General Survey on ALL K-12 Standards - System Architecture
- Satisfaction - Purpose of the Crosscutting Concepts/Selection
Information
2- missing some information
Slightly Satisfied
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>- Connections of the PEs to the crosscutting concepts - Middle School Physical Sciences/Selection</td>
<td>- Connections of the PEs to the crosscutting concepts - Middle School Earth and Space Sciences/Selection</td>
<td>- Connections of the PEs to the crosscutting concepts - Middle School Earth and Space Sciences/Selection</td>
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<tr>
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<td>Somewhat agree</td>
<td>Somewhat agree</td>
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<tr>
<td>General Survey on ALL K-12 Standards - System Architecture</td>
<td>General Survey on ALL K-12 Standards - System Architecture</td>
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<tr>
<td>- Connections of the PEs to the crosscutting concepts - Middle School Engineering, Technology and Applications of Science/Selection</td>
<td>- Connections of the PEs to the crosscutting concepts - High School Physical</td>
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<tr>
<td></td>
<td>Neither agree nor disagree</td>
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<tr>
<td>General Survey on ALL K-12 Standards - System Architecture</td>
<td>General Survey on ALL K-12 Standards - System Architecture</td>
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<tr>
<td>Connections of the PEs to the crosscutting concepts - High School Engineering, Technology, and Applications of Science/Selection</td>
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<tr>
<td>Students Would Have a Good Understanding - Disciplinary Core Ideas/Selection</td>
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<td>Somewhat agree</td>
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<td>General Survey on ALL K-12 Standards - System Architecture</td>
<td>General Survey on ALL K-12 Standards - System Architecture</td>
<td>General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 3-5 - Life Sciences/Selection</td>
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<tr>
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</tr>
<tr>
<td>- Students Would Have a Good Understanding - Science and Engineering Practices/Selection</td>
<td>- Students Would Have a Good Understanding - Crosscutting Concepts/Selection</td>
<td>Somewhat Agree</td>
</tr>
</tbody>
</table>
General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 3-5 - Physical Sciences/Selection
Somewhat Agree

General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 3-5 - Earth and Space Sciences/Selection
Somewhat Agree

General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 3-5 - Engineering, Technology, and Applications of Science/Selection
Somewhat Agree
General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 6-8 - Life Sciences/Selection
Definitely Agree

General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 6-8 - Physical Sciences/Selection
Definitely Agree

General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 6-8 - Earth and Space Sciences/Selection
Somewhat Agree
<table>
<thead>
<tr>
<th>General Survey on ALL K-12 Standards - Coherence - Developmental Progression -</th>
<th>General Survey on ALL K-12 Standards - Coherence - Developmental Progression -</th>
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<tbody>
<tr>
<td>Grade 6-8 - Engineering, Technology, and Applications of Science/Selection</td>
<td>Grade 9-12 - Life Sciences/Selection</td>
<td>Grade 9-12 - Physical Sciences/Selection</td>
</tr>
<tr>
<td>Somewhat Agree</td>
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<td>Somewhat Agree</td>
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<tr>
<td>General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 9-12 - Earth and Space Sciences/Selection</td>
<td>General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade 9-12 - Engineering, Technology, and Applications of Science/Selection</td>
<td>General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade College - Life Sciences/Selection</td>
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<tr>
<td>Somewhat Agree</td>
<td>Somewhat Agree</td>
<td>Somewhat Agree</td>
</tr>
</tbody>
</table>
General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade College - Physical Sciences/Selection
Neither Agree nor Disagree

General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade College - Earth and Space Sciences/Selection
Somewhat Agree

General Survey on ALL K-12 Standards - Coherence - Developmental Progression - Grade College - Engineering, Technology, and Applications of Science/Selection
Did not review this discipline
<table>
<thead>
<tr>
<th>General Survey on ALL K-12 Standards - Coherence - Foundation Boxes Described at an appropriate level for the grade - Science and Engineering Practices/Selection Grade or Grade-band appropriate</th>
<th>General Survey on ALL K-12 Standards - Coherence - Foundation Boxes Described at an appropriate level for the grade - Crosscutting Concepts/Selection Grade or Grade-band appropriate</th>
<th>General Survey on ALL K-12 Standards - Coherence - Foundation Boxes Described at an appropriate level for the grade - Connections to the Engineering, Technology and Applications of Science DCI/Selection Grade or Grade-band appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat less than</td>
<td>The same as</td>
<td>Somewhat less than</td>
</tr>
</tbody>
</table>
General Survey on ALL K-12 Standards - Style of writing - Physical Science

3
General Survey on ALL K-12 Standards - Recommendations for Improvement (Open Response) - Comments

The general response of the Kansas group is that we like the direction that things are going, but there is still work to do. In addition to the specific feedback on individual performance expectations that follows, we have feedback on several topics to offer in guiding the revisions for the next draft.

Engineering Integration—
The Kansas Review team generally liked the intent of the engineering integration and still think that this direction is the right way to go, but this first stab at integration was quite rough. There needs to be a more coherent representation of the cyclical iterative process of engineering across the topics. At this point it seems quite haphazard. Part of this could be accomplished by making sure that the practices verbs are more clearly engineering—investigate seems more of a science term, but was used in quite a number of the “engineering” PEs. Another aspect of engineering that seems to have been lost in the integration is iterative prototype development. In ideal solutions students are evaluating designs and they must have the information (criteria) that led to creation of those designs. They need to propose the next iteration and how it will solve the problem. We would like to see more integration of engineering within the life sciences and wonder if the bioengineering of prostheses and artificial joints and/or biotechnology are fertile ground for this connection.

