked and reviewed for trends periodically.</i></li> <li><input type="checkbox"/> <i>Inventory and tracking</i> of portable and fixed digital technology assets is <i>catalogued and linked to individuals and spaces.</i></li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Technical support is <i>available enough that instructional and business operations are minimally impacted.</i></li> <li><input type="checkbox"/> Technical support is <i>generally available within the same day.</i></li> <li><input type="checkbox"/> Technical support <i>does not rely primarily on instructional technology facilitators, coaches, or other instructional positions.</i></li> <li><input type="checkbox"/> A <i>well-defined technical support procedure is in place and consistently enforced.</i></li> <li><input type="checkbox"/> Technical support <i>requests are logged, tracked, and annotated.</i></li> <li><input type="checkbox"/> <i>Inventory and tracking</i> of portable and fixed technology assets is <i>catalogued and linked to individuals and spaces and incorporates repair history and refresh plans.</i></li> </ul>

TECHNOLOGY & INFRASTRUCTURE				
	Early	Developing	Advanced	Target
T5 Network Services	<ul style="list-style-type: none"> <li><input type="checkbox"/> Equipment is replaced <i>at the point of failure</i>.</li> <li><input type="checkbox"/> Single-sign-on <i>is not yet in use</i>.</li> <li><input type="checkbox"/> Content filtering <i>is not yet differentiated by user type</i>.</li> <li><input type="checkbox"/> Content filtering <i>exclusively restricts and often prevents teachers and students from accessing instructional tools/resources</i>.</li> <li><input type="checkbox"/> Guest devices <i>do not yet have wireless access</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Equipment is replaced <i>sporadically as funding is available</i>.</li> <li><input type="checkbox"/> Single-sign-on <i>is in use only for basic services (i.e., network logins, content filtering, and email systems)</i>.</li> <li><input type="checkbox"/> Content filtering <i>is differentiated by staff and students</i>.</li> <li><input type="checkbox"/> Content filtering <i>sometimes prevents the use of some instructional websites</i>.</li> <li><input type="checkbox"/> Upon request guest devices can be connected to the district wireless network.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A routine and comprehensive replacement cycle exists <i>for some devices and digital technology infrastructure</i>.</li> <li><input type="checkbox"/> Single-sign-on <i>is in use for basic services and some additional applications</i>.</li> <li><input type="checkbox"/> Content filtering <i>is differentiated by school level and user role</i>.</li> <li><input type="checkbox"/> Content filtering <i>seldom prevents the use of instructional websites</i>.</li> <li><input type="checkbox"/> Guest devices can connect to the district wireless network but no system is in place for access control.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A routine and comprehensive replacement cycle exists <i>for all devices and digital technology infrastructure</i>.</li> <li><input type="checkbox"/> Single-sign-on <i>and identity management are integrated across all applications</i>.</li> <li><input type="checkbox"/> Content filtering <i>is in place at the school level, grade level, and by user role</i>.</li> <li><input type="checkbox"/> Content filtering <i>does not restrict Internet usage beyond legal requirements and local responsible use policies</i>.</li> <li><input type="checkbox"/> Guest devices connect to the district wireless network through a system with multiple and varied rates and that tracks users.</li> </ul>
T6 Outside of School	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Fewer than 50%</i> of teachers and students have Internet/broadband access outside the school day.</li> <li><input type="checkbox"/> Partnerships with the community groups (e.g. public libraries, community centers, municipalities, downtown areas, and Internet providers) to support out-of-school Internet access <i>are not yet established</i>.</li> <li><input type="checkbox"/> Commercial Internet/broadband providers <i>do not yet offer discounts</i> for rural or economically disadvantaged families.</li> <li><input type="checkbox"/> Student and teacher devices <i>are not yet filtered</i> off-premises.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>50%</i> of teachers and students have Internet/broadband access outside the school day <i>at least two days per week</i>.</li> <li><input type="checkbox"/> Partnerships with the community groups (e.g. public libraries, community centers, municipalities, downtown areas, and Internet providers) to support out-of-school Internet access <i>are brief and rare</i>.</li> <li><input type="checkbox"/> Commercial Internet/broadband providers <i>offer modest discounts</i> for rural or economically disadvantaged families.</li> <li><input type="checkbox"/> <i>Limited content filtering</i> operates on student and teacher devices off-premises.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Most</i> teachers and students have Internet/broadband access outside the school day <i>3-5 days per week</i>.</li> <li><input type="checkbox"/> Partnerships with the community groups (e.g. public libraries, community centers, municipalities, downtown areas, and Internet providers) to support out-of-school Internet access <i>exist with a small number of organizations or individuals</i>.</li> <li><input type="checkbox"/> Commercial Internet/broadband providers <i>offer substantial discounts</i> for rural or economically disadvantaged families.</li> <li><input type="checkbox"/> <i>Sufficient content filtering</i> operates on student devices when they are off-premises.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>All</i> teachers and students have Internet/broadband access outside the school day <i>6-7 days a week</i>.</li> <li><input type="checkbox"/> Partnerships with the community groups (e.g. public libraries, community centers, municipalities, downtown areas, and Internet providers) to support out-of-school Internet access <i>are continuous and leverage multiple types of organizations</i>.</li> <li><input type="checkbox"/> Commercial Internet/broadband providers <i>offer free service</i> for rural or economically disadvantaged families.</li> <li><input type="checkbox"/> <i>Sufficient content filtering</i> operates on student and teacher devices when they are off-premises.</li> </ul>

PROFESSIONAL LEARNING				
	Early	Developing	Advanced	Target
P1 Professional Development Focus	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development focuses on <i>sharing information about digital technology tools and resources</i>.</li> <li><input type="checkbox"/> Professional development on pedagogy in a digital learning environment <i>has not yet been provided</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>has not yet been provided on content-specific strategies for integrating digital technology into the curriculum</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development focuses on <i>engaging with digital technology tools and resources</i>.</li> <li><input type="checkbox"/> Professional development on pedagogy in a digital learning environment <i>introduces digital learning frameworks (e.g., TPACK, SAMR, 4Cs, etc.)</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>has been provided on content-specific strategies for integrating digital technology into the curriculum for CCSS subjects (ELA, mathematics)</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development focuses on <i>curriculum planning integrated with digital technology tools and resources</i>.</li> <li><input type="checkbox"/> Professional development on pedagogy in a digital learning environment <i>explores digital learning frameworks (e.g., TPACK, SAMR, 4Cs, etc.) for the effective uses of digital technology to support instructional strategies</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>has been provided on content-specific strategies for integrating digital technology into the curriculum for ELA, mathematics, social studies, and science</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development focuses on <i>curriculum planning and student-learning activities integrated with digital technology tools and resources</i>.</li> <li><input type="checkbox"/> During professional development on pedagogy in a digital learning environment, <i>teachers reflect on and revise their implementation of digital learning frameworks (e.g., TPACK, SAMR, 4Cs, etc.)</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>has been provided on content-specific strategies for integrating digital technology into the curriculum for all subject areas</i>.</li> </ul>

