

2. Please comment about the organization of the Science Standards.					
Survey Question	Public Comment	Actionable Yes/No	Item Addressed	Suggested Changes	Committee Notes
Addressed	Comment #				
	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		
	80	Were better before the 'green' areas added by the BOE. Let actual scientists and science teachers write the standards, not bureaucrats and laymen.	No		
	82	Organization is fine.	No		
	88	It is confusing for those reading it when looking at what needs to be learned over the course of a science curriculum rather than individual courses (i.e. biology vs. chemistry).	No		curriculum related
	93	I was able to read this nonsense fairly easy.	No		
	100	They are not scientifically accurate	No		
	108	Grade level content should be aligned with NGSS.	No		already present/curriculum related
	109	These are well organized but sometimes repetitive	No		
	113	I am not happy with the changes made by Superintendent Douglas.	No		
	114	organization is fine	No		
	116	key concepts	No		
	119	The standards are organized fine. I am wondering if we will be given a curriculum to use so that I can teach these new standards?	No		up to LEAs
	123	I would go Life, Earth, then Physical	No		up to LEAs
	124	They are easily understood.	No		
	140	Pretty straight forward on the majority...some strands I question and wonder exactly what we are supposed to teach.	No		
	143	The first section that describes the standards and 3-dimensional learning is done well. The standards are written and organized in a coherent manner. The piece that leads to confusion and inaccurate science are the key concepts, which in what I know about concepts are not even concepts but vocabulary words that may or may not align to the standard. I would like to see these gone....	No		replaced by learning progression document
	145	Key concepts need to be removed as they are not concepts but rather vocabulary and often not even related to the standard. Additionally, it clearly states that the job of the Arizona Department of Education is to write standards NOT curriculum. The key concepts are the job of the school district and classroom teacher.	No		replaced by learning progression document
	150	The standards themselves are organized well but the connection to other academic disciplines does not make sense.	No		
	152	The graphic models of cross cutting are too cumbersome and disjointed.	No		
	154	I like the grade level organization	No		

		The Board of Education's Internal Review of the Standards does not take into account the flow of strands from grade level to grade level. This continuity was in the original standards created by the committee of professionals before Diane Douglas took them for internal review.	No			
	157					
	163	The actual standards are well organized and easy to read. The document itself has some very confusing sections, especially the connections to other academic disciplines (not well connected) and the Key concepts. The addition of the Key Concepts column does not meet accessibility requirements. Placing the coding for each standard in a table cell makes it difficult for districts to capture coding and text of the standards without a lot of reformatting. Please make the document accessible and more user friendly for districts by eliminating the tables. Also, I'm unclear of the color coding. Core ideas are colored yellow/orange but so is physical science. SEPs are color coded blue but so is earth science. Crosscutting concepts are color coded green but so is life science. Is there a reason for using these colors in two different ways? This is very confusing.	No	Organization	within the progression of the standard, include previously built upon concepts	format showed by Brea laid this out in a more coherent manner
	165	The document is too long and repetitive. Trying to go over it in a reasonable length of time is very stressful. There seems to be a lot of jargon. When I studied science in Arizona, we weren't subjected to any of that. This really looks like Common Core in some ways, and Common Core needs to be repudiated.	No			
	168	Standards are easy to read.	No			
	171	The presence of key concepts makes it confusing: are those the performance objectives? I thought this was just about standards, not performance objectives. I think these should be eliminated. They were not in the original version of the standards. It is also confusing as to where the standard number originates, in the individual grade levels...they are numbered sequentially from physical science, through Earth and Space and on to Life sciences...this is a bit confusing.	No	Organization	within the progression of the standard, include previously built upon concepts	format showed by Brea laid this out in a more coherent manner
	172	The standards profess to outline what the students need to know, understand and do by the time they complete high school, and at the same time they then provide of 37 standards, none of which say anything about what the student needs to 'know, understand or do' to be proficient at that standard. Rather the standards are about constructing, engaging, evaluating, developing, etc. So, because a student can construct a model of something does that mean they know and understand what the model represents? And just curious given the length of the standards, are the teachers actually going to read them...or are they going to wait for someone to provide them with materials to use in the classroom? Seems like a lot of time and money has been spent on creating a document that can't be used directly by a teacher in their classroom.	No	Standard	"Understand" is a very low level Bloom's, whereas "constructing, engaging, evaluating, and developing" are a much higher level of thinking	
	179	Really well organized	No			
	180	The Original standards has a sequential flow.	No			
	181	They are easy to read and understand.	No			
	182	A lot more simple and easy to read. Kid friendly	No			
	184	It is very organized and easy to read	No			
	186	They are easier to read because of the Key Concepts. Without the key concepts its hard to understand ideas as to what we are suppose to teach to our students. The key concepts helps give me ideas as to where to go with my students education.	No			
	187	The Ideas don't seem new but more complicated.	No			
	188	They are easy to read due to having the key concepts written in. If you don't keep in the key concepts there will be way too much inconsistency between grade levels, schools, districts. All teachers need to be teaching the same key concept and not keep it just a broad concept.	No	Standard/Key Concepts		will be present within the learning progression document
	189	The diagram is clear and easy to follow.	No			
	190	It is user friendly and I like the key concept portion that gives actual examples of what the standard entails. It would be more comprehensible if visual examples were included.	No			

		The standards feel too broad for me to completely absorb them at this point. In previous years in reviewing other standards, specific example were given for types of activities or questions that we would do with the students, thereby clarifying exactly what we are expected to teach. These feel more broad-based and I fear I may not translate them correctly.	No			
	191		No			
		I do agree that it is visually pleasing and easy to read, however, I do feel that the Big Ideas might be difficult to teach and interpret across grade levels for appropriate scaffolding.	No			
	193		No			
	195	The 14 core ideas and that they're the same for all grade levels.	No			
	196	Like the 14 core ideas behind the science itself and they are the same for all grade levels.	No			
	197	Easy to read.	No			
	206	Much easier to read than previous standards	No			
	208	Easy to read yes, but too complicated!! The coding system is a mouthful by itself.	Yes	Coding/Organization	none	no changes needed, too complex to rename, will take time to adjust and get used to
	210	The organization is fine, but the organization of the content itself is not.	No			
	212	Organization is easy to read, can be searched to find key words.	No			
	215	As Director of a clinical laboratory, having a dual major BS degree in both Chemistry and Biology, I would like to see Arizona adopt the Next Gen Science Standards that are already in use in many states. We need to inspire our young people (especially female students) to consider STEM careers.	No			already present
	218	Key concepts should not be hyperlinked, but explicitly stated so standards can be printed out and easily accessed by teachers.	No	Standards/Organization	will be addressed within the progression document	
	219	The standards are easy to read and clear.	No			
	220	There is the potential misalignment, both vertically and with respect to the 14 core ideas, resulting from internal, non-vetted changes to the standards statements. Reviewing the document, we have noted that, in both Kindergarten and 3rd grade physical science standards, statement changes shift the standards' focus from physical science to life science, resulting in the physical science import being lost. These changes break the learning progressions of the core content as well as vertical alignment between grade levels. It is possible that other significant alignment issues may be present yet not recognized.	No			
	224	It is organized, but it does not seem like 40 minutes per day is possible with this being a computer science school.	No			up to LEAs
	225	The standards for science is limited and similar to what we already teach. However, 40 minutes a day is not realistic in today's classroom, where we teach math for 90 minutes, ELA for 60-90 minutes, Computer Science for 30-60 minutes a day as well. This does not include classes like PE, Music, and Art.	No			up to LEAs
	226	You are also assuming that the younger grades are teaching at least 60 minutes everyday of science. Which we know is not the case. So who will take up the slack?	No			up to LEAs
	227	They are well organized.	No			
	228	I like the general organization of the standards. I think it is helpful to divide science into 3 general categories.	No			
	232	I like the big ideas	No			
	235	Our team thought that the organization allows them to be navigated through easily, but the connection between Development and use in the model and key concepts need to be elaborated on more.	No			
	238	Easy to read and understand general concepts, but very broad and lacking specific objectives and terminology students will be expected to master. How well are these standards aligned to future standardized science tests (AIMS, AZMerit)? Because of the vast changes in the sequence of concepts/topics, I am concerned that there will be huge gaps in transition from the old standards to the new.	No			up to LEAs
	242	I found it really easy to navigate through the document and to understand standards. I also really like the embedded hyperlinks within the document to bring you to other standards that were referenced within a standard.	No			
	243	The science standards are clear and easy to read.	No			

	246	Very easy to read. I can see the asking of students to critical think. My concerns how testing will take place for 8th grade. They can't use the current 8th grade state standard. Does not fit.	No			
	248	I like the way that standards are shown based on the last time that they were taught and how you can go back to the grade level where they were taught to determine what it was that was taught.	No			
	249	Well done on the organization	No			
	250	I do not believe the 7th grade standards should include physical science standards. They should continue to focus on Earth and Space. 7th grade students are not ready to learn about inertia and forces. 8th graders struggled with the concept. 7th graders do not learn about moving variables, so learning about $f=ma$ would be difficult to understand for them. The AZMerit has around 30% on physical science, so they should continue to focus mainly on this in their 8th grade year, which will be a better transition for high school. The Earth and Space standards in 8th grade are oddly placed with the rest of the standards and does not flow well.	No			
	251	The distribution of the standards visual (chart) is very helpful and explains the standards very well.	No			
	252	Some of the standards are too broad an I am confused as to what 8th grade will be responsible to teach in order to have a successful testing session. There are parts that are explicit.	No			
	253	They are far too complicated. They remind me of the ILLP standards. Why does the state feel the need to overcomplicate rather than simplify things.	No			
	255	I think that organization is appropriate and easy to follow.	No			
	257	The integration of content from other previous grade level standards should mention whether correlating math standards will be taught as well.	No	Standards/ Organization	present in the Connections to Other Academic Disciplines document	
	261	yes organized	No			
	265	With the exception of the Key Concepts column that was added by ADE, the organization seems to work fine.	No	Standards/ Organization	will be present within the learning progression document	
	271	They are easy to navigate with the coding, the color differentiation between science domains, and the inquiry standards being intertwined.	No			
	274	The links under Key concepts include but are not limited to: to are helpful, but refer to standard is not. Does it mean the old Arizona State Standard? Is there a list of standards somewhere that I am missing? Or is just up to my interpretation of the standard what should be included?	No	Standards/ Organization	will be present within the learning progression document	
	275	The key concepts seem to be more of a vocabulary list and not concepts. Some of these key concepts are highly inappropriate for the grade level listed and unrelated to the standard it was attached to.	No	Standards/ Organization	will be present within the learning progression document	
	276	Some standards seem inappropriate for grade level and the Key Concepts are not actually concepts. They appear more as a list of vocabulary associated with the standards. This makes the standard seem irrelevant and confusing.	No	Standards/ Organization	will be present within the learning progression document	
	277	I agree. I can read them and understand what is included, even if I do not agree with what is included.	No			
	278	Easy to follow	No			
	279	The high school standards are easy to understand and allow for cross cutting ideas when teaching.	No			
	282	The standards are easy to read. Key concepts are questionable on several standards or of no help in teaching. Standards need to have more details on what specifically students are being asked to know.	No	Standards/ Organization	will be present within the learning progression document	
	284	It is so general, as a teacher I am not sure what I am supposed to be doing with it. Each district will be unwrapping it differently with different expectations. How will I know what will be assessed since it is so general? I am guessing what is included.	No			
	287	That's good. Seems to proceed in an orderly, sequential fashion.	No			
	289	K standards for science are foundational and can be taught in a developmentally appropriate scope.	No			
	290	I would like to see a better layout of the standards.	No			
	291	Once I understood the system, it was a mirror of reading ELA standards and easier.	No			
	292	There are a lot of categories.. it might be more manageable if we made the categories more broad.	No			
	298	I like how it's split by content	No			
	305	The standards are presented in a way that is easy to understand. More details could be provided.	No			