Math Integration—
The Kansas review group was generally positive about the level of integration of mathematics and the resulting narrowing of grain size in PEs. In some of the PEs (as is indicated in the later feedback) it would be helpful to actually have more specificity at least within the clarification statements and/or assessment boundaries that more explicitly makes connections to the common core. For example, rather than just having a generic “analysis of data,” it would be helpful to refer to specific data analysis skills that are called for at that level by the CC.

Elementary topics and storylines—
We liked the changes in elementary topic names to better represent K-12 progressions while retaining elementary-friendly language and the elementary storylines were also helpful. We hope these will be stretched into a K-12 narrative.

Nature of Science—
We like the general pattern of highlighting what is there in terms of Nature of Science rather than adding additional PEs. In some PEs, changes that were made to highlight NOS resulted in clunky PEs. The NOS emphasis...
K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE

Is the performance expectation too prescriptive or too vague?
3- appropriate

K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3- grade level appropriate
<table>
<thead>
<tr>
<th>K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE</th>
<th>Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE.b/Is the performance expectation too prescriptive or too vague?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5- completely</td>
<td>5- completely</td>
<td>3- appropriate</td>
</tr>
</tbody>
</table>
How grade-appropriate is this performance expectation?
3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?
5- completely
<table>
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<th>K.IRE Relationships in</th>
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<tr>
<td><strong>K.IRE.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</strong></td>
<td><strong>K.IRE.c/Is the performance expectation too prescriptive or too vague?</strong></td>
<td><strong>K.IRE.c/How grade-appropriate is this performance expectation?</strong></td>
</tr>
<tr>
<td>5- completely</td>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
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K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE.c

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
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<tr>
<th>K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE.d/Is the performance expectation too prescriptive or too vague?</th>
<th>3- appropriate</th>
<th>K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</th>
<th>3- grade level appropriate</th>
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<tr>
<td>K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE.d/How grade-appropriate is this performance expectation?</td>
<td>3- grade level appropriate</td>
<td></td>
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</table>
K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE

How relevant is this crosscutting concept to the core idea?

5- completely

K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - K.IRE

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
K.IRE Relationships in Ecosystems: Animals, Plants, and Their Environment - Suggest possible changes for those performance expectations that need additional work:
K.IRE.a--It would be wise to have guidance in a clarification statement here about not instilling the misconception that plant mass comes from the soil. K.IRE.a and K.IRE.b- "Make observations" would be much stronger than the passive "Use observations" and indicate that students are actually observing rather than using someone else's observations.

K.SPM Structure and Properties of Matter - Is the performance expectation too prescriptive or too vague?
3- appropriate
K.SPM Structure and Properties of Matter - K.SPM.a/How grade-appropriate is this performance expectation? 3- grade level appropriate

K.SPM Structure and Properties of Matter - K.SPM.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level? 4- mostly

K.SPM Structure and Properties of Matter - K.SPM.a/How relevant is this crosscutting concept to the core idea?

<table>
<thead>
<tr>
<th>K.SPM.a/How well would the performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>5- completely</th>
<th>3- appropriate</th>
<th>3- grade level appropriate</th>
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<tbody>
<tr>
<td>K.SPM.b/Is the performance expectation too prescriptive or too vague?</td>
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<td>K.SPM.b/How grade-appropriate is this performance expectation?</td>
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Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
<table>
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<tbody>
<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
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<tr>
<td>K.SPM.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
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<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>5- completely</td>
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</table>
K.SPM Structure and Properties of Matter - K.SPM Structure and Properties of Matter - K.SPM.d/How grade-appropriate is this performance expectation?

3- grade level appropriate

K.SPM Structure and Properties of Matter - K.SPM Structure and Properties of Matter - K.SPM.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate

K.SPM Structure and Properties of Matter - K.SPM Structure and Properties of Matter - K.SPM.d/How relevant is this crosscutting concept to the core idea?

5- completely
K.SPM Structure and Properties of Matter - K.SPM Structure and Properties of Matter - K.SPM.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  

5- completely

K.SPM Structure and Properties of Matter - K.SPM Structure and Properties of Matter - Suggest possible changes for those performance expectations that need additional work:

K.SPM.b It should be highlighted in the in S and E Practices foundation box that "plan and carry out investigations collaboratively" is about developing collaborative 21st Century skills and not just group work due to equipment needs.

K.SPM.c should be "and" manufactured, not "or"

K.SPM.d-wording is awkward...ask questions about observations? Suggestions--Ask questions aimed at determining if human-made products were made from natural resources.
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

K.WEA Weather - K.WEA Weather - K.WEA
<table>
<thead>
<tr>
<th>K.WEA Weather - K.WEA</th>
<th>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>K.WEA Weather - K.WEA</th>
<th>Is the performance expectation too prescriptive or too vague?</th>
</tr>
</thead>
<tbody>
<tr>
<td>K.WEA Weather - K.WEA.a/How relevant is this crosscutting concept to the core idea?</td>
<td>4- mostly</td>
<td>4- mostly</td>
<td>2- somewhat too vague</td>
</tr>
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</table>
K.WEA Weather - K.WEA Weather - K.WEA.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How grade-appropriate is this performance expectation? 3- grade level appropriate

How relevant is this crosscutting concept to the core idea? 4- mostly
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>3- somewhat</td>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
</tr>
</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
2- slightly
Is the performance expectation too
prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance
expectation?

3- grade level appropriate

Which of the following caused this
performance expectation to be
more appropriate for a higher
grade level?
K.WEA Weather - K.WEA
Weather - K.WEA.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
K.WEA Weather - K.WEA Weather - K.WEA.e/Is the performance expectation too prescriptive or too vague?