PROFESSIONAL LEARNING				
	Early	Developing	Advanced	Target
P2 Professional Development Format	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development is typically delivered <i>in a large-group via lecture</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is designed to address <i>large group needs as determined by district goals or initiatives</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>does not yet include ongoing support through coaching, mentoring, or learning communities</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is <i>rarely delivered in face-to-face or synchronous settings</i>.</li> <li><input type="checkbox"/> Teachers <i>do not have the opportunity to discuss digital learning in professional learning community meetings</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development is typically delivered <i>in small group settings via lecture</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is designed to address <i>large group needs identified through perceptions of district leaders</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>includes ongoing support through coaching, mentoring, and/or learning communities</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is <i>delivered in face-to-face or synchronous settings</i>.</li> <li><input type="checkbox"/> Teachers <i>occasionally share lessons and activities about digital learning through infrequent professional learning community meetings (e.g., quarterly early release days)</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development is typically delivered <i>in small group settings using an appropriate pedagogical strategy (e.g., job-embedded, ongoing, relevant, or sustainable)</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is designed to address <i>large group needs identified through data (e.g., surveys, teacher evaluations)</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>includes ongoing support with coaching, mentoring, and professional learning communities</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is <i>delivered in face-to-face or synchronous settings and informal opportunities are encouraged</i>.</li> <li><input type="checkbox"/> Teachers <i>frequently share lessons and activities about digital learning in their regular professional learning communities (e.g., weekly common planning periods)</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Digital learning-focused professional development is typically delivered <i>in small group settings using multiple pedagogical strategies (e.g., job-embedded, ongoing, relevant, and sustainable)</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is <i>personalized based on participants' professional learning needs identified through data (e.g., surveys, teacher evaluations)</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development <i>includes ongoing support through peer observation, assessment, coaching, professional learning communities, and mentoring</i>.</li> <li><input type="checkbox"/> Digital learning-focused professional development is <i>delivered in face-to-face or synchronous settings and includes intentional opportunities for informal and anytime, anywhere learning</i>.</li> <li><input type="checkbox"/> Teachers <i>frequently share lessons and activities about digital learning in their regular professional learning communities, guiding their work with research-based framework (e.g., Marzano, DuFour, Senge, Hord, etc.)</i>.</li> </ul>
P3 Professional Development Participation	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teachers are <i>responsible for pursuing digital learning-focused professional development independently</i>.</li> <li><input type="checkbox"/> District provides information to administrators about opportunities for teacher professional development on digital learning.</li> <li><input type="checkbox"/> The district <i>has no additional CEU requirements specific to digital learning</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District provides <i>some digital learning-focused professional development typically available after school or during planning time</i>.</li> <li><input type="checkbox"/> Administrators attend professional development on digital learning with their teachers.</li> <li><input type="checkbox"/> The district <i>encourages teachers to pursue professional development opportunities specific to digital learning</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District provides <i>multiple opportunities to meet the professional development needs of all teachers, including some release time to participate in professional learning opportunities</i>.</li> <li><input type="checkbox"/> Administrators participate in professional development on leading digital learning initiatives.</li> <li><input type="checkbox"/> The district <i>requires 1 CEU specific to digital learning during a renewal cycle</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District provides <i>multiple and varied opportunities to meet the individual professional development needs of all teachers, including some release time to participate in professional learning opportunities</i>.</li> <li><input type="checkbox"/> Administrators participate in professional development on leading digital learning initiatives, including evaluating authentic digital learning.</li> <li><input type="checkbox"/> The district <i>requires 2 or more CEUs specific to digital learning during a renewal cycle</i>.</li> </ul>

CONTENT & INSTRUCTION				
	Early	Developing	Advanced	Target
<b>C1 Educator Role</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Shifts in educator role in a digital learning environment, in which teachers do more facilitation, <i>are not yet being addressed.</i></li> <li><input type="checkbox"/> <i>Teachers do not demonstrate proficiency</i> with the “NC Digital Learning Competencies for Teachers” (focus areas include: Leadership in Digital Learning, Digital Citizenship, Digital Content and Instruction, Data and Assessment).</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Shifts in the educator role in a digital learning environment, in which teachers do more facilitation, <i>are driven at the teacher level and are not systemic.</i></li> <li><input type="checkbox"/> <i>Few teachers demonstrate proficiency</i> with the “NC Digital Learning Competencies for Teachers” (focus areas include: Leadership in Digital Learning, Digital Citizenship, Digital Content and Instruction, Data and Assessment).</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Shifts in the educator role in a digital learning environment, in which teachers do more facilitation, <i>are driven at the school-leader level and are not systemic.</i></li> <li><input type="checkbox"/> <i>Many teachers demonstrate proficiency</i> with the “NC Digital Learning Competencies for Teachers” (focus areas include: Leadership in Digital Learning, Digital Citizenship, Digital Content and Instruction, Data and Assessment).</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Shifts in the educator role in a digital learning environment, in which teachers do more facilitation, <i>are driven at the district level and are systemic.</i></li> <li><input type="checkbox"/> <i>All teachers demonstrate proficiency</i> with the “NC Digital Learning Competencies for Teachers” (focus areas include: Leadership in Digital Learning, Digital Citizenship, Digital Content and Instruction, Data and Assessment).</li> </ul>
<b>C2 Student-Centered Learning</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>do not participate in</i> digital learning activities that develop critical thinking, communication, collaboration, and creativity skills.</li> <li><input type="checkbox"/> Students <i>do not have the ability to</i> use digital tools to select their own learning paths.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>have a few opportunities to participate in</i> digital learning activities that integrate critical thinking, communication, collaboration, and creativity skills.</li> <li><input type="checkbox"/> Students <i>have few opportunities to</i> use digital tools to select personalized learning paths based on their learning differences.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>have many opportunities to participate in</i> digital learning activities that integrate critical thinking, communication, collaboration, and creativity skills.</li> <li><input type="checkbox"/> Students <i>have many opportunities to</i> use digital tools to select personalized learning paths based on their learning differences.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>have consistent opportunities to participate in</i> digital learning activities that integrate critical thinking, communication, collaboration, and creativity skills.</li> <li><input type="checkbox"/> Students <i>have consistent opportunities to</i> use digital tools to select personalized learning paths based on their learning differences.</li> </ul>
<b>C3 Access to Digital Content</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>do not have access to</i> digital content and resources.</li> <li><input type="checkbox"/> Teachers <i>do not have access to</i> digital content and resources <i>for instructional use in the classroom.</i></li> <li><input type="checkbox"/> Parents <i>do not have access to</i> teacher-generated and curated digital content.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>have few opportunities to</i> access digital content and resources.</li> <li><input type="checkbox"/> Teachers <i>have few opportunities to</i> access digital content and resources <i>for instructional use in the classroom.</i></li> <li><input type="checkbox"/> Parents <i>have few opportunities to</i> access teacher-generated and curated digital content.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>have many opportunities to</i> access digital content and resources.</li> <li><input type="checkbox"/> Teachers <i>have consistent opportunities to</i> access digital content and resources <i>for instructional use in the classroom.</i></li> <li><input type="checkbox"/> Parents <i>have many opportunities to</i> access <i>all</i> teacher-generated and curated digital content.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students <i>have anytime/anywhere</i> access to digital content and resources.</li> <li><input type="checkbox"/> Teachers <i>have anytime/anywhere</i> access to digital content and resources <i>for instructional use throughout the entire school.</i></li> <li><input type="checkbox"/> Parents <i>have consistent access to all</i> teacher-generated and curated digital content <i>and the work submitted by their students.</i></li> </ul>