311	These are not what the committee created	No			
	They do not address the number of days required to teach the standards, only the number of hours per day they should be taught.	No			Up to LEAs
317	The key concepts are easier to understand	No			
	Organization is very clear, however the numbering system needs clarity.		Standards/ Coding/ Organization	combine the Core Ideas for Knowing Science table with the page that has the Coding for the Science Standards	
318	Standards are easy to look at it, but they are not necessarily easy to understand.	No			
320	The layout of the standards are easy to read and follow through.	No			
321	They are broken down into a format that is easier to understand.	No			
322	The standards are easy to read and understand. I would like to see links that enable further explanations and examples.	No	Standards/ Organization	will be present within the learning progression document	
326	The coding is a bit confusing. Without using the key at the top a code such as 2.P1U2.1 is hard to understand. I know it's 2nd grade, Physical Science (P), and it's the first one of 8 (because of the 1 at the end), but the 1U2 in the middle just makes for a lot.	No	Standards/ Coding/ Organization	combine the Core Ideas for Knowing Science table with the page that has the Coding for the Science Standards	
334	They were very easy to read.	No			
335	Middle school students should explore one are of science in depth. Everything in science builds on something done previously. For instance, introducing atomic structure in fifth grade and then waiting until 8th grade to combine atoms, leaves too much time for students to forget the structure. Each science BUILDS. Allowing students to have the time to explore a subject in depth will allow for retention.	No			
340	Satandards seem out of place and not well aligned. Cause and effect as a main category to teach does not make sense and will leave your teachers scrambling to make sense of that standard and how to teach it. Its too vague. IT looks like all you did was shuffle a few 7th grade standards to 6 grade and few of 8th grade to 7th.. The problem with this is, and especially for 8th grade, the standards you moved are vital to get students ready for HS. YOU took physics out of the question and students need it in 8thfor HS. Dropping it to 7th and not having an adequate replacement is not good enough. It has been replaced with Waves. Waves is such a minor concept that it just dont make sense on why you would teach that at 8th grade. Waves can be taught in 7th grade.Teache hin on Standards of geological rock column in *th grade is out of place since 7th grade teaches about Earth history. You also chopped out anything about the periodic table that is needed for HS.	No	Standards		present in HS.P1U2.1, 6.P1U2.3, 8.P1U2.1
341	I very much like the hierarchical left to right arrangement.I initially though that the breadth of content was lacking because several concepts did not appear represented in the left-hand broad descriptions, but they do show up in the right-hand detailed descriptions. They wording of the broad categories should be clarified to avoid this.	No			
342	I feel verbage is not consistent in areas of key concepts	No			
345	Easy to understand if one is familiar with NGSS. PD will need to be provided on how to read and use standards in planning lessons.	No			Up to LEAs
346	Excellent overview of the crosscutting concepts, practices & core ideas/3D learning. Appreciated the appendix to refer to for more indepth investigation.	No			
347	There is so little left of the current standards. Things have been moved or deleted. What happened to the Next Generation Science Standards?	No			already present
348	I hope it includes specific vocabulary that should be used in each standard.	No	Standards/ Organization	will be present within the learning progression document	
351	Overall, they are good and developmental appropriate.	No			
352	I like that they are organized into grade level groups. It makes it easier to see the changes and the progression from one grade level to the next. I know it's bulky, but it would also be nice to see a document that tracks each standard from K to 12.	No			
353					

		I have strong reservations regarding the key concepts columns. These refer to the content taught, and limit how the standard can be applied. Even though it says include but not limited to teachers and parents still may see this as a list of content required to master the standard. If they are truly meant to be suggestions on how to apply the standard, they should be in a completely separate document. This could be developed by PLC's or districts in the form of curriculum maps etc.				
354		The codes make sense and include a using standard in each	No	Standards/ Organization	will be present within the learning progression document	
355		The standards are easy to read and understand from one grade level to another. The coding of the standards are understandable.	No			
356		The standards organized in a table format make it was to read, but the mass amount of introductory information make it hard to follow and make connections between grade levels.	No			
358		I like how the areas are organized into the 3 sciences. It is great that the core ideas for knowing and the core ideas for using science are embedded through out the standards.	No			
359		The standards are organized in a way that makes them easy to read. The wording of the standards is not clear as to what should be taught.	No			
360		Organized in a readable manner	No			
362		The Standards are easy to read, I like how they were grouped by type of Science. The grouping was similar across grade levels, so the consistency is wonderful!	No			
363		They are not well-written and many of them still require much interpretation. The standards are randomized and completely unorganized over middle school grade levels.	No			
364		The standards for my specific grade level are easy to read, but leave a lot of questions about what content to cover. The inclusion of the 3d idea of crosscutting concepts, core ideas and science and engineering practices created a beautiful theory, but I feel like it is difficult to know what that will look like in the classroom.	No			
365		Standards are concise, articulation both above and below makes sense, like the 3-D visual model but it needs more explanation (titles, arrows), needs to be more user friendly, how to use it to make connections. Under the key concepts section, when it refers to concepts taught in previous grade levels in relationship to that standard, is the purpose for review, re-teach, or just for awareness that the groundwork was laid? Clarification is needed.	No	Standards/ Organization	will be present within the learning progression document	
366		Overall, they are good and developmental appropriate.	No			
367		Look at 3Us. P2U1.1. Key concepts suggest including 1.P2U1.1. Teacher must look back to 1st grade. Once there, key concepts suggest knowing K.P2.1. A teacher would need to double jump into 2 grade level to fully understand the intentions of 3rd grade.	Yes	Standards/ Organization/ K12 Progression	create some kind of grade level vertical alignment for concepts that build upon one another	
369		The standards should make sense both from a level of knowledge aspect as well as a flow perspective.	No			
373		I enjoy that there essential and + standards. It doesn't make sense however to put the discipline area in the physical science standards. Things like energy and waves may fit in both and not necessarily contained in Chem or Physics.	No			refer to cross cutting
376		There seems to be a good flow and the standards seem to build on each other.	No			
377		On page 47- the front introduction of the High school standards, there should be a discussion of the four disciplines (Earth and Space, Biology, Physics, and Chemistry.)	No			already present: Physical pg. 48, Earth and Space pg. 55, Life Sciences pg. 62
380		Earth and Space jump around	No			
381		Vertical alignment is presented well, along with cross-curricular references into ELA and Math for high school alignment as well.	No			
387		The Science Standards are written in a way that is specific rather than vague which makes it easier to teach directly to the standard.	No			
389		The addition of three dimensional learning and cross cutting concepts are a great way to help students get a deep understanding of scientific concepts.	No			
390		The organization is good and easy to access.	No			
392		The standards are more specific and easy to implement.	No			
398		Difficult to understand	No			
400						

	408	We should restore the ASE (Association for Science Education) standards description of evolution because it is scientifically accurate and appropriate.	Yes	Standards		take it up with Life Science
	410	No major issues	No			
	415	I think they should be listed in a different order. Cells and organisms (elements & macromolecules of living organisms) should come first, then genetics, evolution, & ecosystems.	Yes	Standards/ Progression		Up to LEAs
	424	They're fine	No			
	430	No organizational scheme with please everyone all of the time, but it was easy to read and find information.	No			
	431	I like the overall organization of the Science Standards, but having been on the committee originally responsible for the draft, I am confused by the appearance of the Key Concepts section. It was specifically stated that we were to avoid performance objectives because that encouraged teachers to use the standards like a checklist, rather than making bigger connections between the ideas. Including key concepts seems to undermine this idea. Were these added by the committee as a whole at the final committee meeting? These did not exist at the second to last meeting (the last time I was present).	No	Standards/ Organization	will be present within the learning progression document	
	433	I don't feel like the standards flow in a way that would allow deep thinking and mastery of concepts.	No			
	435	Easy to read. Please include exact vocabulary required.	No			
	437	Organization is fine.	No			
	449	I like how you have the Key Concepts and how you can see where the scaffolding was taught previously. Could there be a little more detail for some of them instead of refer to standard I'm assuming that means it's pretty open ended, but not sure.	No			
	451	Wording of the standards are still a bit confusing.	No			
	453	The use of charts is very helpful, as is the focus statement at the beginning of each grade level.	No			
	454	Occasionally redundant.	No			
	455	I very much so like how the standards are divided by grade level and then we are given a breakdown of how the standards connect in the Distribution Chart (I looked only at K-2).	No			
	460	I like how they are detailed and even provide key concepts	No			
	461	Would like to have seen more detail	No			
	463	Doesn't quite explain how the standards go together	No			
	464	Sixth grade should be life Science, Seventh grade - Earth and Space Science, Eighth grade- Physical science.	No			
	467	I am a kindergarten teacher and these standards make more sense than previous ones. They are much more age appropriate.	No			
	469	na	No			
	470	I like the structure of the standards and feel that they will be easy for teachers to follow and understand.	No			
	473	They leave a lot of room for interpretation. They also do not allow for teachers to implement unit based instruction.	No			Up to LEAs
	474	Very general and much of the content in a grade level seems random and unrelated making it difficult to teach units. Prerequisites for standards are missing. Ex. Seismology is taught in the 8th grade, but nothing else about earthquakes.	No			present in standards within the "natural disasters"
	475	I do not think that some of the new standards are vague and lead to interpatation.	No			
	476	They were difficult to read and so broad they do not indicate what is expected to be taught.	No			
	477	They are very broad	No			
	481	The sections describing links between standards and other academic disciplines are wordy and not particularly useful in their current format. They would be of more use where the unnecessary 'key concepts' section is currently located.	No			
	489	I would like to see an inclusion that pushes the biological facts of there being only 2 genders. Male and female.	No			
	491	Ok	No			
	492	When giving examples of the specific topics covered in a standard, the examples should be spelled out and include the grades that they were introduced. The examples should not refer you to the standards for the grade where the topic was introduced.	No			Up to LEAs
	497	They are organized fine but they are so broad and can be interpreted in many different ways. It's hard to know exactly what the standard is looking for	No			

	502	I like how it is broken into different types of sciences. However, I feel like there could be more explanation in some.	No			
	510	I like how it is organized by grade level and what the main focus is.	No			
	512	The standards are organized in a way that is easy to read and understand.	No			
	513	The connection to student initiated higher thinking is great.	No			
	514	The organizational table made it easy to read each standard.	No			
	515	These are so similar to the NGSS standards. I can not understand why Arizona funds such costly practices as rewriting CC and NGSS standards, rather than just adopt a well researched, national standard set.	No			
	516	I like the break down of affiliated terms with each topic. I would like to see resource suggestions.	No			Up to LEAs
	518	I think this reorganization is detrimental to the education of middle school science. The way in which these standards has been grouped not only goes against the old standards but the current next generation science standards, by choosing to ignore both and create your own mess of a plan it is going to cause student gaps in science content knowledge and ultimately be yet another barrier that Arizona students are going to have to overcome. If you are going to rearrange the standards either organize them based on life, physical, earth or follow the guide of the next generation science standards, and states that have successfully implemented the standards ranking high educationally.	No			
	519	They are easier to read and understand than the previous standards.	No			
	527	n/a	No			
	528	The organization of the standards are easy to read. Looking at the essential vs plus standards for high school. I believe the organization between what is essential and what is a Plus standard may need some adjustment	Yes	Organization	within the progression of the standard, include previously built upon concepts	format showed by Brea laid this out in a more coherent manner
	529	Standards are organized. I don't agree with grade level choice for certain standards.	No			
	530	Too Many columns. Why are there the key concepts? This is not what was sent to ADE at the end of revisions	No	Standards/ Organization	will be present within the learning progression document	
	541	I like the way they're connected to other standards in an easy-to-read chart.	No			
	550	Perfect	No			
	551	No comment.	No			
	564	The Science Standards are organized but it seems that the state is removing chemistry classes and physics classes to create one chem/phy class.	Yes			Up to LEAs
	1000	The science standards are sufficient as they are. They should never be amended such that the fact that evolution is a scientific fact and a bedrock for modern viology to stop being taught to children.	No			
	1001	They're missing key scientific language crucial to a fundamental understanding of biology and, by extension, the entirety of the biological sciences.	No			
	1002	Scientific standards should be based on scientific research and nothing else. Replacing and watering down the proven science of evolution is a disservice to our kids, a disservice to our teachers, and a disservice to our educational body. STOP TRYING TO ERASE SCIENCE WITH YOUR PERSONAL RELIGIOUS BELIEFS.	No			
	1003	Organization is adequate.	No			

		The science standards before editing were clear and concise, and showed an understanding of what makes an actionable education goal. During the editing process an extra column was added to each table of standards which consists of lists of terms. For example, under space and science standards the following was added: Weather, seasons, weather patterns, sun, temperature, thermometer, clouds, types of precipitation These lists are not actionable goals but simply a hodgepodge of somewhat related terms. Further, sever guidelines were changed from being specific and actionable to being vague to the point of being unhelpful to teacher. For example: Investigate the properties of earth materials, design and evaluate suitable habitats for organisms using earthmaterials. was changed to Obtain, evaluate, and communicate information about the properties of earth materials. The former has clear goals that suggests lesson plans: students will explore the composition of different terrestrial environment and evaluate whether and how they can support life. The latter is vague and suggests no specific lesson other than students do something related to earth materials .				
	1004		No	Standards/ Organization	will be present within the learning progression document	
	1005	Too much 'eduspeak' & I needed more caffeine to get me through the whole document	No			
	1006	The science standards create ways of avoiding teaching evolution.	No			
	1007	I believe all children should learn the effects fossil fuels have on the environment.	No			
	1008	They are very well organized.	No			
	1009	Having everything relate back to the original 14 core concepts is a good overall organizational concept, but after that the language and organization seems more vague and less concrete than in the 2004/05 standards	No			
	1010	Please note that this is a continuation of my review. The system gave a warning that I had only a few minutes left and advised me to save. I have not seen a save button, so am continuing this where I left off with specific grade level comments.This was already included.As a member of the Standards Committee, I am greatly concerned with what was done in a closed process without the original Committee having the opportunity to comment on the MAJOR changes and deletions made.	No			
	1011	Evolution is the standard accepted by scientists. These are scientific textbooks, maybe they should represent the best knowledge we have today and not the dumbed down version the creationists want to force upon us.	No			
	1012	evolution defined and taught incorrectly	No			
	1013	It appears to be organized.	No			
	1014	Light green font color shows poorly--should use a dark color like navy blur for edits.Key concepts listing of science standards often references science standards--confusing, possibly circular--to what is a reader expected to refer?	No	Standards/ Organization	will be present within the learning progression document	
	1015	The organization is fine, though I don't love that Physics and Chemistry are mixed together when the other disciplines have their own sections.	Yes			Up to LEAs
	1016	In general, these are easy to read and I like the overall organization and layout.	No			
	1017	The science standards appear to remove the teaching of evolution, which is not scientific. Remember, also, that the teaching of intelligent design has been ruled unconstitutional because it advances the role of religion in public schools.	No	Standards/Content		
	1018	These standards are an unconstitutional ploy to put a creationism agenda into the curriculum and confuse students about the scientific fact of evolution	No	Standards/Content		
	1019	It is wrong to miseducate our children & remove scientifically proven information, in particular evolution , from the standards.	No	Standards/Content		
	1020	The inclusion of creationism, and the weakening of the teaching of evolution. Creationism it's not a science but a religion belief. This is a science class, and science is what should taught.	No	Standards/Content		
	1021	Well organized	No	Positive		
	1022	I think the move to teach the periodic table in 6th is a good move	No	Positive		
	1023	Generally well organized but the changes regarding dogmatic evolutionism are a welcome change - LONG OVERDUE	No	Positive/Standards/ Content		