5- completely
4- mostly
3- appropriate
K.WEA Weather - K.WEA
Weather - K.WEA.e/Which of
K.WEA Weather - K.WEA
Weather - K.WEA.e/How grade-
appropriate is this performance
expectation?
3- grade level appropriate
K.WEA Weather - K.WEA
Weather - K.WEA.e/Which of
K.WEA Weather - K.WEA
Weather - K.WEA.e/How more appropriate for a higher
grade level?
K.WEA Weather - K.WEA
Weather - K.WEA.e/How relevant is this crosscutting
concept to the core idea?
4- mostly
K.WEA Weather - K.WEA
Weather - K.WEA.e/How well
would meeting this
performance expectation
demonstrate a student's
understanding of the
disciplinary core idea?
4- mostly
K.WEA Weather - Suggest possible changes for those performance expectations that need additional work:
FYI--This is probably due to a later name change of the topic, but the pdf has this as Weather and Climate (WC) and the survey has it as Weather (WEA).
Is the expectation that students can do these independently or with support/as a class? If it is independently, then C and D are probably more appropriate for a higher grade level.
K.WEA.c needs help - what is meant by "students are to develop, use, and share representations of weather conditions.... and identify patterns- not user friendly wording for elementary teachers - needs to show more of what the S and E practices box explains for this in the standard.
K.WEA.d - Understanding that different types of weather occur in different places would require some knowledge of maps and temperatures based on latitudes and proximity to oceans. If we left off the phrase "that occur in different places" it would be more grade appropriate.
K.WEA.e awkward wordin- Suggestion: Ask questions about how scientists study weather and obtain information about the uses of technologies to gather weather data and make predictions about weather events.
<table>
<thead>
<tr>
<th>1.SFIP Structure and Function and Information Processing</th>
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<tbody>
<tr>
<td>1.SFIP.a/Is the performance expectation too prescriptive or too vague?</td>
<td>1.SFIP.a/How grade-appropriate is this performance expectation?</td>
<td>1.SFIP.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
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<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
<td>3- grade level appropriate</td>
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</tbody>
</table>
1. SFIP Structure and Function and Information Processing -

| 1. SFIP Structure and Function and Information Processing - 1.SFIP.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | 5- completely | 1. SFIP.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | 5- completely |
| 1. SFIP Structure and Function and Information Processing - 1.SFIP.b/Is the performance expectation too prescriptive or too vague? | 5- completely | 1. SFIP.b/Is the performance expectation too prescriptive or too vague? | 1- much too vague |
| 1. SFIP Structure and Function and Information Processing |
| 1. SFIP Structure and Function and Information Processing |
| 1. SFIP Structure and Function and Information Processing |
| 1. SFIP.b/How grade-appropriate is this performance expectation? |
| 1. SFIP.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level? |
| 1. SFIP.b/How relevant is this crosscutting concept to the core idea? |

1. Slightly more appropriate for a higher grade level
2. This practice paired with this core idea
3. Somewhat
1. SFIP Structure and Function and Information Processing -

1. SFIP.b/ How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat

1. SFIP.c/ Is the performance expectation too prescriptive or too vague?

3- appropriate

1. SFIP.c/ How grade-appropriate is this performance expectation?

3- grade level appropriate
1. Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2. How relevant is this crosscutting concept to the core idea?

3. How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
1. SFIP Structure and Function and Information Processing -
1. SFIP Structure and Function and Information Processing -
1. SFIP.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

1. SFIP Structure and Function and Information Processing -
1. SFIP Structure and Function and Information Processing -
1. SFIP.d/How grade-appropriate is this performance expectation?
3- grade level appropriate

1. SFIP Structure and Function and Information Processing -
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1. SFIP.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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1. How relevant is this crosscutting concept to the core idea?
5- completely

1. SFIP Structure and Function and Information Processing -
1. SFIP.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely

1. SFIP Structure and Function and Information Processing -
1. SFIP.e/Is the performance expectation too prescriptive or too vague?
3- appropriate
1. SFIP Structure and Function and Information Processing -

1. SFIP.e/How grade-appropriate is this performance expectation?

3- grade level appropriate

1. SFIP Structure and Function and Information Processing -

1. SFIP.e/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

1. SFIP Structure and Function and Information Processing -

1. SFIP.e/How relevant is this crosscutting concept to the core idea?

4- mostly
1. SFIP Structure and Function and Information Processing -
1. SFIP Structure and Function and Information Processing -
1.SFIP.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely
1. SFIP Structure and Function and Information Processing - Suggest possible changes for those performance expectations that need additional work:
SFIP.b is awkward - what does this mean? Is this a typing error - the standard does not make sense as written. b - a clarification statement would be helpful for this PE. Suggestion: Design a solution to a human problem using information gathered about how animals move. [clarification statement still needed] THe questions part is forced here.
1. SFIP.c THe claim is already made. They are either determining the claim--whether or not plants or animals of similar types have similarities and differences, or they are gathering evidence to support the claim that they do
1.W Waves: Light and Sound - 1.W Waves: Light and Sound - 1.W Waves: Light and Sound -
1.W.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

1.W Waves: Light and Sound - 1.W Waves: Light and Sound - 1.W Waves: Light and Sound -
1.W.a/How grade-appropriate is this performance expectation?
3- grade level appropriate

1.W Waves: Light and Sound - 1.W Waves: Light and Sound - 1.W Waves: Light and Sound -
1.W.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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</tr>
<tr>
<td>1.W.a/How relevant is this</td>
<td>1.W Waves: Light and Sound -</td>
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<tr>
<td>crosscutting concept to the</td>
<td>1.W Waves: Light and Sound -</td>
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<tr>
<td>core idea?</td>
<td>1.W Waves: Light and Sound -</td>
</tr>
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<tr>
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<td>3- appropriate</td>
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</table>
1. How grade-appropriate is this performance expectation?
3- grade level appropriate