CONTENT & INSTRUCTION				
	Early	Developing	Advanced	Target
<b>C4 Learning Management System (LMS)</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district <i>does not</i> have a policy regarding a learning management system.</li> <li><input type="checkbox"/> A learning management system <i>is not</i> used by teachers.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district provides <i>flexibility and support</i> to schools in choosing a learning management system.</li> <li><input type="checkbox"/> A learning management system is used by <i>some</i> teachers.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district provides an <i>integrated learning management system(s)</i> but <i>not all</i> schools are using it.</li> <li><input type="checkbox"/> A learning management system is used by <i>most</i> teachers.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The district provides <i>support in implementing a comprehensive, integrated learning management system(s)</i> to help teachers plan and organize curriculum, provide student activities, and track students' progress.</li> <li><input type="checkbox"/> A district-provided learning management system is used by <i>all</i> teachers.</li> </ul>
<b>C5 Curation &amp; Development</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-supported digital content and instructional resources are selected <i>without teacher input</i>.</li> <li><input type="checkbox"/> Teachers <i>do not</i> have access to a <i>searchable repository</i> to share their curated and/or developed digital content.</li> <li><input type="checkbox"/> Teachers are not yet able to customize digital content aligned to their standards from any sources.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-supported digital content and instructional resources are selected <i>with teacher input</i>.</li> <li><input type="checkbox"/> Teachers <i>have access</i> to a <i>searchable grade-level or subject-area repository</i> to share their curated and/or developed digital content.</li> <li><input type="checkbox"/> Teachers are able to customize digital content aligned to their standards from <i>a few sources</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-supported digital content and instructional resources are selected <i>with input from teachers and content/pedagogy experts</i>.</li> <li><input type="checkbox"/> Teachers <i>have access</i> to a <i>searchable school-level repository</i> to share their curated and/or developed digital content.</li> <li><input type="checkbox"/> Teachers are able to customize digital content aligned to their standards from <i>many sources</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> District-supported digital content and instructional resources are selected <i>through a vetting process with input from teachers and content/pedagogy experts</i>.</li> <li><input type="checkbox"/> Teachers <i>have access</i> to a <i>searchable district-level repository</i> to share their curated and/or developed digital content.</li> <li><input type="checkbox"/> Teachers are able to customize digital content aligned to their standards from <i>unlimited sources</i>.</li> </ul>
<b>C6 Data-Informed Instruction</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teachers <i>do not yet</i> use digital tools to access a variety of data to inform instruction.</li> <li><input type="checkbox"/> Teachers <i>do not yet</i> engage in data-driven re-teaching.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Few teachers</i> use digital tools to access a variety of data to inform instruction.</li> <li><input type="checkbox"/> Teachers engage in <i>large group</i> data-driven re-teaching on a few key standards with which <i>the majority of students</i> are struggling.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Many teachers</i> use digital tools to access a variety of data to inform instruction.</li> <li><input type="checkbox"/> Teachers engage in <i>small group</i> data-driven re-teaching on a few key standards with which <i>particular groups of students</i> are struggling.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>All teachers</i> use digital tools to access a variety of data to inform instruction.</li> <li><input type="checkbox"/> Teachers engage in <i>personalized</i> data-driven re-teaching to <i>individual students</i> who are struggling.</li> </ul>

DATA & ASSESSMENT				
	Early	Developing	Advanced	Target
D1 Data Systems	<ul style="list-style-type: none"> <li><input type="checkbox"/> Learner data storage plan is <i>not yet developed</i>.</li> <li><input type="checkbox"/> A process for collecting, managing, and accessing learner data <i>in place</i>.</li> <li><input type="checkbox"/> Learning and content tools do <i>not yet share assessment, grading, or analytics data with a central repository</i> (e.g. a learning management system or student information system).</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Learner data is <i>stored by individual teachers</i> according to school/district policy or procedure.</li> <li><input type="checkbox"/> A process for collecting, managing, and accessing learner data <i>is used by some educators and administrators</i>.</li> <li><input type="checkbox"/> Some learning and content tools <i>share assessment data with a central repository</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Learner data is <i>housed in centralized applications</i> but is <i>not accessible through a single portal</i>.</li> <li><input type="checkbox"/> A process for collecting, managing, accessing, and analyzing learner data <i>is used by some educators and administrators in real time</i>.</li> <li><input type="checkbox"/> Most learning and content tools <i>share assessment data with a central repository</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Learner data is <i>housed in centralized applications</i> and is <i>accessible through a single portal</i>.</li> <li><input type="checkbox"/> Educators, administrators, parents, and students <i>access individualized learner data in real-time</i>.</li> <li><input type="checkbox"/> Most learning and content tools <i>share assessment and analytics data with a central repository</i>.</li> </ul>
D2 Learner Profiles	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student-level learner <i>profiles are not available district wide</i>.</li> <li><input type="checkbox"/> Teachers make <i>limited use of student data from state level systems</i>.</li> <li><input type="checkbox"/> School Administrators make <i>limited use of student data from state level systems</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student learner <i>profiles exist district wide and include historical student performance data</i>.</li> <li><input type="checkbox"/> Teachers <i>use learner profiles to plan instruction at the classroom level</i>.</li> <li><input type="checkbox"/> School Administrators <i>use learner profiles to make general plans to support schoolwide instructional goals</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student learner profiles <i>exist district wide and include historical student performance data and real-time formative assessment data</i>.</li> <li><input type="checkbox"/> Teachers and students <i>use learner profiles to make just in time adjustments for differentiated instruction</i>.</li> <li><input type="checkbox"/> School Administrators <i>use learner profiles to support schoolwide instructional goals at the grade/subject level</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Student learner profiles <i>exist district wide and include historical student performance data, real-time formative assessment data, information on student learning differences and other contextual out of school factors</i>.</li> <li><input type="checkbox"/> Teachers and students <i>use learner profiles to personalize learning at the student level</i>.</li> <li><input type="checkbox"/> School Administrators <i>use learner profiles to support schoolwide instructional goals at the classroom level</i>.</li> </ul>

