

Arizona Science Standards Revision Working Group



July 9, 2018



Introductions

- Sarah Sleasman
 - Director of Science and STEM
- Brea Rivera
 - Science Specialist
- Jonathan Moore, Ed. D.
 - Deputy Associate Superintendent

Arizona Science Standards Revision Working Group

TO DO LiST

1. **SO**
2. **MANY**
3. **THINGS**



Today we will...

- Finish public comment
- Storyline K-2, 3-5, 6-8
 - Grade-level
 - Band (metric)
- Progression from Big Ideas and Framework

Arizona Science Standards Revision Working Group

TO DO LiST

1. **SO**
2. **MANY**
3. **THINGS**



Today we will...

- Highschool
 - Physics: Review Standards
 - Learning Progression
 - Earth & Space / Life
 - Research Learning Progression
 - Life Review K-12 Progression

Housekeeping

1. Sign in
2. Parking validation
3. Restrooms
4. Breaks/Lunch
5. Sign forms – All members

Cell phones should only be used during breaks and lunch. If you need to take a call, please go to the break room. Please check text and email only during break due to non-disclosure.

Housekeeping

Dr. Eugene Judson

Associate Professor - Science Education
Arizona State University



ASU Research project – IRB consent

Participation in this research project is completely voluntary and does not impact your participation in standards work.

Biggest Thank You!