1.W Waves: Light and Sound -
1.W.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1.W.b/How relevant is this crosscutting concept to the core idea?
4- mostly
1.W Waves: Light and Sound -
1.W.b/How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?
4- mostly

1.W Waves: Light and Sound -
1.W.c/Is the performance expectation too prescriptive or too vague?
2- somewhat too vague

1.W Waves: Light and Sound -
1.W.c/How grade-appropriate is this performance expectation?
3- grade level appropriate
1. Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2. How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat
1.W Waves: Light and Sound -
1.W Waves: Light and Sound -
1.W.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

1.W Waves: Light and Sound -
1.W Waves: Light and Sound -
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1.W Waves: Light and Sound -
1.W.e/Is the performance expectation too prescriptive or too vague?

4- mostly
4- mostly
3- appropriate
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<th>1. How relevant is this crosscutting concept to the core idea?</th>
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<tbody>
<tr>
<td>2- mostly</td>
<td>4- mostly</td>
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**1.W Waves: Light and Sound -**

1.e/How grade-appropriate is this performance expectation?

3- grade level appropriate
1.W Waves: Light and Sound -

1.W.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

1.W Waves: Light and Sound -

1.W.f/Is the performance expectation too prescriptive or too vague?

3- grade level appropriate

4- mostly appropriate

1.W Waves: Light and Sound -
1. Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2. How relevant is this crosscutting concept to the core idea?

3. How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4. mostly
1.W Waves: Light and Sound - Suggest possible changes for those performance expectations that need additional work:

1.W.a-Suggestion: ...light bounces off an object and then travels to your eye.

1.Wb - A clarification statement would be helpful for types of investigations.

1.Wc - The cross-cutting concepts implies student tests, but the practice is about gathering information.

General comment - The science and engineering principles on We, Wc, Wd are a bit confusing. Most of these require the students to record and observe, so should this not be done for all?
1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

1.SS.a/How grade-appropriate is this performance expectation?
3- grade level appropriate

1.SS.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<table>
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<tr>
<th>1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS.a/How relevant is this crosscutting concept to the core idea?</th>
<th>1.SS.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>1.SS.b/Is the performance expectation too prescriptive or too vague?</th>
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<tr>
<td>3- somewhat</td>
<td>5- completely</td>
<td>3- appropriate</td>
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</table>
1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
1.SS.b/How relevant is this crosscutting concept to the core idea?
3- grade level appropriate
5- completely
1.SS Space Systems; Patterns and Cycles - 1.SS Space

1.SS Space Systems; Patterns and Cycles - 1.SS Space
1.SS.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely

1.SS Space Systems; Patterns and Cycles - 1.SS Space
1.SS.c/Is the performance expectation too prescriptive or too vague?
4- somewhat too prescriptive

1.SS Space Systems; Patterns and Cycles - 1.SS Space
1.SS.c/How grade-appropriate is this performance expectation?
3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS.c

How relevant is this crosscutting concept to the core idea?

1.SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - 1.SS.c

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

5- completely
1. SS Space Systems; Patterns and Cycles - 1.SS Space Systems; Patterns and Cycles - Suggest possible changes for those performance expectations that need additional work:

1.SS.a remove "as they have in the past" -- unnecessary and makes the wording awkward

2. ESP Earth's Surface Processes - 2.ESP Earth's Surface Processes - 2.ESP.a/Is the performance expectation too prescriptive or too vague?

3- appropriate
2.ESP Earth's Surface Processes - 2.ESP Earth's Surface Processes -
2.ESP Earth's Surface Processes -
2.ESP a/Which of the following
2.ESP Earth's Surface Processes - caused this performance expectation to be more appropriate for a higher grade level?
2.ESP Earth's Surface Processes - How relevant is this crosscutting concept to the core idea?
2.ESP a/How grade-appropriate is this performance expectation?
3-grade level appropriate 4-mostly
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<th>2.ESP Earth's Surface Processes -</th>
<th>2.ESP.b/How grade-appropriate is this performance expectation?</th>
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<td>2.ESP.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>2.ESP.b/Is the performance expectation too prescriptive or too vague?</td>
<td>3- grade level appropriate</td>
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<tr>
<td>4- mostly</td>
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2.ESP Earth's Surface Processes -
2.ESP Earth's Surface Processes -
2.ESP.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2.ESP Earth's Surface Processes - 2.ESP.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

4- mostly
Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- appropriate
3- grade level appropriate
2.ESP Earth's Surface Processes -
2.ESP.c/How relevant is this crosscutting concept to the core idea?
2.ESP Earth's Surface Processes -
2.ESP.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
2.ESP Earth's Surface Processes -
2.ESP.d/Is the performance expectation too prescriptive or too vague?
4- mostly
4- mostly
4- somewhat too prescriptive
2.ESP Earth's Surface Processes -
2.ESP Earth's Surface Processes -
2.ESP Earth's Surface Processes -
2.ESP.d/Which of the following
2.ESP Earth's Surface Processes -
2.ESP.d/How grade-appropriate
is this performance expectation to be more
appropriate for a higher grade level?
3- grade level appropriate
2.ESP Earth's Surface Processes -
2.ESP Earth's Surface Processes -
2.ESP.d/Which of the following
caused this performance expectation to be more
appropriate for a higher grade level?
3- grade level appropriate
2.ESP Earth's Surface Processes -
2.ESP Earth's Surface Processes -
2.ESP.d/How relevant is this crosscutting concept to the core idea?
3- somewhat
2 ESP Earth's Surface Processes -

2 ESP Earth's Surface Processes -

2 ESP Earth's Surface Processes -

2 ESP.E/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

2 ESP.e/Is the performance expectation too prescriptive or too vague?

2 ESP.e/How grade-appropriate is this performance expectation?

4- mostly appropriate

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

4- mostly
2.ESP Earth's Surface Processes - Suggest possible changes for those performance expectations that need additional work:

2.ESP.a. "home" is watering down expectations. Habitat should a word that used consistently and thus would be appropriate for grade 2.