DATA & ASSESSMENT				
	Early	Developing	Advanced	Target
<b>D3 Multiple &amp; Varied Assessments</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Multiple and varied assessments are <i>not yet in place</i>.</li> <li><input type="checkbox"/> A few teachers use <i>Multiple and varied assessments</i> at the classroom level as indicators of student learning.</li> <li><input type="checkbox"/> Teachers <i>independently create</i> multiple and varied assessments.</li> <li><input type="checkbox"/> Rubrics that measure critical thinking, communication, collaboration, and creativity across content areas <i>are not yet in place</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Multiple and varied assessments <i>are used to identify grade- or subject-level needs and strengths for learning goals</i>.</li> <li><input type="checkbox"/> Most teachers use <i>multiple and varied assessments</i> at the classroom level as indicators of student learning.</li> <li><input type="checkbox"/> Teachers <i>collaborate informally</i> to create multiple and varied assessments.</li> <li><input type="checkbox"/> Rubrics that measure critical thinking, communication, collaboration, and creativity across content areas <i>are in place in individual classrooms</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Multiple and varied assessments are <i>embedded into instruction and are used to identify classroom-level needs and strengths for learning goals</i>.</li> <li><input type="checkbox"/> Schools <i>encourage and support the use of multiple and varied assessments</i> as indicators of student learning.</li> <li><input type="checkbox"/> Teachers <i>work across grade- or subject-level teams</i> to create multiple and varied assessments.</li> <li><input type="checkbox"/> Rubrics that measure critical thinking, communication, collaboration, and creativity across content areas <i>are in use and are vertically-aligned at the school level</i>.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Multiple and varied assessments are <i>embedded into instruction and are used to identify individual student needs and strengths for learning goals</i>.</li> <li><input type="checkbox"/> Districts <i>encourage and support the use of multiple and varied assessments</i> as indicators of student learning.</li> <li><input type="checkbox"/> Teachers <i>work district wide in grade- or subject-level teams</i> to create multiple and varied assessments.</li> <li><input type="checkbox"/> Rubrics that measure critical thinking, communication, collaboration, and creativity across content areas <i>are in use and are vertically-aligned at the district level</i>.</li> </ul>

## Appendix A. Glossary

Rubric Term	Definition
<b>24/7</b>	Available and accessible twenty-four hours per day, seven days per week
<b>24/7/365</b>	Available and accessible twenty-four hours per day, seven days per week, three hundred sixty-five days per year
<b>4 C's</b>	The 21st century skills considered the most important for K-12 education: critical thinking, communication, collaboration, and creativity
<b>Acceptable Use policies</b>	Traditionally, acceptable use policies were interchangeable with "terms of use," establishing baseline behavior for users of a given technology, product, or service; these policies are often written passively and in consideration of what the minimum acceptable behavior might be in a given scenario; there is little or no information offered that might aid users in determining responsible behaviors in a given scenario; these policies are often taken only at face value
<b>Benchmark assessment</b>	Short assessments administered throughout the school year that give teachers immediate feedback on the degree to which students are meeting academic standards; regular use of benchmark assessments is seen as a tool to measure student growth across cohorts and design curriculum to meet learning needs; benchmark assessments are typically standardized at the school or district level
<b>Bring Your Own Device (BYOD)</b>	Programs, policies, and procedures for students and employees to connect personally-owned computers, tablets, and cell phones to school networks for instructional and business purposes
<b>CIPA</b>	The Children's Internet Protection Act (CIPA) is federal law enacted in 2000 to address concerns about children's access to obscene or harmful content over the Internet; CIPA imposes certain requirements on schools or libraries that receive discounts for Internet access or internal connections through the federal E-rate program
<b>Classroom display systems</b>	Commonly referred to as CRS (classroom response systems), these interactive tools exist in many forms developed by a variety of vendors, but operate on the same fundamental concept: students use hand-held devices to respond to multiple choice or polling questions, then their responses are gathered by a central receiver, combined, and totals are immediately projected back for all to see
<b>Collaboration</b>	Students: demonstrate ability to work effectively and respectfully with diverse teams; exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal; assume shared responsibility for collaborative work; and value the individual contributions made by each team member <i>(adapted from p21.org)</i>