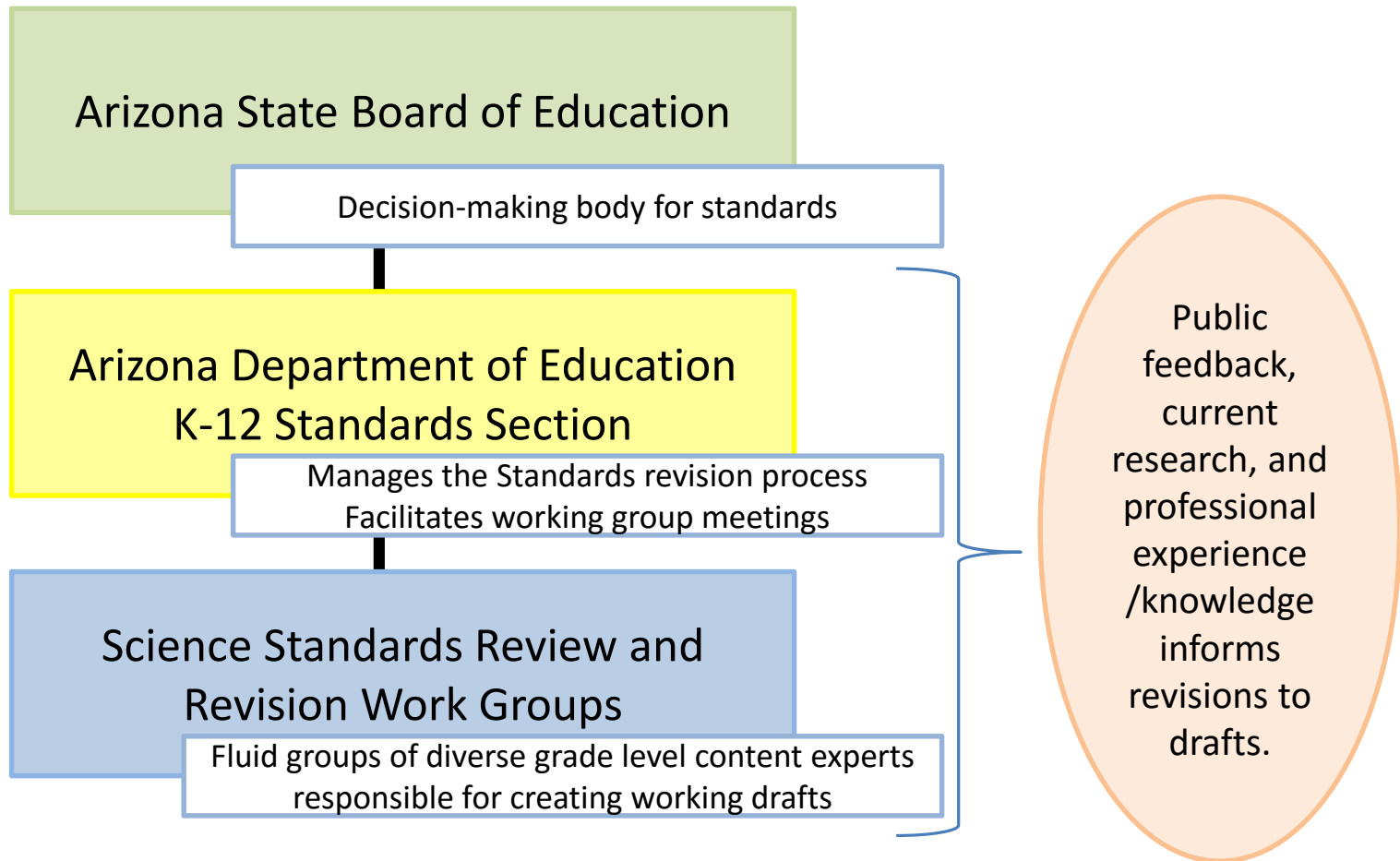
THANK YOU

Introductions

Introduce yourself by telling everyone in the group:

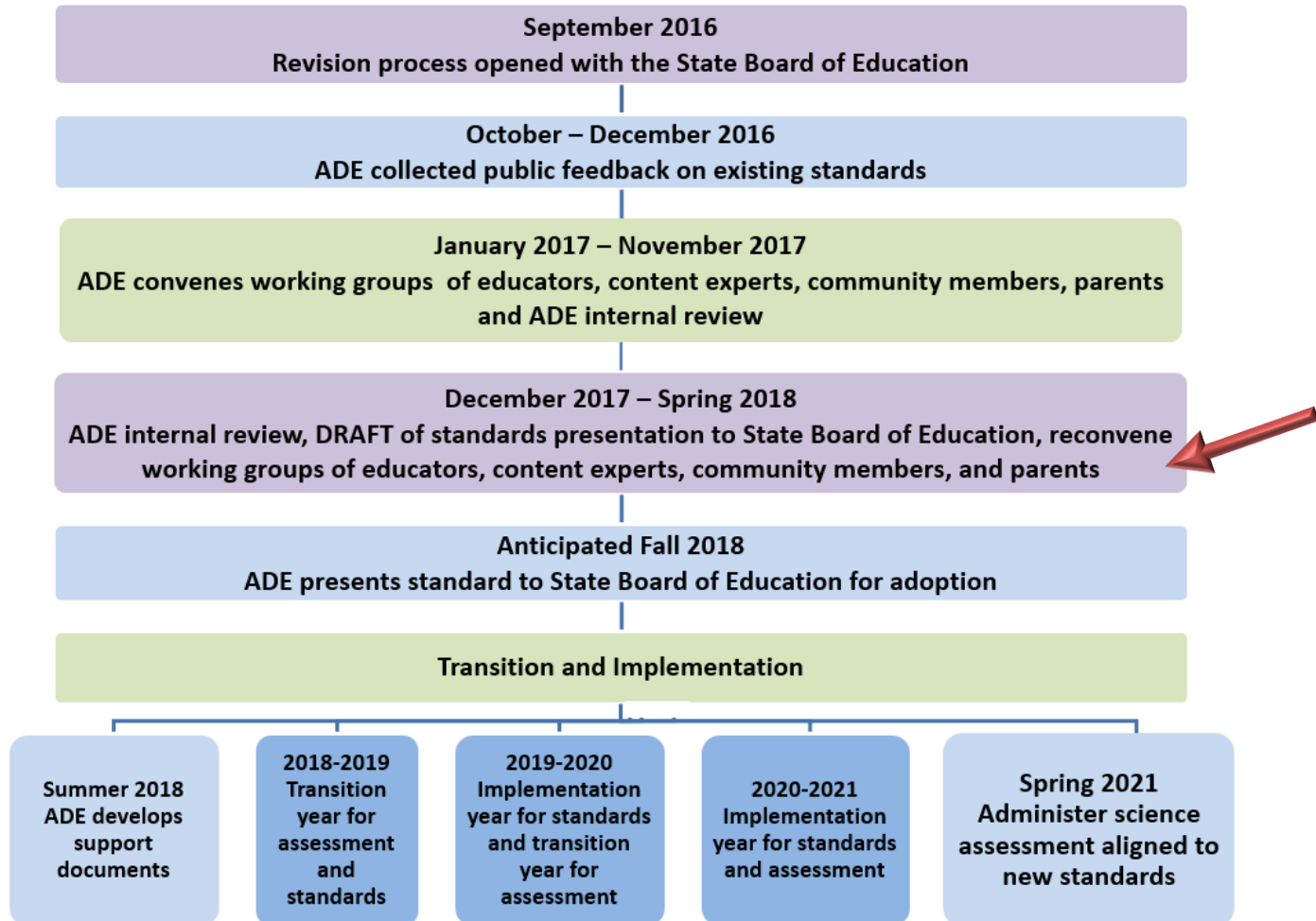
1. Your name
2. Your school/district
3. Your current position
4. Something exciting about this summer