2.ESP.b. The performance expectation is about landforms so the clarifying statement should be more focused on landscapes (e.g., desert, wetlands, rain forests) rather than water bodies (e.g., oceans, rivers, lakes).

ESP.d wording is awkward and a clarifying statement would be helpful.
| 2.SPM Structures, Properties and Interactions of Matter - 2.SPM.a/Is the performance expectation too prescriptive or too vague? | 3- appropriate | 3- grade level appropriate | 2.SPM Structures, Properties and Interactions of Matter - 2.SPM.a/How grade-appropriate is this performance expectation? | 2.SPM.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level? |
| 2.SPM Structures, Properties and Interactions of Matter - 2.SPM a/How relevant is this crosscutting concept to the core idea? 2- somewhat too vague |
|---|---|---|
| 2.SPM Structures, Properties and Interactions of Matter - 2.SPM a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 5- completely |
| 2.SPM Structures, Properties and Interactions of Matter - 2.SPM b/Is the performance expectation too prescriptive or too vague? 5- completely |
| 2.SPM Structures, Properties and Interactions of Matter - 2.SPM a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 2- somewhat too vague |
2.SPM Structures, Properties and Interactions of Matter -
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2.SPM.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
2.SPM.b/How relevant is this crosscutting concept to the core idea?
3- grade level appropriate
4- mostly
2.SPM Structures, Properties and Interactions of Matter -

2.SPM Structures, Properties and Interactions of Matter -

2.SPM.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat

2.SPM Structures, Properties and Interactions of Matter -

2.SPM c/Is the performance expectation too prescriptive or too vague?

3- appropriate

2.SPM Structures, Properties and Interactions of Matter -

2.SPM c/How grade-appropriate is this performance expectation?

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

5- completely
2.SPM Structures, Properties and Interactions of Matter - 2.SPM Structures, Properties and Interactions of Matter - 2.SPM.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

2.SPM Structures, Properties and Interactions of Matter - 2.SPM Structures, Properties and Interactions of Matter - 2.SPM.d/How grade-appropriate is this performance expectation?
3- grade level appropriate

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2.SPM Structures, Properties and Interactions of Matter -
2.SPM.d/How relevant is this crosscutting concept to the core idea?
4- mostly

2.SPM Structures, Properties and Interactions of Matter -
2.SPM.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely
2.SPM Structures, Properties and Interactions of Matter - Suggest possible changes for those performance expectations that need additional work:

2.SPM.b - The standard is too broad - build an object - additional information or clarification of types of objects would be useful. The crosscutting concept for this standard mentions environmental impact, but the PE does not. It's not entirely clear why this PE is in this topic--maybe connecting the comparison to the materials they are built from would make this connection.

2.SPM.c--Suggestion-- "...some changes to objects..."
2.IRE Interdependent Relationships in Ecosystems -

2.IRE.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

2.IRE Interdependent Relationships in Ecosystems -

2.IRE.a/How grade-appropriate is this performance expectation?
3- grade level appropriate

2.IRE Interdependent Relationships in Ecosystems -

2.IRE.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<td>4- mostly</td>
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2.IRE Interdependent Relationships in Ecosystems -

2.IRE Interdependent Relationships in Ecosystems -

2.IRE.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- slightly more appropriate for a higher grade level

2.IRE Interdependent Relationships in Ecosystems -

2.IRE Interdependent Relationships in Ecosystems -

2.IRE.b/How grade-appropriate is this performance expectation?

1- the level of this core idea

5- completely

2.IRE.b/How relevant is this crosscutting concept to the core idea?
2.IRE Interdependent Relationships in Ecosystems -

2.IRE Interdependent Relationships in Ecosystems -

2.IRE.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

2.IRE.c/Is the performance expectation too prescriptive or too vague?

5- completely

3- appropriate

3- grade level appropriate
2.IRE Interdependent
Relationships in Ecosystems -
2.IRE Interdependent
Relationships in Ecosystems -
2.IRE.c/Which of the following
causes this performance
expectation to be more
appropriate for a higher grade
level?

2.IRE Interdependent
Relationships in Ecosystems -
2.IRE Interdependent
Relationships in Ecosystems -
2.IRE.c/How relevant is this
crosscutting concept to the
core idea?
5- completely

2.IRE Interdependent
Relationships in Ecosystems -
2.IRE Interdependent
Relationships in Ecosystems -
2.IRE.c/How well would
meeting this performance
expectation demonstrate a
student's understanding of the
disciplinary core idea?
5- completely
2.IRE Interdependent Relationships in Ecosystems -
2.IRE Interdependent Relationships in Ecosystems -
2.IRE Interdependent Relationships in Ecosystems -
2.IRE.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

2.IRE Interdependent Relationships in Ecosystems -
2.IRE Interdependent Relationships in Ecosystems -
2.IRE Interdependent Relationships in Ecosystems -
2.IRE.d/How grade-appropriate is this performance expectation?
3- grade level appropriate

2.IRE Interdependent Relationships in Ecosystems -
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2.IRE.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3- grade level appropriate
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</table>
2.IRE Interdependent Relationships in Ecosystems - Suggest possible changes for those performance expectations that need additional work:

2.IRE.b This is something I have done with 3rd grade science classes which have learned about plants' needs and seed dispersal in 2nd grade. I don't feel that my 2nd graders would be developmentally ready to do a thorough job with it and so would not learn as much. Evidence supports a claim--the argument links the claim to the evidence.