		Diving instruction on different forces into different grades is less efficient and prevents the ability to look at the foundational role of forces. one significant problem comes from students understanding the difference between mass and weight. The further dividing of energy into different grades threatens mastery. A deep understanding of the idea that work is the transfer of Energy and energy is the ability to do work assumes a foundational understanding of forces. Presenting kinetic energy ($1/2mv^2$) in 6th grade will present a significant math barrier to comparing stored energy to the energy of motion. The standards also lack a focus on the fact that all matter has properties. It is these properties that differentiate types of matter and link matter to how we use them to solve problems. Chemical bond types should remain in high school because the difference between covalent and ionic bonds is both subtle and profound and requires a sophisticated understanding of subatomic particles and the organization of the Periodic Table.			
	1024		No	Standards/Content	Kinetic theory is presented in 6th grade without the mathematical need.
	1025	They are organized by grade and topic, then detail the learning objective. Great.	No	Positive	
	1026	Some of the changed wording makes less sense that the previous version and is confusing to understand. This appears to be, in some cases, a way to remove teaching some concepts.	No	Negative	
	1027	This is not the issue.	No	Positive	
	1028	The spiraling of concepts across grade levels helps students deepen understandings over time.	No	Positive	
	1029	The organization is excellent.	No	Positive	
	1030	I have no objection to the general layout of topics.	No	Positive	
	1031	The standards do not reflect the work of the educators who worked for over a year to develop	No	Negative	
	1032	Only SCIENCE in Science class!	No		
	1033	Adequate	No	Positive	
	1034	Intelligent design is not science keep religion out of public schools	No	Standards	
	1035	The organization of the science standards gave a clear presentation of the standards being put forth. They were well done and easy to follow.	No	Positive	
	1036	Properly tailored to the level of instruction at each grade level.	No	Positive	
	1037	Listing the individual concepts to be mastered by code in the cross reference chart is VERY confusing!!!!	No	Negative	
	1038	Those writing these standards should be experts in science and/or education. At a minimum they should understand what the word THEORY means in scientific terms. Eg: Evolution is a confirmed scientific theory and understanding modern biology, agriculture, genetics and human development is impossible without reference to that established theory	No	Standards	
	1039	I didn't intend to comment on the organization of the Science Standards since I haven't examined them in detail. I marked Disagree due to the Intelligent Design verbiage; since Intelligent Design doesn't follow the scientific process it is confusing, and would affect the organization of the content.	No	Standards	
	1040	Too much information presented in too little detail	No	No	
	1041	As a member of the Standards Committee, I am greatly concerned with what was done in a closed process without the original Committee having the opportunity to comment on the MAJOR changes and deletions made.	No	Negative	
	1042	Keep religion out of public schools, not every family believes the same.	No	Standards	
	1043	The science standards are deliberately organized to require science teachers to include religious superstition in the form of intelligent design; they also eliminate or greatly restrict the mention of evolution and downgrade it to just a theory among competing theories.	No	Standards	
	1044	They are organized in such a way that it's hard to understand them.	No	Negative	
	1045	Standards are based upon false hypotheses, as such this connotes agreement upon other subjects.	No	Standards	
	1046	The draft is nonrigorous to the point of absurdity. Your religious lobbyists are trying to manufacture doubt where no doubt credibly exists. Instead of encouraging students to doubt evolution, why don't you ask yourselves if you have ever doubted the existence of God or an all-powerful intelligent creator. Who's close-minded now?	No	Standards	
	1047	Written by professional science educators.	No		
	1048	The Science Standards are organized well.	No	Positive	

1049	It can't be organized if it is missing topics.	No	Negative		
1050	Stop trying to ignore, deny, erase scientific fact - evolution, from the curriculum.	No	Standards/ Curriculum		
1051	I am concerned about the content.				
1052	No opinion on this.				
1053	Get rid of all references of Intelligent Design. Return the term evolution and evolve to the standards. Research the background influence of 'Intelligent Design' and you will see that this does not belong in public education.				
1054	It was difficult to follow the connections between grades levels and how the learning progress from K-12				
1055	The '3-dimensions of science structure figure emphasizes the most ambiguous and general concept, knowing science and using science, over the specifics of the standards. Furthermore, the figure makes no attempt to illustrate how each standard is linked, other than it relates in some way to knowing and using science. Representations of models are more important than the text for communicating multi-dimensional concepts. This figure should show (1) what the standards are, (2) how standards interact, and (3) how each standard will be emphasized at each grade level.				
1056	Evolution is a fact. It is unconstitutional to inject religious beliefs in public school curriculum.				
1057	With the exception of the key concepts column, there is a clear emphasis on using current science education research. The key concepts should be removed from this document; any extra supports should guide educator understanding of the standards in the context of the 3D Framework.				
1058	The key concepts detract from a focus on the standards. There is a need to improve the progression from grade level to grade level, ensuring that students are learning new content each year not re-learning concepts from previous years.				
1059	The physical structure of the document is user friendly and consistent in layout, but it is not laid out to support an understanding of the progression of the concepts addressed. Key concepts to include section is not helpful as they detract from the standards.				
1060	The document flows from topic to topic and is consistent. Unfortunately, the standards lack				
1061	I found it very easy to follow and understand.				
1062	Easy enough to read.				
1063	Less specific				
1064	They are worded with excessive unnecessary jargon. The essential information is difficult to interpret.				
1065	The draft standards attempt to produce 3D learning, similar to how the NGSS intertwines cross-cutting concepts, disciplinary core ideas, and scientific practices. But there are two problems with the way that the draft AZ standards attempt to do this. First, the crosscutting concepts, disciplinary core ideas and scientific practices are not intertwined. Instead, practices and core ideas are merged and then clustered around cross-cutting concepts, which produces strange clumpings that at times seem forced and at other times leave out important connections across grade levels. For example, patterns are addressed in first grade and fifth grade, but not first, second, third, and fourth grade. As a cross-cutting concept, patterns should be made evident at all grade levels in all content areas. The second problem is the seemingly arbitrary merging of the practices and the core ideas. Why aren't the core ideas merged with all of the practices? It seems that students should learn how to ask questions, plan and conduct investigations, develop and use models, use mathematical and computational thinking, construct explanations, engage in arguments from evidence, and obtains, evaluate, and communicate information related to all of the core ideas. This last issue is a problem with the NGSS too.				
1066	The new standards generally follow the format of the Next Generation Science Standards, which are fairly well-organized. However, key factors are missing (see below).				
1067	I appreciate the organization that the committee put together.				
1068	Organization and readability are not what I am concerned about. It is the content that matters and the content of these standards is very concerning.				

		I like to cross-cutting relationships and connection to other standards. The science and engineering practices are well done, similar to the 8 common core math practices. The fourteen big ideas are well formulated. It looks like you took information from various other standards and consolidated them well.				
	1069					
	1070	The organization of the standards follows the logical template of the Framework for K-12 Science Education.				
	1071	I believe it would serve the children of AZ better if we would just adopt the Next Generation Science Standards.				
	1072	The sheer willful ignorance of removing Evolution from the curriculum is mind boggling. It would put Az students at a vast disadvantage when moving to higher education. If the superintendent's intention is to replace evolutionary theory with intelligent design she should be removed from office and barred from working in education for life. Do not do this.				
	1073	ARIZONA STATE BOARD OF EDUCATION Regular Board Meeting, August 24, 20151535 W. Jefferson, Conf Room 122, Phoenix, Arizona 85007SUMMARY OF BOARD ACTIONMEMBERS PRESENT:Dr. CrowMr. SchmidtSuperintendent Douglas Ms. HamiltonMr. TaylorDr. RottweilerMr. Carter Mr. Jacks Vice President BallantynePresident Miller MEMBERS ABSENT:Mr. DescheneCALL TO ORDER, PLEDGE OF ALLEGIANCE, MOMENT OF SILENCE, AND ROLL CALLMeeting called to order at 9:00 amPledge of Allegiance, Moment of Silence and Roll Call confirmed a quorumItem 1A â€œ President's Report1.3WestEd Appointment of Carol LippertRecorded comments are available (Part 1/00:01:58)President Miller announced Carol Lippert's appointment to WestEd.Item 1B â€œ Superintendent's Report1.8Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) â€œMarni Landry, Paradise Valley High Schoolâ€œShannon Mann, Osborn Middle School2.2015 CIO 100 Awardâ€œMark MastersonRecorded comments are available (Part 1/00:02:21) Superintendent Douglas presented awards as listed on the agenda. Item 1C â€œ Board Member ReportRecorded comments are available (Part 1/00:10:25)Amy Hamilton gave an update to the Board regarding the Teacher Principle Evaluation Task Force.Jared Taylor gave an update on the Arizona Standard Development Committee.Executive Director Christine Thompson gave an update and spoke to Board members regarding the Standard Development Committee.Item 1D â€œ Executive Director's ReportRecorded comments are available. (Part 1/00:16:08)No report.A. Consideration to approve the following				
	1074	The standards should be organized around big ideas of content, practice, and cross-cutting concepts in alignment with NGSS. The Superintendent's edits to the standards have transformed the document from standards to lists of disconnected facts and factoids that are scientifically incorrect.				
	1075	Recent changes made by the ADE make the standards confusing				
	1076	They seem to be absurdly complex. Could probably be streamlined a lot. My impression is that they go into unnecessary detail.				
	1077	The inclusion of Key Concepts was probably an attempt to clarify some ideas, but in reality it added an unnecessary layer of confusion.				
	1078	OK				
	1079	The Standards are clear and easy to read. Thank you for the effort spent!				
	1080	Detailed, generally well-organized. I only hope that teachers will be able to translate the content into meaningful teaching activities.				
	1081	Well done.				
	1082	I do consider the structure of core ideas, practices, and crosscutting concepts as effective, but they become diluted with the use of the Big Ideas document, and are further complicated by what seems like a somewhat random and topical assortment of examples/ Key concepts that are given in the right hand column of the standards document.				
	1083	1. There is lack of clarity between the use of high school and high school plus. 2. The Key concepts column creates confusion by insinuating exactly what should be taught. It is more akin to curriculum, not a guiding standard.3. I don't know why these are connected to AZ health standards.				
	1084	However, they have been changed so that they intentionally strive to MISLEAD and do not represent TRUE science.				

1085	Seems good.				
1086	I object to the idea that intelligent design is interchangeable with evolution.				
1087	Original language should remain				
1088	They should not be changed.				
1089	Science Standards should be as the scientific community understands them. ReWriting science standards to include theories that are not theories and magnetic currents are just wrong. Let people who are in the science field decide what is appropriate and what is theory - and lets not teach quackery.				
1090	This depends on who they are written for. I found a great deal of repetition, and unnecessary verbiage.				
1091	The removal of the term evolution from the DRAFT submitted by the qualified educators makes the DRAFT Science Standards less easy to read.				
1092	These standards seem thorough with the exceptions of the life-science sections.				
1093	Intelligent Design / creationism are untested/ unprovable Ideas. Totally religious in nature No scientific rigor to back them up. Doesn't mean they can't be discussed but science is a provable topic				
1094	Teach evolution. Evolution is science.				
1095	The standards list is incomplete and moot without evolution.				
1096	Too much educational jargon.				
1097	Reasonably easy to follow and read. However, I refer you to the letter sent to you by the Association for Science Education (u.k): https://ncse.com/files/ASE_letter_to_Arizona.pdf				
1098	If the state allows teaching creationism, they will also have to teach other religion's creation myths, such as Hopi, Navajo, Tohono OOdham, etc. For example, in the Maya creation myth, humans are created out of corn.				
1099	I read the document and I cannot believe the wording regarding evolution has been deleted. This act is completely absurd and the people behind this change should either go to school and learn basic biology and the method of science.				
1100	New standards are not specific enough and are too open ended, particularly for first year and new teachers. Trainings should be administered from AZ Dept of Ed if they are to be taught correctly in my opinion.				
1101	The organization is easy to follow, however the reason behind why each standard was chosen for 7th grade science is not effectively represented.				
1102	A clear progression, and rigor of requirements is not obvious.				
1103	The linear format of the grade levels and what will be addressed is helpful. The standards are not measurable though. They allow the possibility of students to come out knowing nothing or something. Granted, standards act as an outline for the general purpose of the rest of the document. The document is redundant almost like someone copy and pasted each grade level and just changed a couple things. They are repetitive. I think a shorter format would be in order so that teachers felt like it was worth their time to read it.				
1104	I find them somewhat hard to read, but am not sure there is a better approach				
1105	They repeated themselves a lot. There were spacing errors, and the grammar was not up to snuff.				
1106	Organization seems clear and well-laid out.				
1107	Evolution should be taught, clearly, in our schools. Anything otherwise is a violation of the separation of church and state.				
1108	I have no problem with the organization, but the actual standards concern me.				
1109	The standards are neatly organized but slanted inappropriately to favor religious opinion as equal to scientific process.				
1110	The content was presented in a logical manner				