Rubric Term	Definition
<b>Communication</b>	Students: articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of forms and contexts; listen effectively to decipher meaning, including knowledge, values, attitudes and intentions; use communication for a range of purposes (e.g., to inform, instruct, motivate and persuade); use multiple media and technologies, and know how to judge their effectiveness and assess their impact; and communicate effectively in diverse environments ( <i>adapted from p21.org</i> )
<b>Confidentiality policies</b>	Policies which ensure that information is accessible only to those with authorization and that the information is protected throughout its lifecycle; these policies imposes boundaries on the amount of personal information and data that can be disclosed without consent, and allow individuals to feel secure giving sensitive information and trust that their privacy is being protected
<b>Creativity</b>	Students: think creatively, using a wide range of idea creation techniques like brainstorming, creating new and worthwhile ideas, and elaborating, evaluating, and refining their ideas; work creatively with others by developing and communicating new ideas with others, being open to diverse perspectives, incorporating feedback, viewing failure as an opportunity to learn, understanding creativity as a cyclical process; and implement innovations by acting on creative ideas to make a tangible and useful contribution ( <i>adapted from p21.org</i> )
<b>Critical thinking</b>	Students: use various types of reasoning, like inductive, deductive, etc., as appropriate to the situation; use systems thinking by analyzing how parts of a whole interact with each other to produce overall outcomes; make judgements and decisions by effectively analyzing and evaluating evidence, arguments, claims and beliefs, synthesizing and making connections between information and arguments, and reflecting critically on learning experiences; and solve different kinds of non-familiar problems in both conventional and innovative ways, asking significant questions that clarify various points of view and lead to better solutions ( <i>adapted from p21.org</i> )
<b>Data privacy</b>	Information privacy, or data privacy or data protection, is the relationship between collection and dissemination of data, digital technology, the public expectation of privacy, and related laws; data privacy is undergirded by the understanding that an individual's data – particularly related to online activity and accounts and content creation – is to remain confidential and in compliance with federal (including CIPA and FERPA), state, and local laws
<b>Digital competencies</b>	At of the publication of this document, the North Carolina Department of Public Instruction was in the process, but had not yet completed, two formal sets of “North Carolina Digital Learning Competencies” – a set for teachers and a set for administrators
<b>Digital learning</b>	Any instructional practice that effectively uses digital technology to strengthen a student's learning experience; it includes a focus on the following instructional characteristics: personalized learning; advancement based on mastery of content and competency in application; anywhere and anytime learning; student-centered instruction; digital content; assessments that are integrated into learning activities; and project-based learning activities

Rubric Term	Definition
<b>Discretionary funds</b>	Monies specifically allocated to cover unforeseen costs as well as to fund those efforts and initiatives that may not require their own budget line
<b>FERPA</b>	FERPA (Family Educational Rights and Privacy Act of 1974) is a federal law ensuring the rights and privacy of students and parents, particularly in relation to personally identifiable information (PII), learning progress, additional relevant student information, and educational determinations
<b>Formal pathways</b>	Clear, well-developed set(s) of standards, actions, responsibilities, and performance indicators to identify, develop, and recruit teachers into roles and positions of leadership; teachers are aware of the specific tasks and steps outlined for them, particularly those desiring to assume additional responsibilities
<b>Formative assessment</b>	Formative assessment is a diagnostic process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes
<b>Informal pathways</b>	Unspoken, undocumented, and typically subjective means by which teachers assume additional leadership opportunities and responsibilities; there are no clear standards or metrics for identifying or developing leadership potential
<b>Instructional technology facilitator</b>	An instructional coach who supports teachers with the selection, training, and implementation of digital tools into classroom instruction
<b>Job-embedded</b>	Job-embedded professional development refers to teacher learning that is grounded in day-to-day teaching practice and is designed to enhance teachers' content-specific instructional practices with the intent of improving student learning; it is primarily school or classroom based and is integrated into the workday, consisting of teachers assessing and finding solutions for authentic and immediate problems of practice as part of a cycle of continuous improvement ( <i>adapted from Croft, et al., 2010</i> )
<b>Just-in-time learning</b>	The acquisition of knowledge or skills at the times they are needed rather than in advance or following
<b>Learner profiles</b>	Suite of information describing an individual student, including but not limited to: performance, learning styles, extracurricular interests, etc.; the profiles are consistent between grade levels, accounting for new knowledge, standards, and expectations at each grade level
<b>Learning management system (LMS)</b>	A tool or platform used to deliver, track, and manage the distribution of instructional content and used to manage learner interactions; learning management systems can perform tasks such as: distribution and allowance for online submission of student work; online assessment; presentation of instructional content; facilitation of teacher feedback on student work; and facilitation of teacher-student and student-student discussions

Rubric Term	Definition
<b>Learning modalities</b>	Refer to how students use their senses in the learning process; four modalities are commonly considered: visual (seeing), auditory (hearing), kinesthetic (moving), and tactile (touching); the more modalities that are activated during a lesson, the more learning will take place
<b>Main distribution frame (MDF)</b>	The location and equipment for connecting external connections (internet/WAN connection) to the internal network
<b>Maker spaces</b>	A makerspace is a place where students and all individuals present can gather to create, invent, tinker, explore and discover using a variety of tools and materials; they provide a physical laboratory for inquiry-based learning; makerspaces give room and materials for physical learning; these spaces can easily be cross-disciplinary and students can find their work enriched by contributions from others students; students often appreciate the hands-on use of emerging technologies and the opportunity to explore the kind of experimentation that leads to a completed project ( <i>adapted from Educause Education Learning Initiative "7 Things About Makerspaces"</i> )
<b>Managed services</b>	Outsourcing day-to-day management and maintenance responsibilities for network services and applications as a method for improving operations and reducing expenses; managed services are also often used for bundled content, student information systems, learning management systems, mobile device management, professional development, network management, etc.
<b>Parent portal</b>	A digital platform which allows parents to stay informed and engaged in their child's education; a parent portal gives parents and guardians real-time access to their child's most recent instructional activities, performance, teacher feedback, etc., as well as access to their child's grades, schedule, contact information, etc.
<b>Performance degradation</b>	A deterioration in network reliability or speed caused by factors such as interference or heavy use
<b>Performance-based assessment</b>	A type of assessment in which students demonstrate the knowledge and skills they have learned; often students are asked to create a product or a response or to perform a specific task or set of tasks; performance-based assessments measure how well students can apply or use what they know, typically in real-world or simulated situations

Rubric Term	Definition
<b>Professional learning</b>	<p>High quality professional learning, in most ideal form, is personalized, job-embedded, ongoing, and interactive; <i>Learning Forward (learningforward.org)</i>, national leader for educator professional development, has outlined 7 standards for professional learning that increases educator effectiveness and results for all students:</p> <ul style="list-style-type: none"> <li>- occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment;</li> <li>- requires skillful leaders who develop capacity, advocate, and create support systems for professional learning;</li> <li>- requires prioritizing, monitoring, and coordinating resources for educator learning;</li> <li>- uses a variety of sources and types of student, educator, and system data to plan, assess, and evaluate professional learning;</li> <li>- integrates theories, research, and models of human learning to achieve its intended outcomes;</li> <li>- applies research on change and sustains support for implementation of professional learning for long-term change; and</li> <li>- aligns its outcomes with educator performance and student curriculum standards</li> </ul>
<b>Project-based learning</b>	<p>A teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge; <i>The Buck Institute (bie.org)</i>, national leader for project-based learning, outlines the following 7 Essential Project Design Elements for Gold Standard PBL:</p> <ul style="list-style-type: none"> <li>- challenging problem or question</li> <li>- sustained inquiry</li> <li>- authenticity</li> <li>- student voice and choice</li> <li>- reflection</li> <li>- critique and revision</li> <li>- public product</li> </ul> <p>The Buck Institute also outlines the following Teaching Practices for Gold Standard PBL:</p> <ul style="list-style-type: none"> <li>- design and plan</li> <li>- align to standards</li> <li>- build the culture</li> <li>- manage activities</li> <li>- scaffold student learning</li> <li>- assess student learning</li> <li>- engage and coach</li> </ul>
<b>Refresh cycles</b>	A regular, consistent schedule for replacing technology equipment