Standards Review - Structure



Science Standard Revision and Implementation Timeline

Science Standards Revision and Tentative Implementation Timeline



Working Group Norms

- Actively engage in all discussions
- Be open-minded
- Have an attitude that fosters collaboration, agreement, and consensus
- Be mindful of timelines and scope of work
- **Cell phone/email checks are limited to breaks**

Standards, Curriculum, & Instruction

Standards – What a student needs to know, understand, and be able to do by the end of each grade. Standards build across grade levels in a progression of increasing understanding and through a range of cognitive demand levels.

Standards are adopted at the state level by the State Board of Education.



This is the “WHAT”



Standards, Curriculum, & Instruction

Curriculum – The resources used for teaching and learning the standards. **Curricula are adopted at a local level by districts and schools.**

Instruction – The methods used by teachers to teach their students. **Instructional techniques are employed by individual teachers** in response to the needs of the students in their classes to help them progress through the curriculum in order to master the standards.



This is the “HOW”



Working Group Norms

No "I" Statements



Today's Tasks



Reminder:

Keep in mind our work product is public record.

Today's Tasks

Finish public comment

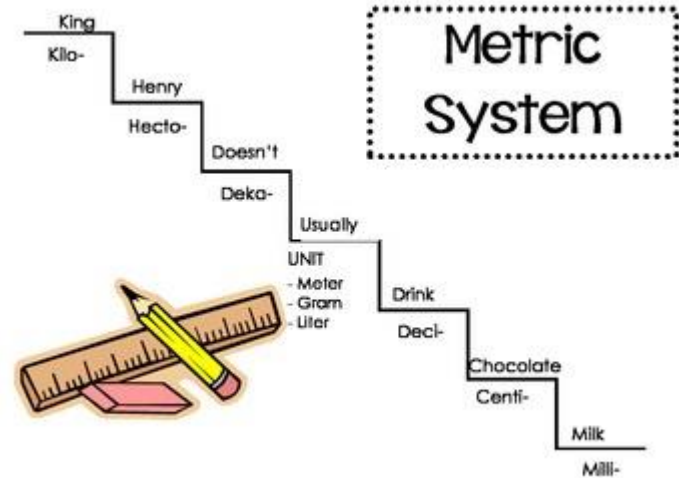
2. Please comment about the organization of the Science Standards.						
Addressed	Comment #	Public Comment	Actionable Yes/No	Item Addressed	Suggested Changes	Committee Notes
	16	The physical layout of the standards is efficient and easy to read, however I have an issue with the key concepts column. I am an 8th grade teacher, and I will use 8.P4U1.4 as an example. The key concepts say Concepts taught in 7.E1U2.4 and wavelength, amplitude, speed, frequency. If I go back to 7.E1U2.4, it tells me Concepts taught in 6.E1U1.6 and hydrologic cycle... So then I again have to go further back to 6.E1U1.6 just to read Extension of those taught in 4.P4U2.1, 4.E1U1.5. So AGAIN I have to dig deeper just to find out what I'm teaching in that 8th grade standard. I find this tedious and unnecessary. I understand that the standards are supposed to build off of each other, however it is frustrating to have to continue to search for the concepts. If the concept would be listed next to the standard from the previous grade level(s) I think it would be much easier for teachers to deal with.	Yes	Organization	within the progression of the standard, include previously built upon concepts	format showed by Brea laid this out nicely
	31	I like the order of which they are presented and that there are fewer standards to cover to focus on mastery.	No			
	33	Why on earth have you removed references to evolution and the big bang theory???	No		not organization related	
	38	I like that they are similar to NGSS.	No			
	40	Nothing special but the order and organization will work.	No			
	44	The draft of the new standards are extremely watered down and less clear as to the learning goal required of each standard.	No		not organization related	
	45	The National science education standard are better.	No			
	47	They are easy enough to follow	No			
	56	They are easy to read - i appreciate how they are segmented by sub-discipline	No			
	61	Some Earth science topics (HS) students coming into high school may not have prior knowledge to build on.	No			
	66	They're okay	No			
	69	N/A	No			