		Standards in general are challenging for a novice to follow. Arizona's original standards, and the current draft, are no exception. I have concerns that some of the topics are poorly defined, based on the intensity with which they should be included in the curriculum. Nevertheless, it the standards are not unusually difficult to unpack. In terms of improving the format, the single greatest recommendation I would make in this vein is to orient the formatting vertically, so it may be read in the ordinary manner. The frequent use of horizontal tables in many state standards (including both the original and draft standards) is puzzling and hinders legibility.				
	1111					
	1112	It's fine.				
	1113	The standards are not written in language accessible to many parents; a college education seems required.				
	1114	They should be collected more sensibly based on classes that are taught.				
	1115	There are a lot of sections. Some are the actual standards, some are instructional notes, some are concept notes. Please at least add a table of contents. Also please provide options to access standards by grade level as well as by Physical / Earth & Space / Life.				
	1116	Regarding physical sciences, organization and ease of reading are fine, but that is not the problem.				
	1117	Alignment of core ideas across grade levels helps readers see how standards are connected and progress. Interesting choice to focus grade-levels on cross-cutting concepts. However, I would argue that since the cross-cutting concepts are exactly that, grade foci should not be limited to some concepts. For example, it is appropriate to see how patterns are relevant to content studied in all grades.				
	1118	Please teach science				
	1119	The organization seems appropriate in length and organization.				
	1120	Attempting to sneak creationism in through the back door of a science curriculum is an affront to education.				
	1121	They are well organized				
	1122	Please do not allow the instruction of Creationism/intelligent design in our K-12 schools, this is pure conjecture & not science. My future offspring deserve to learn the facts about evolution. Religion has no place in school, we will teach our children about religion on our time.				
	1123	What is at the top of the illustration given? 'Engage in argument thru evidence' That is a core ideology				
	1124	Adequate				
	1125	NO CREATIONISM! NO INTELLIGENT DESIGN. NO UNCONSTITUTIONAL ADVANCEMENT OF RELIGION IN PUBLIC SCHOOLS. SCIENCE ONLY IN SCIENCE CLASS.				
	1126	Teaching creationism in school is an unconstitutional endorsement of religion in tax payer funded public schools. Any effort to introduce this into school curriculum will be met with strong opposition.				
	1127	I do not understand why, in this day and age, there is removal of evolution in science. It's not a theory, it's as close to a fact as we can get.				
	1128	The organization is fine. It's the content I have concerns about.				
	1129	I do not know of any reason there should be any drastic changes made.				
	1130	Include evolution and creationism isn't science since it cannot be shown through experimentation. Evolution can be tested so it should be taught.				

		<p>If the goal of organization was to illustrate how each standard could stand alone and be integrated into several sciences, the organization is more complex than it needs to be. Organizational categories should divide information in order to be able to use it. As it stands, standards are not appropriately connected to the science classes in which they traditionally belong. Taking into consideration the transition to 3D curriculum, different categories would better serve: 1) Big Ideas - larger cross concepts for all Sciences, 2) General Science - smaller pieces of content to break down those Big Ideas into separable and studiable parts, 3) Next, specific Science content, 4) Cross curricular concepts, 5) Skills, 6) Meta Ideas, 7) Technology & Engineering components</p> <p>EXAMPLE: EARTH & SPACE SCIENCE 1) Big Idea: All matter in the Universe is created from atoms which interact to make the things around us, 2) Atomic Structure, Periodic Table, 3) Earth & Science curriculum specifically- protons, neutrons, electrons, nucleus, charge, 4) Structure and function cross curricular. After the Big Ideas are identified and curriculum science categories are determined, individual sciences can determine how they will specifically teach/use the curriculum in their course. This way, simply, many courses can teach Atomic Theory- not just Chemistry. This particular curriculum can be taught in Earth, Enviro, Biology, and Chemistry. The way the curriculum is written now it TOO complicated. It does not need to be so. Science Content is one of the pillars of 3D learning! You cannot leave out the curriculum part- which you put in later as the 'Key concepts' part! This is too disorganized! Allow each curriculum science course team to</p>				
1131						
1132		N/A				
1133		<p>The draft was easy to read and followed a pretty logical path from my experience of education. Though some of the language seemed too open for interpretation around the evolution topic. We should work to ensure that real scientific research is used to teach our children what has been proven as a sound theory (near equivalent meaning as 'fact' in science definitions).</p>				
1134		It clarifies a few things.				
1135		<p>The organization is easy to follow. The section on cross-curricular ties is important and will be useful.</p>				
1136		<p>If Diane Douglas does not believe in evolution then Diane Douglas does not believe in science. She needs to turn in her cellphone and go back to the pony express, turn in her modern car and go back to a horse, turn off her GPS and use a map, turn off her air conditioner and start sweating and instead of flying to her next vacation destination, take a horse and buggy, and on and on. It is only the religious fringe elements who are trying to excise evolution and global warming, not the mainstream of Arizona residents and residents of the United States and the world. If Arizona wants to attract technology companies to invest here, they will not do so by denying science. Remember this is PUBLIC education not RELIGIOUS education. If those of her ilk do not like science fine but they do not get to impose their minority view on the rest of us who do. The expression 'tail wagging the dog' comes to mind. The purpose of education is to teach our children about the world around them as it actually is, not filtered through religious zealotry.</p>				
1137		<p>They were easy to read until the Superintendent thought it was ok to impose her radical religious views and delete all mention of evolution in the life science sections. This is outrageous. Mainstream religions have no conflict with evolution. I was taught about evolution by the sisters of saint joseph in my first 12 years of catholic school! After that I aquired a BS in Biology from U Mass, an MS in Population and Environmental Biology from UC Irvine, followed by a MA and PHD from Duke focused on Demography. I taught Demography, medical Sociology, and Aging (as well as a few other courses) for 36 years at ASU. I fear that my 7 grandchildren will be ill prepared for 21st century STEM jobs and the economic future of this state will be undermined by Douglas' imposition of her ignorant zealotry.</p>				
1138		This conflates important scientific knowledge with unimportant opinions.				
1139		The organization makes logical sense to me.				
1140		They are satisfactory.				

		The standards should be re-formatted as performance objectives. They should be very well defined and specific in order for teachers to develop appropriate curriculum from them. The key concepts are too nebulous and leave too much up to interpretation. They should be omitted and instead have very clear specific performance objectives.				
	1141					
	1142	The organization mirrors the NGSS.				
	1143	Need more emphasis on the lower grades content.				
	1144	The Science Standards should ALWAYS be organized around SCIENCE and not politics/religion.				
	1145	Science standards should encourage critical thinking and evaluation of the evidence relating to evolution.				
	1146	KEEP ALL religious beliefs out of the classroom. TEACH REAL SCIENCE based upon hundreds of years of research and peer reviewed studies. DO NOT ALLOW any so-called beliefs about a certain religious creation story that was first brought forth by people that didn't know where the sun went after setting. Please allow Arizona children to really learn science and be prepared for working in the 21st century.				
	1147	I disagree with the state eliminating requirements that students be able to evaluate how inherited traits in a population can lead to evolution.				
	1148	I disagree with the state eliminating requirements that students be able to evaluate how inherited traits in a population can lead to evolution.				
	1149	Categories and subjects are arranged in an easy to use format.				
	1150	Clearly laid out and organized.				
	1151	As a science teacher, the standards were relatively understandable. However the wording is vague as far as the verbs for learning objectives.				
	1152	Creationism should stay out of Science!!				
	1153	I think we should be using a set of standards that reflect the Next Generation Science Standards.				
	1154	Teach Evolution, not religion				
	1155	The original structure, before internal review, of the standards presents information in a clear and detailed way with more of a focus on the goal of science rather than a checklist of skills.				
	1156	Diane Douglas made this difficult to read by misrepresenting evolution repeatedly as a theory and altering the language to be more religion-friendly. She is solely responsible for this, and not only does it not read well, it derails any semblance of organization of anything when one of the largest overarching principles of science is tossed aside like a used napkin.				
	1157	The draft is well organized and precise.				
	1158	The organization is easy to read. No changes necessary here.				
	1159	It is easy to see the relationship between the core and advanced standards. I like how there are two sets of standards; HOWEVER, by having two sets you are tracking students - which can be good or bad. For me a long time experienced teacher, I can easily leap back and forth between the two. For new and young teachers, they will probably choose one track or another and leave out chances for enrichment.				
	1160	keep your god out of our schools				
	1161	Continue to teach evolution and not remove it to teach creationism				
	1162	Evolution is an established scientific theory. Creationism/intelligent design is a fantasy. It has no basis in reality.				
	1163	The standards are vague. The only thing that is scripted is what students should be able to know/do at the end of the each year. They are not that specific, nor do they give examples of activities, etc.				
	1164	The Science Standards, as initially drafted by knowledgeable Arizona science teachers, have been edited under ADE to respond to political pressure and dilute the teaching of evolution, which is a foundational concept of life science and Earth science.				
	1165	Poorly organized, appear to follow Next gen standards but fall short				
	1166	Confusing, misleading, and unscientific language regarding the evolution and development of life on Earth. We need to rely on demonstrated science, not on a belief in what we want to be true.				

		The standards are written as they have always been written. It is neither poorly written or well written. A new teacher in Arizona should be able to read the standards, know the intended learning outcome, what common vocabulary is used, the overarching main concept and all of the concepts that would fall under that overarching main concept.				
1167						
1168		Confusing, misleading, and contradictory language regarding evolution.				
1169		The removal of key science topics including Evolution and big Bang is wrong. A Theory is not just an idea Here is the definition of a theory a coherent group of tested general propositions, commonly regarded as correct, that can be used as principles of explanation and prediction for a class of phenomena:				
1170		Diane Douglas stated that evolution is just a theory. That is a failed talking point of creationists. There is absolutely no evidence for any gods. That is a fact. If Douglas can provide verifiable facts that god exists, then he remains just a theory. Evolution is one of the most important scientific theories of all time. The sequencing of the human genome is proof positive, if there was ever any doubt, that evolution is a fact. At present, many teachers fear teaching evolution simply because they fear reprisals from students' parents. Evolution should be taught in all schools and without interference from religious zealots such as Douglas. These new standards are a joke, and they will set Arizona education back to the 1950s. Shameful!				
1171		I am concerned that the phrase science and engineering practices has replaced the term scientific method. I do not understand the rationale. Also, the separation of standards into essential and plus isn't a bad idea, but students only receiving essential standards seem to be missing out on rather essential content such as natural selection.				
1172		Some standards are not scientific standards seem more like religious ones.				
1173		I feel that we SHOULD NOT SPRIAL earth concepts over the three years, this content is very boring and is not vital to the learning. I feel that the content currently in 8th grade should stay at the 8th grade level, except ecology concepts that should be moved down to 7th. Physics and chemistry content should stay in 8th grade as well as genetics.				
1174		obfuscating the meaning is contrary to all scientific evidence.				
1175		Creationism is not science but a religious belief. If evolution is not taught in schools, students will be lacking in fundamental knowledge of science. Bacteria are evolving and now are resistant to many antibiotics. This is because they are evolving. This is because of evolution. If students are not taught evolution in school Arizona students will be looked at as coming from an already flawed, underfunded education system we have here in Arizona.				
1176		Within the standards, they should be organized by core ideas instead of topics. It will help teachers see the connections between topics.				
1177		The organizational structure seems to comply with the next generation science standards, which is the standard by which they should be judged. https://www.nextgenscience.org/				
1178		organized.				
1179		I find the older standards much easier to read, as they better identify how strands of knowledge or individual topics change and complement each other through the grade levels. Contrary to the claim of not prescribing curriculum, the new standards seem excessively detailed and don't make clear connections among topics or to other grade levels on the same topic. The introduction pages (e.g. page 9 for K-2) describe core goals for each level that often don't quite match up with the individual standards described. E.g. 4th grade is supposedly about the role of the sun in providing energy, but that is the topic of individual standards for grade 3. For Summary table on page 20 Why are there no examples for U3, knowledge produced by science is useful for products, in the life science standards? Plenty of examples to choose from, including communicable diseases, medical diagnoses and treatments, agriculture practices, food production and consumption.				