Rubric Term	Definition
<b>Responsible Use policies</b>	Policies that outline clear, proactive standards that project higher expectations than traditional “acceptable use” policies; the primary difference from acceptable use policies is that a responsible use policy acts as a “floor” for technology use, encouraging users to think beyond the bare minimum behaviors stated in policies and to contemplate what true, responsible use of a given technology might entail; these policies are especially valuable when the terms of use or acceptable use policies are unclear or incomplete
<b>SAMR</b>	An observational taxonomy, developed by Dr. Ruben Puentedura, for classifying the role of technology within a learning activity from “substitution” (technology acting as a substitution for traditional tools) to “augmentation” to “modification” to “redefinition” (technology allowing instructional activities that would not otherwise be possible)
<b>Shared vision</b>	Educational leaders bring together stakeholders - faculty, staff, students, parents, community members, etc. – to form a collective, clear picture of what the school (or other organization) aspires to be or become in the future; the leaders also set in motion a process to assess progress toward achieving that vision; the vision will be shared and valued when a process of assessment is in place to provide feedback about the degree to which the vision is being achieved
<b>Summative assessment</b>	Cumulative assessments used to measure student learning at the end of an instructional unit, often given at the end of a course to determine the degree to which long term learning goals have been met; summative information can shape how teachers organize their curricula or what courses schools offer their students; common examples include state-mandated tests, district benchmark assessments, end-of-unit tests, and end-of-term exams
<b>Synchronous</b>	Existing or occurring at the same time; with regard to digital learning environments, typically refers to online discussions or other learning events in which participants are having direct, immediate, real-time conversations with each other, as opposed to “asynchronous” discussions in which participants leave posts or other artifacts which other participants respond to at a later time
<b>Terms of Use policies</b>	Policies locally established that clarify the rights and responsibilities of all users (including but not limited to teachers, students, and staff members) in relation to the technology and its proper use; these policies should create clear definitions for the expected use of various technologies as well as what expectations are being placed upon the user in a mutually agreeable interaction; often used interchangeably with “acceptable use” and “responsible use” agreements, terms of use policies should focus on the role of technology, rather than the behavior of the user
<b>Total cost of ownership</b>	A comprehensive assessment of information technology or other costs across organizational boundaries over time; can include hardware and software acquisition, management and support, communications, end-user expenses, the opportunity cost of downtime, training, and other productivity losses
<b>TPACK</b>	A framework for understanding the kinds of technology, pedagogical, and content knowledge needed by educators in a digital learning environment; the framework was created by Punya Mishra and Matthew J. Koehler at Michigan State University, and was based on the Pedagogical Content Knowledge framework created by Lee Shulman

<b>Rubric Term</b>	<b>Definition</b>
<b>Two-way communication</b>	A process in which two people or groups can communicate reciprocally and exchange ideas; digital platforms with two-way communication allow for both parties to express themselves and receive information from the other
<b>Vertically-aligned</b>	Educational frameworks (practices, content strands, etc.) that are consistently applied across grade-levels with modifications for the developmental level of the students at each grade-level

## Appendix B. Scoring Sheet

District Name: \_\_\_\_\_ Date Rubric Completed: \_\_\_\_\_

**Names and/or numbers of district staff completing the rubric:**

School administrators: \_\_\_\_\_

Central office administrators: \_\_\_\_\_

Teachers: \_\_\_\_\_

Other: \_\_\_\_\_

Enter the identified ranking or “score” into the blank boxes below each key element name, and calculate overall score (e.g., 16 out of 28 possible points or 16/28):

**Early = 1**

**Developing = 2**

**Advanced = 3**

**Target = 4**

<b>LEADERSHIP</b>							<b>Comments</b>
L1 Shared Vision:	L2 Personnel:	L3 Comm. & Collaboration:	L4 Sustainability:	L5 Policy:	L6 Continuous Improvement:	L7 Procurement:	
							<b>Overall Leadership Score (SUM/28):</b>

<b>TECHNOLOGY INFRASTRUCTURE &amp; DEVICES</b>						<b>Comments</b>
T1 School Networks:	T2 End-User Devices:	T3 Learning Environments:	T4 Technical Support:	T5 Network Services:	T6 Outside of School:	
						<b>Overall Tech. &amp; Infra. Score (SUM/24):</b>

PROFESSIONAL LEARNING			Comments
P1 Professional Development Focus:	P2 Professional Development Format:	P3 Professional Development Participation:	
			<b>Overall Prof. Development Score (SUM/12):</b>

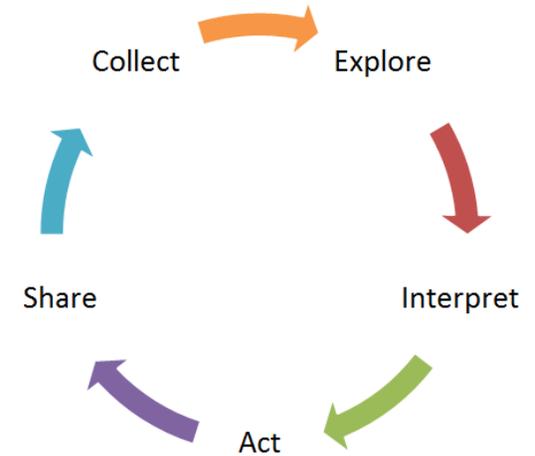
CONTENT & INSTRUCTION						Comments
C1 Educator Role:	C2 Student-Centered Learning:	C3 Access to Digital Content:	C4 Learning Management System (LMS):	C5 Curation & Development:	C6 Data-Informed Instruction:	
						<b>Overall Content &amp; Instruction Score (SUM/24):</b>

DATA & ASSESSMENT			Comments
D1 Data Systems:	D2 Learner Profiles:	D3 Multiple & Varied Assessments:	
			<b>Overall Data &amp; Assess. Score (SUM/12):</b>

<b>Overall NC Digital Learning Progress Rubric Score:</b> <i>(sum of overall scores for each main area out 100 possible points, e.g., 52/100)</i>	
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## Appendix C. Data Interpretation Guide

Analysis for strategic planning is the process of breaking down and examining data to understand project implementation or impact. Before meaningful decisions can be made, it is necessary to understand what data show by manipulating them in thoughtful ways. Analysis bridges the gap between collecting data and interpreting those data for monitoring and adjusting a project. Interpretation, the next phase in strategic planning, is the process of determining “what the data mean”—an important activity between the analysis of data and the making of decisions for next steps.