2.IRE.d "are extinct" rather than "that once lived"
2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls - 2.FM.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

2.FM.a/How grade-appropriate is this performance expectation?
3- grade level appropriate

2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls - 2.FM.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls -
2.FM.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
2.FM.b/Is the performance expectation too prescriptive or too vague?
3- appropriate
2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls - 2.FM.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level? 2.FM.b/How relevant is this crosscutting concept to the core idea?

3- grade level appropriate

4- mostly
2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls -
2.FM.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls -
2.FM.c/Is the performance expectation too prescriptive or too vague? 2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls -
2.FM.c/How grade-appropriate is this performance expectation?
2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls -
2.FM.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls -
2.FM.c/How relevant is this crosscutting concept to the core idea?

5- completely

2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls -
2.FM.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
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| 2- somewhat too vague | 3- grade level appropriate | }
2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls - 2.FM.d/How relevant is this crosscutting concept to the core idea? 4- mostly

2.FM Forces and Motion: Pushes and Pulls - 2.FM Forces and Motion: Pushes and Pulls - 2.FM.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 4- mostly
2.FM Forces and Motion: Pushes and Pulls - Suggest possible changes for those performance expectations that need additional work:

2.FM.a refers to only one or two pushes or pulls in the clarification statement. This restriction doesn't seem to be necessary.

2.FM.b--how fast they are going before or after the collision or both--please clarify.

2.FM.c clarification statement--on observations of.

2.FM.d - A clarification statement would be useful here.
<table>
<thead>
<tr>
<th>3.WC Weather and Climate - 3.WC Weather and Climate - 3.WC.a/Is the performance expectation too prescriptive or too vague?</th>
<th>3.WC Weather and Climate - 3.WC Weather and Climate - 3.WC.a/How grade-appropriate is this performance expectation?</th>
<th>3.WC Weather and Climate - 3.WC.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</th>
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<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
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</table>
3.WC Weather and Climate -
3.WC Weather and Climate -
3.WC Weather and Climate -
3.WC.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

3.WC Weather and Climate -
3.WC Weather and Climate -
3.WC Weather and Climate -
3.WC.b/Is the performance expectation too prescriptive or too vague?
3- appropriate
3.WC Weather and Climate -
3.WC Weather and Climate -
3.WC.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
2- this practice paired with this core idea
4- mostly

3.WC Weather and Climate -
3.WC.b/How relevant is this crosscutting concept to the core idea?
4- slightly more appropriate for a higher grade level
3.WC Weather and Climate -
3.WC Weather and Climate -
3.WC.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3.0- mostly
3.3- appropriate
3.3- grade level appropriate
3.WC Weather and Climate -

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

- somewhat

3.WC Weather and Climate -

How relevant is this crosscutting concept to the core idea?

3.WC Weather and Climate -

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3.WC Weather and Climate -

3- somewhat
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<td>4- mostly</td>
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3.WC Weather and Climate - Suggest possible changes for those performance expectations that need additional work:

For relevance of D, the last two bullets from the influences of engineering cross cutting concept are most appropriate. It's also important that we show the relationship of the standards such as 3.WC.d and 3.FM.b are very important to one another. Clarifying statements are really important here.
3.MEOE.Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

3.MEOE.Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.a/How grade-appropriate is this performance expectation?
3- grade level appropriate

3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.a/How relevant is this crosscutting concept to the core idea? 5- completely 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.b/Is the performance expectation too prescriptive or too vague? 3- appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate
3.MEOE Matter and Energy in Organisms and Ecosystems:
Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
2- slightly
3- appropriate
3- grade level appropriate
3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.c/Is the performance expectation too prescriptive or too vague?
3- grade level appropriate
3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

5- completely

3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.c/How relevant is this crosscutting concept to the core idea?

5- completely

3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.d/Is the performance expectation too prescriptive or too vague? Not Applicable - Not Sure

3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.d/How grade-appropriate is this performance expectation? 3- grade level appropriate

3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?
5- completely

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely

Is the performance expectation too prescriptive or too vague?
3- appropriate
3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.e/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3. grade level appropriate

3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - 3.MEOE.e/How relevant is this crosscutting concept to the core idea?
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3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms

- 3.MEOE Matter and Energy in Organisms and Ecosystems: Environmental Impacts on Organisms - Suggest possible changes for those performance expectations that need additional work:

- 3.MEOE.b-a fits better with this practice--this is more about obtaining information than about analyzing data

- 3.MEOE.c--an argument links the claim to the evidence; the claim is given in the PE; Suggestion--Obtain information to construct an argument that supports the claim that changes in a habitat may be beneficial or harmful to different organisms in the same habitat.
3.SFIP Structure, Function and Information Processing - 3.SFIP Structure, Function and Information Processing - 3.SFIP.a/Is the performance expectation too prescriptive or too vague?
3. appropriate
3.SFIP Structure, Function and Information Processing - 3.SFIP Structure, Function and Information Processing - 3.SFIP.a/How grade-appropriate is this performance expectation?
3- grade level appropriate
3.SFIP Structure, Function and Information Processing - 3.SFIP.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3- appropriate
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<td>3.SFIP.a/How relevant is this crosscutting concept to the core idea?</td>
<td>3.SFIP.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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<tr>
<td>5- completely</td>
<td>5- completely</td>
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3.SFIP.b/Is the performance expectation too prescriptive or too vague? | 3- appropriate |
How grade-appropriate is this performance expectation?
3- grade level appropriate
3.SFIP Structure, Function and Information Processing - 3.SFIP
3.SFIP.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- completely

3.SFIP Structure, Function and Information Processing - 3.SFIP
3.SFIP.c/Is the performance expectation too prescriptive or too vague?
3- appropriate

3.SFIP Structure, Function and Information Processing - 3.SFIP
3.SFIP.c/How grade-appropriate is this performance expectation?
3- grade level appropriate
3.SFIP Structure, Function and Information Processing - 3.SFIP Structure, Function and Information Processing - 3.SFIP.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3.SFIP Structure, Function and Information Processing - 3.SFIP Structure, Function and Information Processing - 3.SFIP.c/How relevant is this crosscutting concept to the core idea?