		I enjoy how standards are linked to previous grade level standards in the key concepts column. I feel the other information (vocabulary words and concepts) are a helpful addition; however, teachers must be explicitly told or trained to use this as a guide rather than just vocabulary. Boiling down the three dimensional learning idea into a vocabulary list would just be a giant waste of time.				
	1180					
		There is no mention of Charles Darwin theory in the life science curriculum. Specifically there is no mention of evolution as he is currently excepted by 99.99% of the scientific community of this country				
	1181					
		Science must include the scientific research published in high ranking peer-reviewed journals of climate change, evolution, and mechanisms of natural selection if student are to have a better understanding of the scientific process, theories, and major mechanisms at work in our world. It is also essential preparation for higher education as these are subjects that will be taught heavily in entry level biology class. Sometimes spanning an entire semester, and make up more advanced science course such as organic evolution. It is imperative to a student's education in science that large scientific fields such as evolution and climate change research not be censored like banned books.				
	1182					
		Draft science standards need to be improved to encourage critical thinking and evaluation of the evidence relating to evolution. Your Core Idea L4 implies that evolution over countless generations is the only explanation for the origin and development of life. However, a large percentage of researchers in the Life Sciences community do not find evidence for this neo-Darwinian model of evolution taught in schools as assumed fact. Their findings need to be given equal weight in the interest of scholastic integrity and intellectual honesty.				
	1183					
	1184	The organization is not what I find fault with.				
		I do not understand eliminating references to evolution as a driving force for biological diversity. Evolution of plants, animals and humans over time are scientific facts and should be explored in detail by students.				
	1185					
		Intelligence is missing from the section: processes by which a species may change over time due to environmental conditions.				
	1186					
	1187	May I see the new draft?				
	1188	Organization by grade is adequate.				
	1189	orderly				
		In both Kindergarten and 3rd grade Physical Science Standards, statement changes shift the standards' focus from physical science to life science, resulting in the physical science import being lost. Changes to standards statements such as these break the learning progressions of the core content as well as vertical alignment between grade levels.				
	1190					
	1191	Takes us back to the dark ages.				
	1192	TEACH EVOLUTION, NOT RELIGIOUS DOGMA				
	1193	Comply with scientific fact, thoroughly.				
		The content, should evolution be watered down by talks of intelligent design theory is alarming. Intelligent design is not scientifically accurate, and it only pushes unconstitutional religious indoctrination upon AZ students. I'm very disappointed Ms. Douglas thinks she can go against matters higher courts have already resolved. Any attempt to shoe-horn her personal beliefs into public policy should warrant an investigation into her ability to perform her duties. I know Ms. Douglas does not have a strong educational background, so we must continue to guide her in areas she is apparently ignorant.				
	1194					
	1195	They are not as easy to read as the next generation science standards. I find the key concepts very confusing.				
	1196	Very organized, clarifies objectives better by being more specific				
	1197	The organization makes it easy to follow.				
		The Dept of Education's biases are evident in their revisions. Some are okay, but many are not acceptable. For example, evolution is not a theory any more than gravity, Earth's revolution around the Sun, and how babies are made are theories. The use of positive and negative effects throughout the document are also biased and should be removed.				
	1198					
	1199	difficult to clearly understand				

1200	There are several sections that do not belong. Primarily any inclusion of creationism is bogus hogwash and does not have any role in Science.				
1201	done by a buerecrat				
1202	They are comprehensive and data oriented.				
1203	The science standards for Arizona students should contain all relevant scientific theories.				
1204	I am horrified that religious creationist garbage is being inserted into curriculum by a religious zealot. We do not want to become more uneducated as a nation. Intelligent design has no place in a public school curriculum				
1205	Clear horizontal alignment charts showing each essential standard's progression from k-12 on one page would be helpful.				
1206	The draft standards are much less detailed than those articulated in the common core curriculum within the Az-Merit program that Superintendent Douglas vowed to remove when she took office. They are easier to read but this is mainly because the content is often vague and poorly stated.				
1207	No issues.				
1208	I taught in AZ several years ago, the science standards are appropriate and well aligned to standards in most other states. It would be best if they were left as is.				
1209	Please take this moron out of the decision making process, please quit being over sensitive and trying to change everything. We are turning today's children into cry babies, children with a sense of entitlement and we are doing them a disservice if this changes due to her beliefs/values.				
1210	Do not remove evolution. We should be teaching our children progress and science, not instilling the board's beliefs - school is NOT the place to do that.				
1211	Science should be organized and taught to founded and researchable theory... this was not.				
1212	How do teachers feel about the organization of the science standards? They are the ones who will be responsible for teaching to the standards. Teachers should have the final say in the structure of the standards.				
1213	Too often refers to acronyms and standards not part of the document.				
1214	These science standards are not developmentally appropriate for children. Gwnwtics in 5th grade is insane!				
1215	I can read them.				
1216	The organization of this draft seems appropriate. My comments have more to do with content in some areas. I am currently a professor at Northwestern University (Evanston, IL) and a research scientist at the Chicago Botanic Garden. I received my PhD from the University of Arizona in the department of Ecology and Evolutionary Biology.				
1217	I am commenting on the DRAFT Science Standards from the Committee NOT as amended by the the ADE staff and Superintendent!				
1218	The organization of the science standards is acceptable.				
1219	l't missing some key components				
1220	I have not read the full draft, so have no comment on this				
1221	Organization is fine for each grade level.				
1222	Evolution is central to all of Biology and must be included in the science standards because biology only makes sense in light of evolution.				
1223	The wording is difficult to understand for some of the standards.				
1224	It is organized into an understandable format.				
1225	No, I found them to be confusing, leaving a lot of room for interpretation.				

		High School Standards: The high school standards are confusing to understand the difference between essential and plus standards. Possible solutions: reference page of how the essential standards and/or plus standards align to current courses that schools have; indicate that essential standards are the tested standards; Make one table (column for both) bolding or highlighting the tested standards (standards for all students). Key Term Column: Although this column contains lists of words that might be useful to a teacher, they do not assist the teacher in the practices or cross cutting concepts that should be integrated with that standard. In addition, listing terms can be a check-list for teachers indicating that they taught the standard. Possible Solutions: Include the learning progressions from Framework and/or Working with Big Ideas of Science Education instead of terms; include the crosscutting concepts that align with that standard - this would indicate a 3-dimensional approach rather than the 2 dimensional approach that is currently indicated by the way the standards are written; Have that column as an appendix or a resource to the standards - other information could then be added such as info about the practices and new discoveries				
	1226					
	1227	Science classes must include the scientific research published in high ranking peer-reviewed journals of CLIMATE CHANGE, EVOLUTION, and mechanisms of natural selection if students are to have a better understanding of the scientific process, theories, and major mechanisms at work in our world. It is also essential preparation for higher education as these are subjects that will be taught heavily in entry level biology class, sometimes spanning an entire semester, and make up more advanced science courses such as organic evolution. It is imperative to a student's education in science that large scientific fields such as evolution and climate change research not be censored like banned books.				
	1228	Organization is straight forward				
	1229	It is necessary for students to understand the process of science and to understand how new revelations in science, based on peer-reviewed data and interpretation, results in small yet significant changes in our understanding of how living and non-living matter change over time. Science uses language to express concepts that best fit the best available data. But science is much more than concept vocabulary. Science is an every changing understanding that refines our perception of and capacity to utilize matter and energy in numerous different functional processes. What is missing is the lack of the over-arching framework of science in which the major ideas come from the critical thinking of analyzing how the small pieces fit together to form the big pieces. The plan needs a comprehensive conceptual structure based upon the key ideas in science.				
	1230	I do not understand why there are essential standards and then other standards, especially when the other standards need to be taught to achieve the essential standard.				
	1231	They ramble on in some cases				
	1232	I wish you could just adopt the NGSS as other states have, there is no need to reinvent the wheel and this will make it challenging to find a strong curriculum.				
	1233	Only in an impending theocracy intelligentsia design' taught. It being less than a pseudo-science with no proof or empirical fact. I will not let the children of this state be taught, at the discretion of some teacher with no scientific background that adam and eve were the first humans and their mythological deity created a universe in 6 days. Why not just give them a lobotomy if you are going to teach what they do in the middle east. I our nation to become the equivalent of the taliban and the saudi's.				
	1234	Fine				
	1235	There simply is no organization when facts are removed in the standards.				
	1236	Understanding the theory of evolution is critical to the fields of medicine, biology, and applied science like agriculture.				
	1237	Understanding evolution is critical to the fields of medicine, biology, and applied science like agriculture.				
	1238	Just ok				
	1239	Educational structure -- as long as the teachers/ admin can figure it out.				

	1240	I appreciate the connections to other content areas. This is helpful to encourage interdisciplinary studies.				
	1241	Creationism is not science it has no place in these standards. Evolution is the internationally accepted and scientifically provable Theory which belongs in these standards.				
	1242	Science was organized in my time in CUSD				
	1243	Creationism is not a valid scientific theory. Keep religion out of schools.				
	1244	Based off the general impressions of the organization, content, and rigor of this DRAFT, and recommendations to the State Board There is nothing appropriate about what you are trying to do.				
	1245	Send the standards back for review.				
	1246	Intelligent Design does not belong in our science standards.				
	1247	Removing all references to Evolution is nothing but conservative correctness run wild. Worse, endorsing Intelligent Design as science IS AN OUTRIGHT LIE! It is no more science than the belief the Earth is flat, or that it's the center of the universe. What's next, teaching the theory that disease is caused by witchcraft, or punishment from Apollo?				
	1248	The Science standards are biased and not based on scientific knows.				
	1249	Science standards should teach science, not religion.				
	1250	Evolution is science. If you remove it from the curriculum then you are no longer teaching science. You're putting the children of Arizona at a distinct, global disadvantage.				
	1251	Intelligent design is a front for 'creationism'. Creationism is not science - It is an opinion with no connection to fact. Science is simply observation of data, while this 'creationism' is designed to fit a belief system.				
	1252	I like the similarities between NGSS and the AZ science standards. The crosscutting concepts help them connect between grades and across topics.				
	1253	Efforts to include creationism in a science based curriculum demonstrates a lack of understanding of the rigors the methodology applied within the scientific community. Creationism fails the evidence threshold and should take its rightful place within the realm of theology; science and religion are incompatible.				
	1254	To say that evolution is just a theory demonstrates a gross misunderstanding of science. Biological evolution is not just a theory, it is the most robustly demonstrated theory in all of science. By omitting this fundamental concept and achievement of the scientific method severely disadvantages the children of Arizona. They will not be able to compete with the jobs of tomorrow. Job in bio-science and medicine make money and cure diseases because they are founded on reality; the reality of evolution. Do not let ideology or ignorance hold our future back. Put evolution back into the curriculum. Facts aren't ideology. Evolution is a fact. You test it every time you get a flu vaccine or eat food from plant and animals humans have changed and domesticated over the last 10,000+ years. Shame on Diane Douglas. Keep your religion out of our schools.				
	1255	I am only clicking agree here so that I can get to the part of the survey where I can comment on the removal of certain items in the standards. I would say here that the teachers who put together the standards are opposed to what Diane Douglas has done here.				
	1256	Science Standards should include the study of evolution, an evidence-based model critical to the understanding of biology and medicine. To be rigorous, the Standards must include evidence-based science.				
	1257	The way the content is defined does not make sense to me				
	1258	Evolution is critical to science. Intelligent design is a misnomer and had no place in science instruction.				
	1259	Organization ignores proven theories of evolution.				
	1260	Easy to follow.				
	1261	Painful to read. Contains many grammatical errors making it difficult to comprehend.				
	1262	They may be organized but are not based on true science and facts.				
	1263	The standards are difficult to				
	1264	Evolution happened, is happening, and will continue to happen. You are dumb-ing down our children by teaching them fake news.				

	1265	Any well-organized Science Standards would not include creationism.				
	1266	I know a great deal about Charles Darwin and have published a book about how George Eliot and other novelists responded to evolution. It is a travesty to turn the clock back to the age of the Scopes Trial!				
	1267	Evolution is fact.				
	1268	I prefer the Next Generation Science Standards for organization, detail, and overall scientific content. These draft science standards are a poor substitute for the Next Generation Science Standards. Maybe you should use those. They are based on the same books you claim to base these standards on, but the NGSS are much better.				
	1269	Evolution needs to be included				
	1270	The standards do not use the language of scientists. Important words have been changed and will negatively affect the learning of our kids.				
	1271	The removal of vital information shows that these new science standards are NOT well-organized.				
	1272	Needs to go back to review.				
	1273	You need to review this				
	1274	It needs to go back to review.				
	1275	There are strands mentioned on the connections to other academic disciplines, but I can't find an explanation of the strands or how they fit into the overall framework of the standards. The previous standards listed the strand, then the concept and were much easier to follow.				
	1276	Science classes must include the scientific research published in high ranking, peer-reviewed journals of climate change, evolution, and mechanisms of natural selection if student are to have a better understanding of the scientific process, theories, and major mechanisms at work in our world. It is also essential preparation for higher education as these are subjects that will be taught heavily in entry level biology class, sometimes spanning an entire semester, and make up more advanced science course such as organic evolution.				
	1277	The original draft was great before the unscientific edits.				
	1278	Needs review				
	1279	The constant refer to standard and references back to other grade levels is unclear and convoluted. State the standard and what key concepts need to be taught. Teachers need guidelines not word searches.				
	1280	not perfect but ok.				
	1281	Much better now!				
	1282	It looks nice but has major content issues.				
	1283	Inaccuracies make them difficult to read.				
	1284	As sent by the 111 science specialists in November 2017 (left unchanged).				
	1285	No problem with the organization.				
	1286	The changes are unacceptable.				
	1287	Due to trying to downplay the role that evolution has in Science, the standards are worded weirdly and are harder to understand.				
	1288	I think you should keep some of the original explanations for the Space Science for the HS. E2U2.17 Also, the 8th Grade and High School changes are unacceptable. Specifically, changes to some of the vocabulary words. How this gets rid of words such as evolve, big bang theory, and etc.				
	1289	I would prefer the standards acknowledge the scientifically accepted theory that all things evolve. The use of the word evolution is not a bad thing. Religious extremism does not belong in science standards.				
	1290	Easy to read				
	1291	You are taking out requirements for evolution. This is absolutely necessary to be required learning in science.				

