



Developing K - 8 Achievement Level Descriptors

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<http://tiny.cc/K8PLDMT>

Why Standardized Tests?

History of Standardized Testing in the US:

<http://www.nea.org/home/66139.htm>

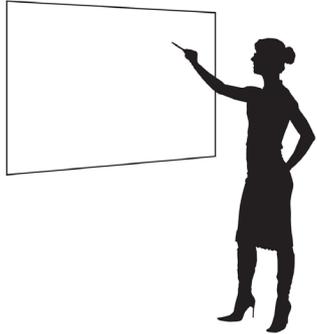


Name

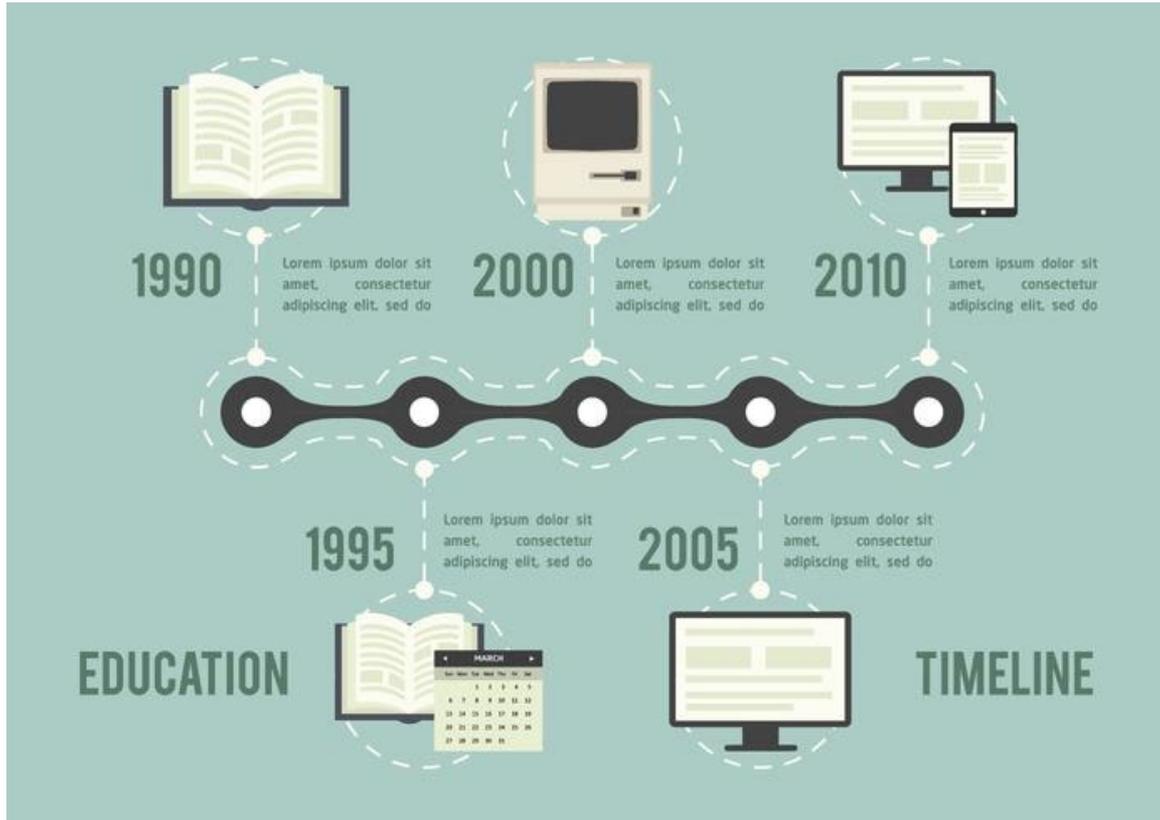
Primary Work Location/Role

Your Answer to the question:
“Why Standardized Tests?”

Why Standardized Tests?



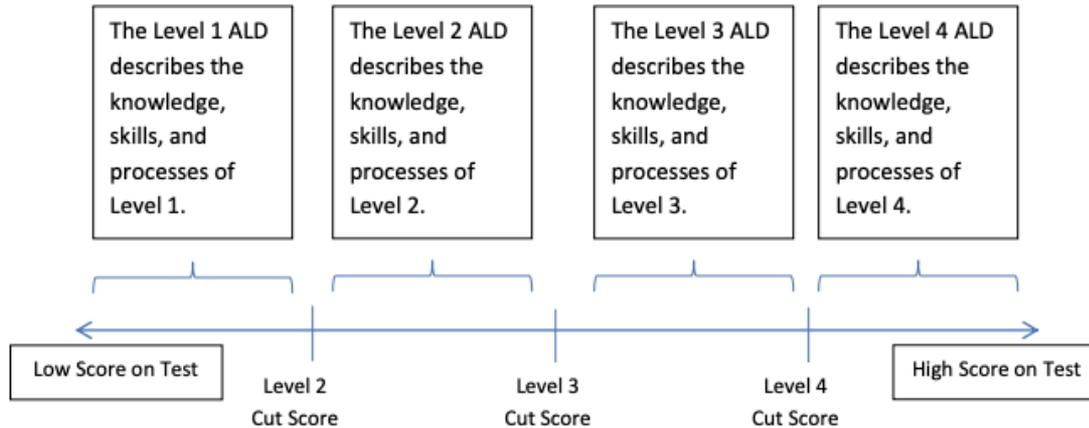
Why Standardized Tests?



What is an Achievement Level Descriptor?