5- completely

3.SFIP Structure, Function and Information Processing - 3.SFIP Structure, Function and Information Processing - 3.SFIP.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
3.SFIP Structure, Function and Information Processing - 3.SFIP Structure, Function and Information Processing - 3.SFIP.d/Is the performance expectation too prescriptive or too vague?
3- appropriate
3- grade level appropriate
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<td>3.SFIP.d/How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?</td>
<td>5- completely</td>
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</table>
3.SFIP Structure, Function and Information Processing - Suggest possible changes for those performance expectations that need additional work:

3.SFIP.b--though the team was generally positive here, some thought that testing and comparing designs would require several students or groups of students to design the same solution, then determine controlled testing and comparing the results, this seems too much to expect of 3rd graders; it would be helpful to provide potential criteria for evaluation

3.SFIP.c - teachers may need clarification on this more than just learned and innate behaviors, they will need examples
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.a
3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions -
3.FM.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.b/Is the performance expectation too prescriptive or too vague?
3- appropriate
3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions -
3.FM.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3.FM.b/How relevant is this crosscutting concept to the core idea?
3- grade level appropriate
4- mostly
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<th>3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.c/How grade-appropriate is this performance expectation?</th>
<th>3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.c/Is the performance expectation too prescriptive or too vague?</th>
<th>3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
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<tr>
<td>3- mostly</td>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
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3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions -
3.FM.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
4- mostly

3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions -
3.FM.c/How relevant is this crosscutting concept to the core idea?
4- mostly
3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.d/Is the performance expectation too prescriptive or too vague?

3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.d/How grade-appropriate is this performance expectation?

3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.d/Which of the following caused this performance expectation to be more grade-appropriate than for a higher grade level?

1- much too vague
3- grade level appropriate
| 3.FM Forces and Motion: Interactions - 3.FM Forces and Motion: Interactions - 3.FM.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? |
|---|---|
| 4- mostly | 4- mostly |
3.FM Forces and Motion: Interactions - Suggest possible changes for those performance expectations that need additional work:

3.FM.a-wording is awkward and seems manipulated to work a practice in...what is really called for here is "Identify repeated patterns in the motion of objects and use these patterns to create a simple model that can predict future motion" or if the practice has to be first, "Create a conceptual model based on a consistent pattern observed in a moving object that can be used to predict future motion of the object."

3FMd - very vague. A clarification statement is needed. Does the teacher provide the problem? Who decides the problem?
4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

4.IVT a/Is the performance expectation too prescriptive or too vague?

3- appropriate

4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

4.IVT a/How grade-appropriate is this performance expectation?

3- grade level appropriate

4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

4.IVT a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

4.IVT. How relevant is this crosscutting concept to the core idea?

4.IVT.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4.IVT.b/Is the performance expectation too prescriptive or too vague?

5- completely

3- appropriate
4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

4.IVT.b/How grade-appropriate is this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate

5- completely
4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

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<tr>
<th>4.IVT.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
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<td>5- completely</td>
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<th>4.IVT.c/Is the performance expectation too prescriptive or too vague?</th>
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4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

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4.IVT.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -
4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -
4.IVT.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
5- completely
4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

4.IVT.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

3- grade level appropriate

4.IVT Inheritance and Variation of Traits: Life Cycles and Traits -

4.IVT.d/How grade-appropriate is this performance expectation?
4.IVT.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
4.IVT Inheritance and Variation of Traits: Life Cycles and Traits - Suggest possible changes for those performance expectations that need additional work:

IVTb - "influenced by the environment" will require clarification. It needs more than just the assessment boundary.

4.IVT.a--Between the PE and the clarification statement (including in the foundation box below, there is a confusion between life cycles and the cycle of life. Death, a part of the cycle of life of an individual, is not part of a life cycle (which is a feature of the species not just the individual). Death is part of a life history which, though typical for the species, is specific to each organism. The whole concept of a cycle is that it is ongoing and thus can't continue if there is death as part of it. Do we want kids to know about life cycles, life histories, or both. We just shouldn't include death as part of a life cycle. leave death out of life cycles
<table>
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<td>Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
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<tr>
<td>How grade-appropriate is this performance expectation?</td>
<td>3- grade level appropriate</td>
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<tr>
<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td>3- grade level appropriate</td>
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<td>4.ESP Earth’s Surface Processes</td>
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<td>4.ESP.a/How well would</td>
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<td>meeting this performance</td>
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<td>4.ESP.b/Is the performance</td>
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<td>5- completely</td>
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<td>core idea?</td>
<td>student's understanding of the</td>
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<tr>
<td>5- completely</td>
<td>expectation expectation</td>
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<tr>
<td>5- completely</td>
<td>too vague?</td>
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4.ESP Earth’s Surface Processes -

4.ESP Earth’s Surface Processes -

4.ESP Earth’s Surface Processes - 4.ESP.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate

3- grade level appropriate

4- mostly

4.ESP Earth’s Surface Processes - 4.ESP.b/How relevant is this crosscutting concept to the core idea?
4.ESP Earth’s Surface Processes -

4.ESP.c/Is the performance expectation too prescriptive or too vague?