		While I do appreciate the connections drawn between grade levels, I think all of the 5.P2U1.3 type verbiage all over makes them hard to decipher. Teachers would have to keep several grade bands of standards available in order to figure out where exactly they need to begin and end their instruction based on prior knowledge that should have been acquired and not step of the toes of future instruction. Also landscape with 1 margins doesn't provide for a reasonable use of space. The middle grades standards could easily fit on 2 pages (which could be copied front and back) to allow for easier referencing. #earthfriendly! am also very concerned about what the testing for these standards will look like in a grade band scenario the tested grade teacher will be responsible for filling multiple years of gaps and teach their own content.				
	1292					
		I am confused by the knowing and using science as big ideas. It would be far better to use the science and engineering practices, cross cutting concepts, and disciplinary core ideas that the rest of the country is using. These came from A Framework for K-12 Science Education, a document upon which the AZ draft science standards are supposedly based upon. Further, the key concepts are NOT concepts. They are a vocabulary list. This defeats the intent of the new vision for science education to have deeper, richer conceptual understanding.				
	1293					
		HS+CP1U4.8 and all Physical Science Plus (+) Standards. We do not have materials to teach all this standards so that it will be engaging to students. If the Department of education will provide science kits that will address all this standards then we will be willing to teach it and engage our students well or else Physics class will be boring and hard with Physics with just mathematical calculations... I would like to see Physics as more applicable to daily lives of students and they can really apply it in their house and etc. As of now, my focus are topics like Motion and Forces, Energy Conservation, and electricity. Also, there too many Physical Science Standards (Physics) compare to Chemistry. Chemistry essential = 4 and plus= 9 total of 13 only, then Physics has essential 6 and plus = 13 total of 19... why there are too much of the Physics. Hopefully all students are being considered too and not only A schools, our students needs still basic mathematics and it's hard to teach hard topics like magnetism with them. Although I am trying to engage them with everything that I can....				
	1294					
		Evolution is more than a theory, so believe the theory of should be edited out				
	1295					
		I am thinking in terms of content and cannot get pass the glaring mistakes. Magnetic field, evolution...terms that are completely acceptable and agreed upon by the scientific community and that are missing from this draft. I for one do not want my children growing and learning in a community that still calls Evolution a theory and opens the door to thinking the world is flat.				
	1296					
		There should be more content per p.o				
	1297					
		Organization is adequate to convey information.				
	1298					
		Keep Diane Douglas out of this process!				
	1299					
		The standards as presented do not have a foundation base, and leave behind many students.				
	1300					
		Like the listing of the key concepts. How the Distribution of the standards are broken out and connected together.				
	1301					
		Well organized				
	1302					
		Very concerned about evolution not being talked about. The 1st amendment is being trampled. The Establishment Clause is being flaunted.				
	1303					
		It's fine.				
	1304					
		Omitting information on change over time, evolution and the big bang theory, completely negates the validity of this document.				
	1305					
		I can read them and understand them clearly.				
	1306					
		'Theory' needs to be defined in scientific context				
	1307					
		Organized by grade level and able to follow, although many of the edits add more ambiguity and detract from the scientific concepts to be taught. Also an issue with disciplines skipping years, or multiple years as seen with concepts in physical science and life science bands in middle school.				
	1308					
		Generally OK				
	1309					
		Organization is fine				
	1310					
		Well laid out with color coding is easy to follow and read				
	1311					

		Downplaying the FACTS of EVOLUTION is not science. It is not your job to advance the religious nonsense pushed by the AZ Republican Party. Your job is to make certain FACTS and SCIENCE are taught throughout AZ's PUBLIC schools. Parents who are made sad by science & facts may place their children in PRIVATE, religious schools.				
	1312					
	1313	A table of contents or other organizational tool at the beginning would be helpful.				
	1314	These standards are not written in an easily understandable way. I don't feel that they are organized by a unit of study. It would be better if they were more specific and less general. I understand the idea of being broad as to lend itself better to more in-depth study, but I don't feel that these provide enough direction. For example, this standard: Obtain and evaluate information regarding how scientists use technology to identify substances based on unique physical and chemical properties. My question: What is meant by technology? Would this be what students would be utilizing in the process of doing a lab to identify substances? Such as laboratory tools?				
	1315	I would like to see the standards first, followed by the overall explanation.				
	1316	The Core vs Plus set up is not very easy to read. I think it would be better to have them separate like they do in the math standards.				
	1317	They are very confusing and hard to navigate. When I first viewed the standards, I was very lost and not able to understand the standards due to the lack of organization. The standards should be straight-forward and organized in a way that a parent, student, and teacher (both new teacher and experienced teacher) could access and understand how they are formatted. Instead, I found myself having to search for content and look for certain pages to access material.				
	1318	I can easily read the standards.				
	1319	I believe we need more time when talking about Newtons three laws of motion.				
	1320	a bit repetitive, but acceptable				
	1321	wordy and unnecessarily difficult to search				
	1322	Organization seems fair although matching better to what is used at University level, using terms like applied mathematics and physics would be beneficial for continuity.				
	1323	Written in a more passive voice than previously. Directness is always better.				
	1324	Organization is important, but content more so.				
	1325	The key concepts do not correctly refer to the science standards. The key concepts distract from the main points in the standards and add too much incorrectly placed terminology for students to have to memorize. One of the issues that we have in our current standards, is the 2-3 year gaps between touching base on certain concepts. I still see this issue in the new draft, I was hoping that issue would be resolved.				
	1326	The science standards are not organized well. Concepts have been moved to lower grades that are not developmentally appropriate. For example, atoms in 6th grade have been moved from 8th grade along with matter and physical properties. 8th grade students struggle with these concepts. In addition, the periodic table is taught in 5th grade and then not mentioned again until high school so teaching atoms in 6th grade and atomic bonding in 8th grade are out of context without the periodic table of elements.				
	1327	The proposed science standards with the added key concepts do not articulate well. Many ideas that are introduced in early elementary school are too difficult for these young children to conceptualize.				
	1328	STOP DENYING OUR KIDS A FULL EDUCATION WITH YOUR RELIGIOUS AGENDA!!! Evolution is real!				

		I disagree with the minimizing of the role Evolution plays in human history and science education. It is not debated in the Science community. The science standards of Arizona need to be compatible with modern scientific fact, not biases or religion. If Evolution is being wrongfully omitted I grieve to know what other facts the Arizona Department of Education will omit from Education. That is limiting future generations of American thinkers, who face scientific truths of the world and use the scientific method for progression of humanity. Please revise the k-12 science standards to fit current scientific fact, so that future generations will possess the knowledge they have the right to receive from their Education department. Thank you.				
	1329					
	1330	It is good that they are separated and color-coded by strand. However, I do not like the naming system. I think it would be best to just include a letter to represent the strand (i.e. P for physical science, L for life science), than to try to incorporate multiple core ideas into the name.				
	1331	The three dimensional nature of the organization allows for some confusion, especially U2. Perhaps it would be better to leave out the core ideas and just list the standards.				
	1332	Its fine.				
	1333	The standards as revised by staff compromise their intent and therefore compromise the ability of Arizona students to deal with the modern world.				
	1334	They are organized fine				
	1335	The proposed edits make the standards much less clear. Please use the standards that were submitted, prior to the edits.				
	1336	No comments				
	1337	There is no mention of the scientifically accepted concepts of evolution or natural selection. These are core concepts in biology that help explain vital parts of life science. It is unacceptable to not include them.				
	1338	Easy to follow and understand				
	1339	I find Concept Maps confusing and not to the point. Often created to make people look like they have been working when in fact they are just recycling old stuff.				
	1340	I do not understand the purpose of the far right column, especially when it says, Refer to Standard.				
	1341	The standards are vague in some cases and are left open to interpretation.				
	1342	I think it is well organized				
	1343	I like the organization				
	1344	Without the input and additions from the state, the science standards lack structure and coherence.				
	2001	The science standards appear to remove the teaching of evolution, which is not scientific. Remember, also, that the teaching of intelligent design has been ruled unconstitutional because it advances the role of religion in public schools.				
	2002	These standards are an unconstitutional ploy to put a creationism agenda into the curriculum and confuse students about the scientific fact of evolution				
	2003	The sections are conveniently broken up by grade level. These are further organized based on physical, earth and space, and life science standards. The way(s) in which these areas of study are connected to other academic disciplines is straightforward and has been well implemented.				
	2004	It's hard to read a draft that aims to do so much damage to a child's education.				
	2005	It is difficult to argue that the standards are well-organized and easy to read when they are in fact so poorly designed. It does little good to clearly explain something that is so nonsensical in every other respect.				
	2006	Organization was clear and logical.				
	2007	While I disagree with them, they are clear.				
	2008	Simple, and easy to follow.				
	2009	Very wrong not to teach proven Science...				
	2010	Follow same format- easy to determine the standard.				

		They WERE well-organized until they were edited by non-scientists/non-educators. We will do a GREAT disservice to students in Arizona if non-scientific views, i.e., religious views, obstruct the established scientific truth in the standards. Already military families avoid our public schools because the Arizona Legislature does not invest in our children. Now they will avoid the public schools because of the antiquarian myths perpetuated in the standards. It is essential that real science be taught in Arizona.				
	2011					
	2012	Evolution is not a theory. It is proven. It is ongoing in our lifetime that living creatures and plants adapt and evolve. Stop injecting uncertainty in to scientific methods.				
	2013	confusing				
	2014	Please teach evolution and not creationism				
	2015	Well organized.				
	2016	key components within each grade level cluster allow appropriate categorization of content topics/strands.				
	2017	While the grammatical changes do improve the standards, evolution should be included as a fact, not a theory. If students want to explore theories, philosophy classes in college and bible studies can assist students' with ideology that has not yet been proven.				
	2018	I think the organization reflects the foundational documents, the Framework for K-12 Science Education & the Big Ideas in Science. Not sure where to put this comment so I'll put it here. The wording of the Big Ideas (knowing and understanding science) came from published sources- the wording for several of these big ideas has been altered throughout the document. The original document should be referenced and the original language of each of the big ideas should be retained. Specifically: P4 the words in a closed system were added. L4 The wording should be returned to the original. The diversity of organism, living and extinct, is the result of evolution. U1 The wording should return to: Science is about finding the cause or causes of phenomena in the natural world. U4 The wording should return to: Applications of science often have ethical, social, economic and political implications.				
	2019	Teach Science				
	2020	The standards are no longer grouped in a logical order. 7th Grade is no longer Earth and Space, which are two sciences that traditionally go together. Instead physics has been added and geologic time has been added to 8th Grade. There is no longer a logical flow and connection within each grade level. It seems very random.				
	2021	as I read them on line, they seemed well organized				
	2022	Given that it's an official document, not (for instance) a work of lyric poetry, it's reasonably approachable.				
	2023	The organization of the Science Standards is not the reason for my current comments.				
	2024	I would prefer a neither agree nor disagree option.				
	2025	K-12 Framework for Standards for Science and cross disciplines				
	2025	clear and concise				
	2026	well organized				
	2027	N/A				
	2028	The current (2004) standards are fine. The proposed changes regarding the removal of 'evolution' and 'Big Bang Theory' are an affront to intelligent, educated people and these changes have no place in in the Arizona State Science Standards!!				
	2029	I felt that they were well organized into overall concepts and broken into units well. As a 4th grade teacher, I felt that the content was better distributed among the grade levels making not so heavy in 4th grade. I agree with some of the content like plants, classifications of plants and animals, and cells were given to other grade levels so that 4th grade could use it's energy to concentrate mostly on earth science which is an extensive part of the curriculum.				
	2030	The key concepts don't make sense. They are VOCABULARY words, not concepts				
	2031	By not using the word evolution some parts of it make little or no sense.				
	2032	I prefer the old format				
	2033	well organized and easy to read and follow				

		I DO NOT support the teaching of creationism in Arizona schools. Please keep religion out of our public schools and keep Science classes focused on 'sense-making (as) a conceptual process in which a learner actively engages with phenomena in the natural world to construct logical and coherent explanations that incorporate their current understanding of science, or a model that represents it, and are consistent with the available evidence.' Evidence being the operative word.				
	2034					
		This formatting is not the easiest to read. The tables just seem to make it more confusing. Instead of having to read it right to left, top to bottom like the old standards would be easier to read. Also, the colors make it more difficult to follow what is happening, even though their intent is probably the opposite.				
	2035					
		Mrs. Douglas needs to get with the 21st century and science.				
	2036					
		This is long over due, and a step in the right direction.				
	2037					
		The deliberate intention to obfuscate the critical role evolution has in biology by definition makes this not easy to read in the sense that it makes it hard to ferret out the insidious influence of groups with special interests.				
	2038					
		Stop oppressing us with your Christian views. I am not a Christian and this is an obvious attack on science. Evolution is important for all students to learn. Keep your religious beliefs to yourself. Start up your own private school that teaches religion over evolution. Don't oppress us with your beliefs. It's raking away our liberty.				
	2039					
		I don't have a problem with the organization of the standards. My disagreement is with the substantive changes of the standards.				
	2040					
		Biology is a science, not a background text to insert the Education Secretary's personal religious beliefs. There is no place for creationism or intelligent design in public school textbooks. The addition of ANY language purporting to introduce these religious concepts, which are NOT related to actual biological processes of evolution and selective adaptation, is scientifically ridiculous and foolhardy. It also violates the basic separation of church and state as specified in the United States Constitution First Amendment. As an attorney, I must say you that introducing these religious concepts into public school textbooks could well be legally actionable. Existing, science-based biology textbooks need no revisions or additions. Please abandon this misguided attempt at placating a few religious conservative voters, and consider the overwhelming majority of Arizona citizens that want no religious intrusion into public education.				
	2041					
		Please do NOT make changes that remove or downplay references to evolution and the big bang made by Diane Douglas. These changes, made to support a religious agenda by a person who is on the record as supporting intelligent design (which is about as scientific as believing that Mickey Mouse controls the weather) would do our students a great disservice by removing or mumbling through references to genuine scientific principles and theories. Because they are supported by rigorous scientific research, data and real-world observation, evolution and the big bang are scientific theories. The intelligent design driven Ms. Douglas supports is based on religious beliefs and have no place in public education.				
	2042					
		Confused wording throughout downgrades the understandability of the document				
	2043					
		This proposed change is ridiculous and takes students back in time and will ill-prepare them for the future.				
	2044					
		don't confuse science with religion. teach science in school. teach religion in church or temple.				
	2045					
		Should be written by scientists ONLY				
	2046					
		Science is evidence based. Pseudoscience and faith based speculation are not science! Diane Douglas do your job! Stop trying to turn the the K-12 Arizona science curriculum into a soap box for your religious beliefs! Shame on you!				
	2047					

