

# 2016 Arizona Standards Draft Review

By Gina Ray, K-12 parent & member of The Mommy Lobby

In March of 2015, Gov. Ducey asked the State Board of Education to create a committee to review and replace the 2010 Common Core Standards. On the 23<sup>rd</sup> of March, the AZ Capitol Times quoted our Governor as saying:

“We are going to set our own standards and we are going to take charge of them here in the state of Arizona,” Ducey said. “This is Arizona taking charge of its own direction, in terms of standards, keeping what works. And what doesn’t work, what’s problematic or what causes confusion and anxiety for these parents is going to be removed.”

Arizona parents have been undoubtedly frustrated with the Common Core Standards. They are difficult to understand and rather convoluted. They are also developmentally inappropriate causing undue stress on small children whose minds have not reached the capability to think critically, logically, and abstractly at such a young age. The Common Core Standards have also caused many teachers to leave the teaching field due to their overly prescriptive and constraining nature. Seasoned teachers do not like to be told HOW to teach. They have already attended school for this. Most teachers like to feel the freedom to use their own methods to help their students come to a thorough understanding of core concepts. These are the reasons why Arizonans do not want to be beholden to the Common Core Standards, as they are:

1. Confusing;
2. Developmentally inappropriate;
3. And overly prescriptive.

The Executive Summary of the new Arizona Draft Standards states that the Review Committee kept only two of problems in mind as they reviewed and edited the Common Core standards --being clarity and proper cognitive demand.

“Using the public comment data, academic research, and three criteria for the review process (clarity, cognitive demand, and measurability), workgroups reviewed all K-12 mathematics standards individually within domains and across domains and grade levels. The Mathematics Workgroups utilized the following definitions when reviewing all standards for **clarity, cognitive demand** and measurability:

**CLARITY:** Quality of being easily understood. (Merriamwebster.com) • **The standard is clear and understandable.** • The standard can be used by educators to clearly guide learning for students. • The standard can be used by educators to build student understanding. • Examples or parenthesis in/after the standard provide clarification or define the limit of the standard.

**COGNITIVE DEMAND:** **Represents the type of thinking and level of complexity of thought we expect students to engage in when learning.** Cognitive Demand is about high levels of reasoning and thinking. Standards are written at different levels/ranges of cognitive demand. • The standard has complexity of reasoning. • The cluster contains a range of cognitive demand/complexity of reasoning.

**MEASUREABLE:** Student progression towards mastery of the standards should be observable and verifiable. • The standard can be measured through varied modes of assessments.

However, it is evident that the Review Committee did not follow through completely with these even these two promises. The draft is still confusing for parents and even well-seasoned teachers to read and interpret. The draft also contains cognitive demands that children cannot attain without unnecessary stress due to their developmentally inappropriate demands.

In regards to the developmentally inappropriate cognitive demands, parents and teachers have repeatedly petitioned the Arizona State Board of Education and the Standards Review Committee to employ an independent child psychologist. A couple of child psychologists have even offered their services pro bono, yet not a single one has been asked to join the team to review the draft before they were released to the public.

As you read through this parent review of the drafted standards, please keep in mind the research of a well know developmental psychologist, Jean Piaget. Before he studied the minds of children, it was thought that children have the capability to think and reason like adults. However, after his studies on epistemology (the nature of knowledge) and how people come to gradually acquire it, he formed the Piaget theory –which is used by child psychologists around the world. Below is a basic chart explaining the cognitive development of children and what type of demands their minds can accept in their corresponding ages:

<p><b>Preoperational</b></p>		<p><b>2-7 yrs</b></p>	<p>Once children acquire language, they are able to use symbols (such as words or pictures) to represent objects. Their thinking is still very egocentric though -- they assume that everyone else sees things from the same viewpoint as they do.</p> <p>They are able to understand concepts like counting, classifying according to similarity, and past-present-future but generally they are still focused primarily on the present and on the concrete, rather than the abstract.</p>
<p><b>Concrete Operational</b></p>		<p><b>7-11 yrs</b></p>	<p>At this stage, children are able to see things from different points of view and to imagine events that occur outside their own lives. Some organized, logical thought processes are now evident and they are able to:</p> <ul style="list-style-type: none"> <li>• order objects by size, color gradient, etc.</li> <li>• understand that if <math>3 + 4 = 7</math> then <math>7 - 4 = 3</math></li> <li>• understand that a red square can belong to both the 'red' category and the 'square' category</li> <li>• understand that a short wide cup can hold the same amount of liquid as a tall thin cup</li> </ul> <p>However, thinking still tends to be tied to concrete reality</p>
<p><b>Formal Operational</b></p>		<p><b>11+ yrs</b></p>	<p>Around the onset of puberty, children are able to reason in much more abstract ways and to test hypotheses using systematic logic. There is a much greater focus on possibilities and on ideological issues.</p>