PHASE	GUIDING QUESTIONS
<p style="text-align: center;"><b>Explore</b></p>	<ul style="list-style-type: none"> <li>• Do your rubric results resonate?</li> <li>• Any surprises? Why?</li> <li>• Any disappointments? Why?</li> <li>• Do you see any correlation or inconsistencies between the rubric results and other data you have? Why do you think this is the case?</li> </ul>
	<p><i>Identify 3-4 questions that emerge as you review your data.</i></p>
<p style="text-align: center;"><b>Interpret</b></p>	<ul style="list-style-type: none"> <li>• What do the results mean? How would you summarize the data?</li> <li>• What is working really well in your district? What is not?</li> <li>• What are the critical points or trends you saw in the data?</li> <li>• At your district, who needs to be involved in a discussion about this data? How can you engage teachers and other stakeholders?</li> </ul>

PHASE	GUIDING QUESTIONS
	<i>Document at least 3 takeaways from your review of your data.</i>
<b>Act</b>	<ul style="list-style-type: none"> <li>• What does this rubric data tell you about efforts you should prioritize now? Next school year?</li> <li>• What changes are you going to make based on this data?</li> <li>• How do these data inform local policy?</li> </ul>
	<i>Identify two things you should do based on the data and who in your district should be involved in next steps.</i>
<b>Share</b>	<ul style="list-style-type: none"> <li>• How should you share your interpretation of the data with staff? Parents? School board?</li> <li>• Who should have this information?</li> <li>• How can your data support current or ongoing initiatives in your district?</li> <li>• What is your vision for getting additional input as you go through the planning process?</li> </ul>
	<i>Note how and with whom this data should be shared.</i>
<b>Collect</b>	<ul style="list-style-type: none"> <li>• What local data do you already have available?</li> <li>• What new data do you need to collect?</li> <li>• What about qualitative data?</li> </ul>
	<i>List other data you already have available and additional data that you need.</i>

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**WYOMING**  
DEPARTMENT OF EDUCATION

*Creating Opportunities  
for Students to Keep  
Wyoming Strong*

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Superintendent of Public Instruction

**Dicky Shanor**  
Chief of Staff

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**Brent Young**  
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## MEMORANDUM

**TO:** Chairman Gosar, State Board of Education  
**FROM:** Brent Young, Chief Policy Officer  
**DATE:** May 9, 2016  
**RE:** Agenda Item Overview

**Meeting Date:** May 19-20, 2016

**Agenda Item:** Alternative Schedules Approval

**Item Type:** Action:  Informational:

### **Background:**

Wyoming Statute 21-2-304(b)(viii) and 21-4-301 provide the opportunity for school districts to apply for a waiver to the statutory requirement for schools to be in session for 175 student contact days each year. Districts may request a one year or two year approval for an alternative schedule for any or all of the district schools by submitting an application. The application must include educational objectives, a description of the proposed schedule and copy of the proposed calendar, a description of the methods to be used to evaluate improved student achievement, evidence of two advertised public meetings, public comment records, and evidence of meeting required hours for each grade level.

### **Statutory References (if applicable):**

W.S. 21-2-304(b)(viii) and 21-4-301

### **Fiscal Impact (if applicable)**

None noted

**Supporting Documents/Attachments:**

**New Requests:** The following school districts have submitted all required materials and are requesting approval from the State Board of Education to implement an alternative school schedule:

School District	School Name	Alternative Schedule	Applicable School Year(s)
Carbon 1	Little Snake River Valley Cooperative High School	<ul style="list-style-type: none"> <li>4-day school week, with Fridays available for students with low grades</li> <li>150 Contact Days</li> <li>155 Contract Days</li> </ul>	2016-17 2017-18
Converse 1	Dry Creek Moss Agate Shawnee White Walker Creek	<ul style="list-style-type: none"> <li>4-day school week</li> <li>152 Contact Days</li> <li>162 Contract Days</li> </ul>	2016-17 2017-18
Fremont 2	All Schools	<ul style="list-style-type: none"> <li>Some Fridays reserved for “High Impact” days dedicated to meeting school- and district-wide goals</li> <li>155.5 Contact Days</li> <li>170 Contract Days</li> </ul>	2016-17
Fremont 6	All Schools	<ul style="list-style-type: none"> <li>4-day school week</li> <li>165 Contact Days</li> <li>175 Contract Days</li> </ul>	2016-17 2017-18
Fremont 24	All Schools	<ul style="list-style-type: none"> <li>Allows for later start date, earlier end date</li> <li>Year 1 Elementary Contact Days: 169</li> <li>Year 1 Secondary Contact Days: 173</li> <li>Year 1 Contract Days: 183</li> <li>Year 2 Elementary Contact Days: 168</li> <li>Year 2 Secondary Contact Days: 172</li> <li>Year 2 Contract Days: 182</li> </ul>	2016-17 2017-18
Natrona	Midwest School	<ul style="list-style-type: none"> <li>4-day school week, with 22 Focus Fridays</li> <li>148 Contact Days</li> <li>170 Contract Days</li> </ul>	2016-17 2017-18
Uinta 4	All Schools	<ul style="list-style-type: none"> <li>Extending length of school day in favor of no school on specific Fridays due to certain events/activities that</li> </ul>	2016-17 2017-18

		result in high absenteeism <ul style="list-style-type: none"> <li>• 165 Contact Days</li> <li>• 180 Contact Days</li> </ul>	
Uinta 6	All Schools	<ul style="list-style-type: none"> <li>• 4-day school week</li> <li>• 145 Contact Days</li> <li>• 155 Contract Days</li> </ul>	2016-17 2017-18

**Information Only:** The following school districts were previously approved for an alternative schedule for 2015-16 and 2016-17:

- Campbell 1 – Westwood High School
- Carbon 2 – All Schools
- Johnson 1 – Kaycee School
- Laramie 2 – All Schools
- Niobrara 1 – Lance Creek School
- Sheridan 1 – All Schools
- Sheridan 3 – All Schools
- Sweetwater 1 – Farson-Eden Schools
- Teton 1 – Jackson Hole High School and Summit High School

***For questions or additional information:***

Please contact Julie Magee, [julie.magee@wyo.gov](mailto:julie.magee@wyo.gov), or 307-777-8740

***Suggested motions/recommendation:***

“I move that the new requests for alternative schedules be approved for the 2016-17 and 2017-18 school years.”