		Teach science, not religion. Diane Douglas is a religious fanatic, which is her right. However, she has no right to impose her religious views on the children of Arizona. Public schools are not allowed to teach religion. Evolution is not a 'theory'. It is based on sound science. That science should be taught to our children in science classes. If Ms. Douglas wants to teach 'creationism' and 'intelligent design', then she should get a job as a Sunday School teachers and subject the children in that environment to her unscientific beliefs.				
	2048					
	2049	It seems like a good, logical structure.				
	2050	De emphasizing evolution and the Big Bang true a science instruction in those areas on its head. Eliminate the nonscientific, last minute draft revisions done by the Superintendent and reinstate the work product of the science teaching workgroups.				
	2051	Evolution is an integral part of it without religion of any form included.				
	2052	reasonably clear				
	2053	Competent				
	2054	Organization is fine, the problem is their intention to alter already correct science standards.				
	2055	My wife and I find the proposal fundamentally wrong and therefore, are sickened when reading the proposed revisions to the Science Standards.				
	2056	The organization of the standards are sufficient. Breaking them down across the three major sciences for 6th grade is a good decision. Though, pretending to integrate the scientific method into the standards will not benefit students. There is no foundation laid for 6th graders here.				
	2057	The standards are extremely confusing. Originally, they seem straight forward, but then after looking into them more in depth, the cross curricular content makes it even more confusing. I do enjoy the new key concepts which will help the teachers to understand a little more, but in some circumstances they are still so vague. In 8th grade we are supposed to teach about how energy can transfer and how energy affects wave characteristics, but that can mean so many different things. We need a more specific guide on what you want us to teach.				
	2058	You have to flip through the standards too much to see exactly what was taught previously and what you need to teach at your grade level. There is not enough specificity as to what is expected at each grade level.				
	2059	I like how in the draft the broad core ideas for knowing science are tied together in one chart. I do not like how the 6th grade standards have taken on the former 8th grade standards. I don't think the students are going to be ready for those concepts developmentally at this level. I don't think the flow of standards are as good as they use to be.				
	2060	The labeling of the standards is very confusing, and the titling of each is difficult to remember. i.e. 8.E1U1.6.				
	2061	While looking at the standards, they appear neat and easy to read, but when you pull apart all the core ideas, there is more information in the coding. This then makes the standards quite overwhelming and difficult to follow. Having to go from one sheet to another in order to understand what I need to teach and how I need to document that is difficult. It is lacking precision.				
	2062	Overall, I like the new standards. I am very concerned that the teaching of evolution is being diluted, and what that implies. Some topics are being moved to lower grades, for example the periodic table is being moved from 8th to 5th. I'm concerned it will be difficult to teach all the concepts to kids who are so young. More importantly, science is largely ignored in K-5, because such an emphasis is placed on ELA/Math. Even fourth grade teachers currently complain about lack of time to teach science.				
	2063	I like how they are chunked and how the language is easy to understand. However, I feel that the standards are quite broad - there is a lot of room for interpretation, which could be good and bad depending on the instructor's confidence level and access to resources.				

		The standards for 7th grade don't flow together at all. It looks like someone just picked some random standards and put them at the 7th grade level. If someone wants the students to come away each grade with more content knowledge then we need to start at a basic level and allow the teachers to continuously build on the students prior knowledge; instead of waiting a few years to circle back to standards. Right now there are concepts at the lower levels that those students can't grasp because they just don't have the background.				
	2064					
		I have no problems with the understanding the expectation of what is to be taught to reach each of these standards.				
	2065					
		There are a lot of components to each standard such as core ideas, crosscutting concepts, engineering practices, and lower grade level connects which all require you to look in different places within the standards.				
	2066					
		I am very concerned about the proposed changes related to evolution. Any deletion of the term reflects an anti-science bias most likely with religious motives.				
	2067					
		they are structured ok.				
	2068					
		Have not looked.... I am here to comment on the proposed wording for evolution and the Big Bang. I do not understand the need to spend time and resources developing standards specifically for AZ when there are national standards that have been developed by experts: NGSS. I strongly support the NGSS because K-12 Science Education Should Reflect the Interconnected Nature of Science as it is Practiced and Experienced in the Real World. The framework is designed to help realize a vision for education in the sciences and engineering in which students, over multiple years of school, actively engage in scientific and engineering practices and apply crosscutting concepts to deepen their understanding of the core ideas in these fields. The vision represented in the Framework is new in that students must be engaged at the nexus of the three dimensions: 1. Science and Engineering Practices, 2. Crosscutting Concepts, and 3. Disciplinary Core Ideas. Currently, most state and district standards express these dimensions as separate entities, leading to their separation in both instruction and assessment. Given the importance of science and engineering in the 21st century, students require a sense of contextual understanding with regard to scientific knowledge, how it is acquired and applied, and how science is connected through a series of concepts that help further our understanding of the world around us. Student performance expectations have to include a student's ability to apply a practice to content knowledge. Performance expectations thereby focus on understanding and application as opposed to memorization of facts devoid of context. The Framework goes on to emphasize				
	2069					
		Easy to read				
	2070					
		Standards are well organized				
	2071					
		NC				
	2072					
		As a lay person, I find it a bit hard to follow. I would defer to the opinions of science teachers and professionals on this, however.				
	2073					
		Religious viewpoints should be taught in church and by parents, not by science teachers and the Dept. of Ed. should have no role to play in introducing religion into school science curriculum. Encourage teachers to help students explore science and use their native curiosity and not stifle by making teachers offer biased information.				
	2074					
		I have not read the official document. My opinions are based on public information as provided by TV and newspaper.				
	2075					
		The organization and readability of the new draft standards are not in question. The scientific content and accuracy are a matter of concern.				
	2076					
		While I have not read all of the Science Standards, I found what I have read to be in many cases wordy: run-on or exceedingly long sentences, and repetitive phrases between sentences. Also, some language choices seem cryptic, and could be written more clearly.				
	2077					

		As a parent of 2 daughters who attended K-12 as well as undergrad and graduate schools in Arizona, I oppose the changes to the science curriculum that Diane Douglas is proposing. Science belongs in schools and the bible belongs in the religious community. Science and technology are moving at lightning speed today and to muddy the waters of content is depriving Arizona students of the tools they need to compete in the world. The Arizona education system is ranked well behind the rest of the country and the United States has fallen behind many industrial countries.				
	2078					
	2079	pretty easy to read, a little repetitive				
	2080	I RECOMMEND YOU EXPLORE THE CURRENT CURRICULUM OF THE AWARD WINNING BASIS SCHOOLS AND THE AWARD WINNING UNIVERSITY HIGH PROGRAM IN TUCSON. THEY ARE THE ONLY COMPETITIVE, NATIONALLY RANKED SCHOOLS I AM AWARE OF IN ARIZONA. DO YOUR HOMEWORK! How can you consider these well organized when you obfuscate and de-emphasize the critical role science plays in a child's education through their scholastic experiences from kindergarten through college? You are attempting to muddy the waters and mix specific religious views with accepted, peer-reviewed science. That is deceitful and misrepresents the best available science.				
	2081	Standards should be totally evidence based and not on any specific religious beliefs or dogmas				
	2082	I will not comment on the organization of the standards because I am not a teacher.				
	2083	The design of the standards are easy to follow and should help teachers identify the focus of required instruction.				
	2084	Any attempt at questioning the role of evolution in our existence or any question as to the theory of how we became what we became as put forth by 98% of all scientist is an injustice to every Arizona student and please, please must not be done.				
	2085	They are better but still not great.				
	2086	Leave the organization remain as it is.				
	2087	no comment				
	2088	A bit dense for the average parent/public. I realize the necessity of being thorough for the professional reader, but a annotated version more user friendly would be helpful.				
	2089	Under Core Ideas of Using Science and Core Ideas of Using Science, the author appears to add word salad to remove the word, Evolution, from the document. Many similar examples throughout.				
	2090	Of course you should teach evolution, why ever question that?				
	2091	KEEP the word EVOLUTION in the standards. Evolution is accepted science. There are NO alternative theories that are no religiously based.				
	2092	Evolution is no longer a theory it is proven fact and must be taught in our science classes.				
	2093	Overall, I support the move towards larger concepts that are better connected to each other. The standards reflect necessary changes to the science education in AZ and should be put into action right away.				
	2094	This feedback form attempts to hide the actual crux of this debate (Evolution vs. Creationism). These questions about the entire content of this draft are insignificant. Douglas should have been less Draconian and put out a survey that only states the actual changes proposed to the Physical Science part of the Curriculum. Everything else is just a diversion to confuse.				
	2095	NOTE: ALL COMMENTS ARE PERSONAL OPINIONS AND DO NOT REPRESENT THE OPINIONS OF MY EMPLOYER				
	2096	There is no place for religious beliefs in the school system				
	2097	They are NOT easy to read since Sister Mary Diane Douglas is trying to fool the public into believing she truly wants to educate the children of AZ.				
	2098	Organization of the science standards is not the issue. At issue is whether religious beliefs will be allowed to guide science instruction.				
	2099	No issues.				
	2100	The content infringes on separation of church and state.				
	2101	Well done by educators who understand the needs of students with out editing by politicians who have no understanding of scientific principles.				
	2102	Add a table of contents to help readers find things they are looking for!				

	2103	Ambiguous and misleading comments about evolution				
	2104	You need a table of contents				
	2105	Keep it simple.				
	2106	Well-written and well-organized.				
	2107	These appear to parallel the organization in NGSS.				
	2108	Learning progressions are critical to providing appropriate grade level rigor, and can lead to differentiation for students. What causes some confusion is the designated focus on only certain crosscutting concepts is too limiting - schools & districts should determine which and how crosscutting concepts will be developed throughout all grade levels in their curriculum development.				
	2109	I have no qualms with the organization of the standards at this time.				
	2110	I have concerns about the Key Concept section. I am not sure what is meant by 'Refer to standard' in some areas.				
	2111	The theory of evolution should not be omitted from the Science Standards, removing the comment unity and diversity of organisms, living and extinct, is the result of evolution is egregious and only benefits in further weakening of our education system.				
	2112	It is organized but incredibly simplified. I'm looking at the 4th grade standards and there is really no depth of content.				
	2113	Keep your religious beliefs out of the public schools. There is a separation of church and state in the US. If you wish to teach untellable, do it at church!				
	2114	I am not concerned about the organization of the document				
	2115	Really appreciate making the draft with internal review comments readily available, this facilitates a more thorough review.				
	2116	The color coding is the same as the science and engineering practices, core ideas, and crosscutting concepts, not clear. Plus, you must know the core ideas for knowing science and using science to read the grade band standards.				
	2117	They weren't horrible to read but definitely need to be cleaned up a bit.				
	2118	A...B...C... But, by analogy, the fine organization of garbage does not make it more than garbage.				
	2119	This document is an affront to critical thinking!				
	2120	No Comment				
	2121	Standards are relatively easy to follow. Some charts appear to be designed with space saving in mind and not readability.				
	2122	color coordination works well, the headings and definitions of standards, curriculum, and instructions are clearly stated and delineated				
	2123	For a non-educator and non-scientist this is not an easy read but I am not sure it needs to be.				
	2124	Religion has no place in the classroom that is why we have a separation of church and state.				
	2125	The quantity of coding - particularly referring back to previous topics - make it very difficult to read. Hard to have a coherent full image with so much of the text abstract.				
	2126	I especially like the connections to other areas of the curriculum.				
	2127	None				
	2128	The science standards are concise but not thorough enough. For instance, the chemistry standards should be broken down into subdivisions of chemistry. Students should be able to explore the branches of chemistry such as biochemistry, organic chemistry, and inorganic chemistry. This is essential for students at all levels. The content in the HS chemistry standards are very specific to inorganic chemistry (also known as General Chemistry in high school). For students entering college for the allied health fields or pre-professional allied health fields, a solid foundation in chemistry will be necessary to prepare students for college level chemistry, a prerequisite for organic chemistry.				
	2129	I feel that the Key concepts include but should not be limited to part of the standards outline is unnecessary. I am confused as to why science and engineering are separate. I do not feel it is necessary.				
	2130	Does not need any non scientific hypothesis such as creationism				
	2131	They read very similarly to the College Board standards.				