As stated above, a large number of the new 2016 Arizona Standards do not meet the criteria for clarity and appropriate cognitive demand. Specific problems in these areas will be pointed out below with the corresponding standard.

Also, parents have voiced concerns on standards that were missing from the 2010 Common Core standards that have been traditionally taught for decades and are necessary to assist children in future higher learning. The 2016 Standards have continued this omission. These missing factors will also be listed in the appropriate grade in the specific standard review below:

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#### Kindergarten Math

Operations and Algebraic Thinking (OA) K.OA.A (1-5)

**Problematic Areas:** Algebraic thinking is developmentally inappropriate at this age. Most children cannot use “a variety of strategies” being that they are in the preoperational phase. They also cannot be expected to use equations to give answers to problems on their own. They need concrete ideas and lots of repetition. K.OA.A.5

is a good example of what 5 and 6 year old children can do. This specific line is also a good example of clarity. The rest of these “standards” are not really standards at all, they are prescribed methods of how to teach. It would be best to simply state what a child needs to know and learn, not HOW the teacher should teach and what method is to be used.

#### Number and Operations in Base Ten (NBT)

K.NBT.A.1

K.NBT.B.2

**Problematic Areas:** Overly prescriptive in telling a teacher how to teach the standard:

- “...by using objects or drawings and record each composition or decomposition with a drawing or equation.”
- “...using a variety of strategies.”

#### Measurement and Data (MD)

K.MD.B.3

**Problematic Areas:** Overly prescriptive in telling a teacher how to teach the standard:

- “...count the number in each category and sort the categories by count.”

#### Geometry (G)

K.G.B.4

**Problematic Area:** Again, overly prescriptive in methodology.

- “...using informal language to describe their similarities and differences.”

#### Standards for Mathematical Practice (MP)

K.MP.1

K.MP.2

K.MP.3

K.MP.4

K.MP.5

K.MP.6

K.MP.7

K.MP.8

**Problematic areas:** clarity & proper developmentally appropriate cognitive demand.

These eight paragraphs have been presented to a large number of parents around Arizona. All have responded that these paragraphs are very difficult to understand and do not fit the criteria for clarity. “Reason abstractly” and “contextualize and decontextualize problems” are not directives to teach in concrete manners. Abstract thinking has no place in kindergarten. Also, the demand for kindergarteners to critique their peers and debate their reasoning is also inappropriate for their developmental stage. Kindergarteners are egocentric at this age and cannot see from another’s perspective. Critiquing peers can lead to lowered self-esteem and loss of creativity. Debating with their peers is not cognitively appropriate at this age. And again, kindergarteners need concrete ideas presented to them and should not be required to reason and explain their answers.

The Standards for Mathematical Practice are also developmentally inappropriate for 1<sup>st</sup> grade, 2<sup>nd</sup> grade, and even 3<sup>rd</sup> grade when students are egocentric and whose minds have not developed past the pre-operational phase.

**Missing:** Patterns and Classification

- Establish concepts of likeness and difference by sorting and classifying objects according to various attributes: size, shape, color, amount, function, etc.
- Define a set by the common property of its elements.
- In a collection of objects that includes a given set and an item that does not belong, indicate which item does not belong.
- Moving from concrete objects to pictorial representations, recognize patterns and predict the extension of a pattern.
- Extend a sequence of ordered concrete objects.

The 2016 Math Standards draft for 1<sup>st</sup> grade, 2<sup>nd</sup> grade, and 3<sup>rd</sup> grade are all very similar to the Kindergarten Standards as far as not containing clear and understandable standards and having cognitive demand that is developmentally inappropriate causing undue stress on young children. The standards for all grades (K-12) are all overly prescriptive in telling a teacher how to teach rather than stating what the end goal in mind is. Again, this is where a standard no longer can be deemed as just a “standard” and instead becomes methodology.