Today's Tasks K-8

Think.....Does it match the standards in your grade level?

Steps:

- Read the grade level standards
- Review and revise the story line per each grade level
- Review and revise the grade band story line add in the metric system



Today's Tasks

Read and review your grades progression

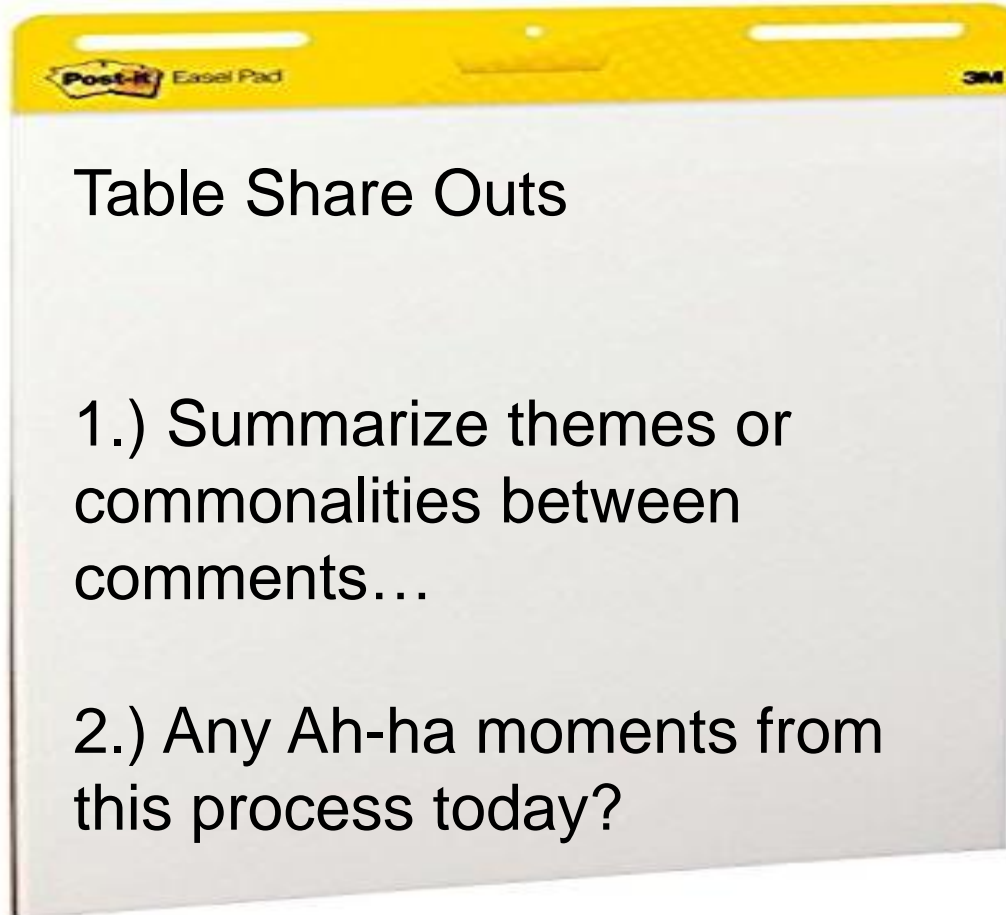
Read the progression that corresponds with your standards

Citation with:
BIG Ideas 2
Framework 4

Add in the page number



Final Thoughts



Final Thoughts

Standards Revision Executive Summary

Grade Level	Key Highlights from Public Comment and/or Technical Review	Key Points of Discussion from Working Group	Key Revisions and/or Changes
Kindergarten			
First Grade			
Second Grade			
Third Grade			
Fourth Grade			
Fifth			
Sixth			