	2132	I am fine with the organization .				
	2133	Science is not based on religious fantasy. Creationism is fantasy!				
	2134	The standards are poorly worded. The behavior expectations of the objectives are too cumbersome. There are too many cognitive actions [e.g. Observe, record, and ask questions; Observe, describe, ask questions, and predict]. The conditions are also vague and mostly at a DOK-1 or DOK-2 level.				
	2135	The committee did a good job. Just remove the edits by Douglas and you have a reasonable product.				
	2136	Very cluttered				
	2137	I don't think they need to be altered				
	2138	They are often hard to read and difficult to suss out what exactly each standard is asking for.				
	2139	There are standards that are randomly placed in grade levels that do not make any logical sense for growing and developing curriculum.				
	2140	The attempt to delete the word evolution from the document is not acceptable.				
	2141	Science standards should reflect the latest information based on peer-reviewed scientific knowledge. For example, evolution should be taught as a known fact. There is no scientific evidence whatsoever for creationism and should NOT be included in the science curriculum whatsoever! As a retired biomedical scientist, I am aghast that this issue is being considered in 2018! Ms. Douglas is not qualified to make such a decision for Arizonans and should not change the Science Standards without extensive review by noted scientists at our higher education institutions of ASU and UA. Religion should be taught outside of public education and has no place in our school system in Arizona!				
	2142	Separating the cross cutting concepts and core ideas for using science from the core ideas and practices makes for cumbersome reading. It would be useful to at minimum have cross cutting concepts embedded within each standard. It would be less confusing if Using Science was separated out completely as an appendix. Connections to other disciplines should be listed as an appendix as well. Key concepts column is redundant to Core Ideas for Knowing Science.				
	2143	You are the dept of ed., not religion. Religion is faith based and there are multiple religions in the world. Science, on the other hand, is fact based. Science belongs in school, religion does not!				
	2144	We must not remove the word evolution from our curriculum				
	2145	We care more about the content than we do about the organization. You can't really organize ignorance anyway.				
	2146	They have to be continually modified. The science taught in grade school, needs to expanded as the curriculum moves through the classes. We can't just dump our deepest sciences on grade school students.				
	2147	Some of the changes in green have created incomplete concepts; the key concepts are confusing would suggest putting the learning progressions from the document Working with Big Ideas in Science - this allows teachers to see the concepts in context with vocabulary that makes more sense to teachers.				
	2148	Beliefs resulting from the study of the Bible have NO PLACE dictating a science curriculum.				
	2149	They appear to be orderly and generally well organized. Should be easy to follow for most teachers.				
	2150	I understand the process, but this reductionism to this level of detail would be stifling to a competent teacher.				
	2151	The standards are not well organized; they are hard to follow and hard to understand.				
	2152	It is ok.				
	2153	well organized, but I object to any change in language that attempts to undermine evolution as scientific fact.				
	2154	very vague				

		Creationism does not belong in public school science curriculum. The purpose of public schools is to educate our children, and the purpose of science curriculum in public schools is to educate children about science. It is not to educate about religious beliefs. Creationism is a religious belief, not a scientific principle. Education about the Big Bang theory and evolution belong in public school science curriculum. DRAFT is a sneaky and underhanded way to impose the religious beliefs of a few on the majority, and it is morally wrong.				
	2155					
	2156	Organization is sufficient.				
	2157	These standards - BY DEFINITION - apply to the teaching of science. Such content should be the results of knowledge gained through the use of The Scientific Method, which is a reasoned judgement based on evidence that can be replicated in a laboratory setting. Statements that arise from the acceptance of ANY religious, spiritual or emotional theory as explanation for how history and human activity have changed over time are worthy of study, but DO NOT BELONG IN ANY SCIENTIFIC CURRICULUM. We (still) live in a secular democracy, not a theocracy.				
	2158	I read the Science Standards and redlined version as of Sunday night, attempting to comment while the public survey was down. This version is NOT the version I saw Sunday night. You have removed several areas of redlining as they existed at that time, showing only your replaced verbage; and you have revised the organization of our facing page on the public comment forum to encourage people to look first at the non-redlined version of the Draft. This is misleading and unethical, given the Education Department's clear awareness of the raging debate over changes to terminology related to evolution and the Big Bang theory. You are not serving the public responsibly nor ethically with these manipulations.				
	2159	NGSS is what we are using. We don't even follow AZ standards.				
	2160	The revisions made by the Department, to the draft that was submitted by the teacher committee, did not add any clarity to the standards, and only muddled the presentation of evolution by the addition of the tentative and ambiguous theory of when presenting evolution. Evolution is no more of a theory than respiration and photosynthesis, and to clarify it as the theory of evolution is disingenuous and misleading.				
	2161	The science standards are clear, easy to understand, and up to date as they exist current.y.				
	2162	Evolution needs to be taught.				
	2163	The attempt to weave the 3 dimensions as outlined in the Framework for K-12 Education falls short of what is needed. The way the crosscutting concepts are grouped seems forced and often leaves out important connections across grade levels. Please see the NGSS as a model that we could work from, making adjustments as our teachers and content experts see fit.				
	2164	From what I can find online and read the organization of the Science Standards seems OK but I object to the attempt to change evolution to the theory of evolution. These are Science Standards. Evolution is science. Creationism and Intelligent Design are stories for Sunday School. These stories don't belong in the AZ Science Standards.				
	2165	Educator speak, no thought given to parents/public				

		The organization is OK but the language of the standards is often scientifically inaccurate. For example, the Core Idea L4 is inaccurate in that the theory of evolution does not merely seek to make clear the unity and diversity of organisms, rather it actually explains the unity and diversity of organisms by way of specific mechanisms that account for the unity and diversity of organisms. The Science and Engineering Practices are referred to as formerly the scientific method. That comparison/reference is inaccurate. The Practices are not the same thing as the scientific method. They represent a variety of activities that scientists and engineers engage in, whereas the scientific method implied a specific set of steps involved in all scientific activity. In the organization of the standards, there is no indication about how the Cross Cutting Concepts are to be used. If cross cutting concepts are important, then they should be used in organizing the standards in such a way that their place and role in the standards becomes clear. Most of the Key Concepts in the standards appear to be a list of vocabulary terms and may be seen as terms to be learned rather than concepts to be understood. The standards should be organized in such a way that the concepts appear as integral parts of the standards rather than as separate list of terms. It is not clear to me why we are relying more on a foreign publication (Harlen, 2015) to develop our standards rather than relying more fully on the NRC 2012 Framework, which provides a well organized and well thought out vision for K-12 Science Education.				
	2166					
	2167	Need to keep evolution.				
	2168	I cannot endorse any curriculum with religious content. Intelligent design and evolution can co exist, but intelligent should be taught at home and left to parents to explain their family's belief system to their children.				
	2169	There's a lot to read. Does there have to be so much?				
	2170	I will not consider any changes if the teaching of evolution is in jeopardy including the word evolution. I have taken the time to read the proposal for every grade level.				
	2171	It should be organized based on when the standard should be taught throughout the year building up to more difficult standards.				
	2172	These comments are exclusively about the proposed adoption of Intelligent Design theory in the classroom. I'm sure you know about the federal court case ruling it unconstitutional, but I would like to add that these kinds of ideas are what make Arizona's educational system the butt of so many jokes. What utter nonsense.				
	2173	The standards need to be revised with the only agenda being that of advancing science education, rather than the advancement of a theocratic agenda.				
	2174	My team and I had to really carefully read to see if we are still teaching anything we are familiar with in second grade. It appears as though we are teaching most of what we did before we some additions.				
	2175	The standards are fairly easy to read and understand.				
	2176	Some of the wording is unclear and needs to be a voice of a teacher				
	2177	No comment				
	2178	No comment				
	2179	The use of color and strikethrough font made changes very easy to review				
	2180	This DRAFT should have been designed and vetted by scientists not by Diane Douglas who has no science training.				
	2181	Well organized and easy to read??? This is what is important in a science standard? How about the full knowledge and scope of that particular field! Do not water down the language that defines our science standards!				
	2182	seem fine				
	2183	Diana Douglas does not have the education background just because she was voted in solely on the Republican ticket. Teach science not religion.				
	2184	Appear similar to the NGSS				
	2185	I feel that the 2004 standard format is easy to following and understand. It is easy to see the standards that go along with each section across all grade levels. The revision is more cumbersome and distractive.				
	2186	Fine				
	2187	Put it back the way it was.				

		The current draft of the science standards does not reflect the necessary and sought-after shifts in science education as charged to the Science Standards Committee with respect to organizing the standards around 14 core ideas and developing learning progressions to coherently and logically build scientific literacy from kindergarten through high school.				
	2188					
		This new language is vague and sounds made up. As a mother of son in the Math Science Academy at SHS, I find this disheartening our educators find this is to be at a high standard.				
	2189					
		Organization seems OK				
		I like the overall organization, however, I feel like the final draft should contain headers and bookmarks for easy digital navigation. These features aren't hard to add in Word, and maintain their functionality once the document is converted to PDF.				
	2191					
		As a resident living in AZ and a grandparent and a great grandparent of children attending school in AZ, I strongly object to forcing religious beliefs into the educational system funded by taxpayers. This idea cannot be considered good leadership for public education, but simply a way for the Christian church to 'get them young'				
	2192					
		It is surprising how much information is within the standards. This is something that is usually within each district curriculum map instead of standards lists.				
	2193					
		Life Science standards should be ordered in a way that the standards would be taught. Starting small going to large as following the textbook used by the districts. The standards should be dumbed down especially because new teachers could be intimidated. Standards need to be broken down and labeled better. Organisms is what we are learning about because biology is literally the study of life, organisms are alive. The Cells and Organisms label should be broken down between organization of life, biochem, cells then maybe broader into specific organization of organisms. Organization of Life-->Biochemistry-->Cells-->Genetics-->Organisms-->Evolution-->Ecology				
	2194					
		special education students in high school can have trouble with meeting some of the standards.				
	2195					
		The organization is well-planned and communicated. However, the order of the content may need changing. Organization of Living Things --> Biochemistry --> Cells --> --> Genetics --> Organisms --> Evolution --> Ecosystems I understand that this is a curriculum discussion but it may make life simpler to have that standards in the same order. At the end of the day, they are definitely well organized and easy to read.				
	2196					
		It jumps around too much from small to big to small. I would like to see the order of the standards going from small to large concepts. Kinda in the way our textbooks sort of do it, following the textbooks that our districts adapted would be beneficial. I hardly use the textbook because we jump around in concepts so much. So the action would be nice to change the order of the standards. As far as reading them, the standards seem a little wordy....it would be nice to see a little more to the point of what is being asked. Many teachers take each standard differently because it is too broad at times.				
	2197					
		I do not think it makes sense to label a variety of items in the document as positive and negative when referring to implications. Both of those are more charged and leading. I don't see the positive impact of including those words.				
	2198					
		They're easy to read and identify the different topics but they don't give enough information and examples to go with each topic.				
	2199					
		It would be more clear if the Science Standards are more clear about which Crosscutting concepts, and Science and Engineering Practices are being applied to each standard.				
	2200					
		The standards are not clear and are very broad. It leaves so much room for interpretation which leads to confusion.				
	2201					
		We are back to vocabulary again instead of the scientific principles that make up our standards.				
	2202					
		I believe that the Three Dimensions of Science Instruction are explained in the opposite order of what they should be: I would start with the Core Ideas and move outward, instead of the other way.				
	2203					

		keep science in science classes not religious opinions...keep evolution and reject intelligent design. Church and state are constitutionally separate for this very reason. This woman needs to be fired.				
	2204					
		The suggestions for modifications of Science Standards are not logically organized.				
	2205					
		While organized, there is some discontinuity in terms of voice and conceptual frameworks - particularly in regards to energy - is there one kind with various transfer and storage mechanisms, or are there different forms? Can it be used or merely transferred around? There are others, I will attempt to place them in useful parts below (those that have not already been communicated).				
	2206					
		The standards are organized in strands that make sense and are cross referenced with other content area skills.				
	2207					
		The use of a new way but it can be followed				
	2208					
		The Use of Science is a new way of organizing but it is understandable.				
	2209					
		The use of science is a new way of organizing but it is understandable. I can follow it.				
	2210					
		The organization is a new format, but fairly easy to understand.				
	2211					
		They are bad, You shouldn't eliminate or water down the ideas of evolution and the big bang. They are scientific theories, which have been proven time over time. Evolution is a FACT.				
	2212					
		I think that the layout of the standards is good and, to a lay person, I imagine that they are easy to read. However, I am a recently certified science teacher (middle/high school) who used to work as a professional scientist (teaching is my second career). I found the edited version difficult to read because the edits changed the meaning of the original intent so much and there are fundamental flaws in understanding that are now part of this document.				
	2213					
		Too complicated.				
	2214					
		I'll admit it - I mostly skimmed it, and read through the parts that people were in a tizzy about. But despite skimming, it seemed easy to read!				
	2215					
		All faith based or religion related education needs to be eliminated from all science education. Opposing points of views must NOT be taught in relation to Creation Science or Scientific Creationism. We are no longer in the dark ages...!				
	2216					
		OK				
	2217					