***Action taken by State Board of Education:*** \_\_\_\_\_ ***Date:*** \_\_\_\_\_

**ACTION SUMMARY SHEET  
STATE BOARD OF EDUCATION**

**DATE:** May 19, 2016

**ISSUE:** K-1 ELA Extended Standards Standards

**AUTHORITY:** W.S. 21-2-304(a)(iii) and W.S. 21-2-304(c)

**BACKGROUND/HISTORY:** The Board is charged with prescribing uniform student content and performance standards under W.S. 21-9-101 and promulgating uniform standards for programs addressing the special needs of student populations specified under W.S. 21-9-101(c) that ensure these student populations are provided the opportunity to learn the common core of knowledge and skills as prescribed by the uniform student content and performance standards. The Wyoming Department of Education (WDE) convened a focus group following communication from members of the original standards review committee who stated their final work was not accurately reflected in the adopted version of the K-1 ELA Extended Standards.

**FUNDING:** N/A

**IMPLEMENTATION AND SUSTAINABILITY:** Once these standards are adopted and Ch. 10 Rules are promulgated, the ELA Extended Standards will remain in effect until the next review cycle or until directed by the Board to open the review process, whichever comes first. Upon adoption of these standards, the Board will determine dates for implementation in schools per W.S. 21-2-304(a)(iv).

**SUGGESTED MOTION(s)/RECOMMENDATION(s):** I move to adopt the revised 2014 Wyoming ELA Extended Content and Performance Standards.

**SUPPORTING INFORMATION ATTACHED:** The K-1 ELA Extended Standards and presentation materials are included in the packet. Input from the public, collected online and through Public Hearings has also been given to the Board.

**PREPARED BY:** *Laurie Hernandez*

**Laurie Hernandez, WDE Standards Supervisor**

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**

**ACTION SUMMARY SHEET  
STATE BOARD OF EDUCATION**

**DATE:** May 19, 2016

**ISSUE:** Proposed 2016 Wyoming Science Content & Performance Standards

**AUTHORITY:** W.S. 21-2-304(c)

**BACKGROUND/HISTORY:** The Board is charged with evaluating and reviewing the uniformity and quality of the educational standards imposed under W.S. 21-9-101 including the student content and performance standards. The Wyoming Department of Education (WDE) convened a Science Standards Review Committee (SSRC) to review the science standards and make a recommendation to the state board for review and adoption. The SSRC is recommending a set of rigorous, internationally benchmarked, college & career-ready science standards.

**FUNDING:** N/A

**IMPLEMENTATION AND SUSTAINABILITY:** Once these standards are adopted and Ch. 10 Rules are promulgated, the science standards will remain in effect until the next review cycle or until directed by the Board to open the review process, whichever comes first. Upon adoption of these standards, the Board will determine dates for implementation in schools per W.S. 21-2-304(a)(iv).

**SUGGESTED MOTION(s)/RECOMMENDATION(s):** I move to adopt Chapter 10 Rules and the proposed 2016 Wyoming Science Content and Performance Standards documents. (includes the appendices)

**SUPPORTING INFORMATION ATTACHED:** The science standards documents and presentation materials are included in the packet. Input from the public, collected online and through Public Hearings has also been given to the Board.

**PREPARED BY:** *Laurie Hernandez*

**Laurie Hernandez, WDE Standards Supervisor**

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**



**WYOMING  
STATE BOARD  
OF EDUCATION**

## **ACTION SUMMARY SHEET**

**DATE:** April 28, 2016

**ISSUE:** Approval of SBE Meeting Schedule

**BACKGROUND:**

**SUGGESTED MOTION/RECOMMENDATION:**

To approve the SBE meeting schedule

**SUPPORTING INFORMATION ATTACHED:**

- Proposed meeting calendar and locations

**PREPARED BY:** Chelsie Oaks

**Chelsie Oaks, Executive Assistant**

**ACTION TAKEN BY STATE BOARD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMENTS:**



**WYOMING  
STATE BOARD  
OF EDUCATION**

### Meeting Locations:

June- Douglas

August- Casper

September- Sheridan/buffalo

October-Lander

November-Casper

January- Cheyenne, Legislative Session

February-Cheyenne, Session

March- Wheatland

April-Casper

May-Riverton

June-Sheridan

# 2016

# 2017

January							February							March						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
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3	4	5	6	7	8	9	7	8	9	10	11	12	13	6	7	8	9	10	11	12
10	11	12	13	14	15	16	14	15	16	17	18	19	20	13	14	15	16	17	18	19
17	18	19	20	21	22	23	21	22	23	24	25	26	27	20	21	22	23	24	25	26
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31																				

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3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11
10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18
17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
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15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18
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16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24	
23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31	
30	31																				

## Federal holidays 2016

<b>Jan 1</b> New Year's Day	<b>Jul 4</b> Independence Day	<b>Nov 24</b> Thanksgiving Day
<b>Jan 18</b> Martin Luther King Day	<b>Sep 5</b> Labor Day	<b>Dec 25</b> Christmas Day
<b>Feb 15</b> Presidents' Day	<b>Oct 10</b> Columbus Day	<b>Dec 26</b> Christmas Day (obs.)
<b>May 30</b> Memorial Day	<b>Nov 11</b> Veterans Day	

## Federal holidays 2017

<b>Jan 1</b> New Year's Day	<b>May 29</b> Memorial Day	<b>Nov 10</b> Veterans Day (obs.)
<b>Jan 2</b> New Year's Day (obs.)	<b>Jul 4</b> Independence Day	<b>Nov 11</b> Veterans Day
<b>Jan 16</b> Martin Luther King Day	<b>Sep 4</b> Labor Day	<b>Nov 23</b> Thanksgiving Day
<b>Feb 20</b> Presidents' Day	<b>Oct 9</b> Columbus Day	<b>Dec 25</b> Christmas Day