Achievement Level Descriptors are used to explain the knowledge, skills, and processes that students display.

Achievement Level Descriptors are broken down into categories of achievement (i.e. Basic, Proficient, and Advanced).



Reference:

<https://portal.smarterbalanced.org/library/en/mathematics-alds-and-college-content-readiness-policy.pdf>

Figure 1. Relationship between Test Scale and ALDs

Then what do the other levels mean?

Level 1	Level 2	Level 3	Level 4
<p>Student demonstrates minimal understanding of and ability to apply the knowledge and skills associated with the standard.</p>	<p>Student demonstrates partial understanding of and ability to apply the knowledge and skills associated with the standard.</p>	<p>Student demonstrates adequate understanding of and ability to apply the knowledge and skills associated with the standard.</p>	<p>Student demonstrates thorough understanding of and ability to apply the knowledge and skills associated with the standard.</p>

What does this mean for Science?



Montana Science Content Standards

Adopted September 16, 2016
by the

Montana Board of Public Education



3-LS2-1 - NGSS Full Text

Students who demonstrate understanding can:

3-LS2-1. Construct an argument that some animals form groups that help members survive.

The performance expectation above was developed using [the following elements](#) from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices

Engaging in Argument from Evidence

Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).

- Construct an argument with evidence, data, and/or a model.

Disciplinary Core Ideas

LS2.D: Social Interactions and Group Behavior

- Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size (*Note: Moved from K–2*).

Crosscutting Concepts

Cause and Effect

- Cause and effect relationships are routinely identified and used to explain change.

Connections to other DCIs in third grade: N/A

Articulation of DCIs across grade-levels:

1.LS1.B ; MS.LS2.A

Common Core State Standards Connections:

ELA/Literacy –

- RI.3.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS2-1)
RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS2-1)

W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons. (3-LS2-1)

Mathematics –

MP4 Model with mathematics. (3-LS2-1)

3.NBT Number and Operations in Base Ten. (3-LS2-1)

* The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.

The section entitled “Disciplinary Core Ideas” is reproduced verbatim from *A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas*. Integrated and reprinted with permission from the National Academy of Sciences.

3-LS2-1 Evidence Statement

Observable features of the student performance by the end of the grade:	
1	Supported claims
	a Students make a claim to be supported about a phenomenon. In their claim, students include the idea that some animals form groups and that being a member of that group helps each member survive.
2	Identifying scientific evidence
	a Students describe* the given evidence, data, and/or models necessary to support the claim, including:
	i. Identifying types of animals that form or live in groups of varying sizes.
	ii. Multiple examples of animals in groups of various sizes:
	1. Obtaining more food for each individual animal compared to the same type of animal looking for food individually.
	2. Displaying more success in defending themselves than those same animals acting alone.
3. Making faster or better adjustments to harmful changes in their ecosystem than would those same animals acting alone.	
3	Evaluating and critiquing evidence
	a Students evaluate the evidence to determine its relevance, and whether it supports the claim that being a member of a group has a survival advantage.
	b Students describe* whether the given evidence is sufficient to support the claim and whether additional evidence is needed.
4	Reasoning and synthesis
	a Students use reasoning to construct an argument connecting the evidence, data and/or models to the claim. Students describe* the following reasoning in their argument:
	i. The causal evidence that being part of a group can have the effect of animals being more successful in obtaining food, defending themselves, and coping with change supports the claim that being a member of a group helps animals survive.
ii. The causal evidence that an animal losing its group status can have the effect of the animal obtaining less food, not being able to defend itself, and not being able to cope with change supports the claim that being a member of a group helps animals survive.	

Exploring PLDs - What would the levels be?

Level 1	
Level 2	
Level 3	
Level 4	

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1	Supported claims
	a Students make a claim to be supported about a phenomenon. In their claim, students include the idea that some animals form groups and that being a member of that group helps each member survive.
2	Identifying scientific evidence
	a Students describe* the given evidence, data, and/or models necessary to support the claim, including:
	i. Identifying types of animals that form or live in groups of varying sizes.
	ii. Multiple examples of animals in groups of various sizes:
	1. Obtaining more food for each individual animal compared to the same type of animal looking for food individually.
2. Displaying more success in defending themselves than those same animals acting alone.	
3. Making faster or better adjustments to harmful changes in their ecosystem than would those same animals acting alone.	
3	Evaluating and critiquing evidence
	a Students evaluate the evidence to determine its relevance, and whether it supports the claim that being a member of a group has a survival advantage.
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	a Students use reasoning to construct an argument connecting the evidence, data and/or models to the claim. Students describe* the following reasoning in their argument:
	i. The causal evidence that being part of a group can have the effect of animals being more successful in obtaining food, defending themselves, and coping with change supports the claim that being a member of a group helps animals survive.
ii. The causal evidence that an animal losing its group status can have the effect of the animal obtaining less food, not being able to defend itself, and not being able to cope with change supports the claim that being a member of a group helps animals survive.	

Putting this in the context of an item:

Step 1 - Click on the link

Step 2 - Complete the item and score your response

Step 3 - Review the information provided about incorrect responses (you may want to complete the item again with intentionally incorrect responses)

Step 3 - Reviewing the item stimulus and the questions, reflect on the alignment between this item (item set) and the standard we have been exploring

Step 4 - Using the group map draft of PLDs, reflect on whether this item is able to provide us information about the PLD for a student based on their response

[Link to Sample Item](#)

Next Steps

The OPI will be working with stakeholder groups to further explore the alignment between the ACT and our state standards, and to write PLDs for the high school science assessment.