4.ESP.c/How grade-appropriate is this performance expectation?

4- mostly appropriate
3- grade level appropriate
4.ESP Earth’s Surface Processes - 4.ESP Earth’s Surface Processes -
4.ESP.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
4.ESP Earth’s Surface Processes - 4.ESP.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely 5- completely
4.ESP Earth’s Surface Processes -
4.ESP Earth’s Surface Processes -
4.ESP.d/Is the performance expectation too prescriptive or too vague?
4.ESP Earth’s Surface Processes - 4.ESP Earth’s Surface Processes - caused this performance
4.ESP.d/How grade-appropriate is this performance expectation to be more appropriate for a higher grade level?
1- the level of this core idea
2- somewhat too vague
3- slightly more appropriate for a higher grade level
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<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>4- mostly</td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
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</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

- 4- slightly more appropriate for a higher grade level
- 2- this practice paired with this core idea
- 4- mostly

How relevant is this crosscutting concept to the core idea?

- 4- slightly more appropriate for a higher grade level
- 2- this practice paired with this core idea
- 4- mostly
4.ESP Earth’s Surface Processes -
4.ESP Earth's Surface Processes -
4.ESP.e/How well would
meeting this performance
expectation demonstrate a
student's understanding of the
disciplinary core idea?
4- mostly
4.ESP Earth’s Surface Processes - Suggest possible changes for those performance expectations that need additional work:

4.ESP.a - not plausible to test all of those
4.ESP.b - this will be hard for many urban students other than looking at man-made structures and the effects, who are the peers this is referencing?--lots of overlap between a and b--don't think a is needed with b there
4.ESP.c needs a clarifying statement--are we really wanting them to develop the explanation or link the evidence to the explanation?
4.ESP.e - Needs to be rewritten for clarity of expectations.
4.E Energy - 4.E Energy - 4.E.a/Is the performance expectation too prescriptive or too vague?

4.E Energy - 4.E Energy - 4.E.a/How grade-appropriate is this performance expectation?

3- appropriate  3- grade level appropriate

4.E Energy - 4.E Energy - 4.E.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<td>4.E Energy - 4.E Energy - 4.E.b/Is the performance expectation too prescriptive or too vague?</td>
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<tr>
<td>4- mostly</td>
<td>4- mostly</td>
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4.E Energy - 4.E Energy -
4.E.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3- grade level appropriate

4.E Energy - 4.E Energy -
4.E.b/How relevant is this crosscutting concept to the core idea?
4- mostly
4.E.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat 4.E Energy - 4.E Energy - 4.E.c/Is the performance expectation too prescriptive or too vague?
2- somewhat too vague 4.E Energy - 4.E Energy - 4.E.c/How grade-appropriate is this performance expectation?
4- slightly more appropriate for a higher grade level
4.E Energy - 4.E Energy -
4.E.c/Which of the following
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appropriate for a higher grade
level?
2- this practice paired with this
core idea

4.E Energy - 4.E Energy -
4.E.c/How relevant is this
crosscutting concept to the
core idea?

4- mostly

4.E Energy - 4.E Energy -
4.E.c/How well would meeting
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understanding of the
disciplinary core idea?

4- mostly
4.E Energy - 4.E Energy - 4.E.d/Is the performance expectation too prescriptive or too vague?

3- appropriate

4.E Energy - 4.E Energy - 4.E.d/How grade-appropriate is this performance expectation?

3- grade level appropriate

4.E Energy - 4.E Energy - 4.E.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<th>4- Mostly</th>
<th>4- Mostly</th>
<th>2- Somewhat Too Vague</th>
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<td>How relevant is this crosscutting concept to the core idea?</td>
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4.E.e/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate

4.E.e/How relevant is this crosscutting concept to the core idea?

4- mostly
4.E.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

4.E Energy - 4.E Energy - 4.E.f/Is the performance expectation too prescriptive or too vague?
3- appropriate

4.E Energy - 4.E Energy -
4.f/How grade-appropriate is this performance expectation?
4- slightly more appropriate for a higher grade level
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2- this practice paired with this core idea

How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?

4- mostly
Is the performance expectation too prescriptive or too vague?
How grade-appropriate is this performance expectation?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?
4.E Energy - 4.E Energy -
4.E.g/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
4- mostly
4.E Energy - Suggest possible changes for those performance expectations that need additional work:

4Eb - Why does this need to be magnets? Could it be something else? This seems very directive.

4Ec - Electric currents are introduced here. At what point are the students learning the basics of electricity for this to be a possibility?

4Ee - Need clarification statement.

4E.f - "in the solution" is redundant and makes the wording more awkward
--e and f are redundant--cut one and/or combine--just add "within given design constraints" to e and drop f

4E.g - assessment boundary doesn't seem to match PE
4.W.a/Is the performance expectation too prescriptive or too vague?
2- somewhat too vague
4.W.a/How grade-appropriate is this performance expectation?
4- slightly more appropriate for a higher grade level
4.W.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
2- this practice paired with this core idea
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4.W Waves - 4.W Waves -
4.W.b/Which of the following
caused this performance
expectation to be more
appropriate for a higher grade
level?
2- slightly more appropriate for
a lower grade level

4.W Waves - 4.W Waves -
4.W.b/How relevant is this
crosscutting concept to the
core idea?
4- mostly
4.W Waves - 4.W Waves -
4.W.b/How well would meeting
this performance expectation
4.W Waves - 4.W Waves -
demonstrate a student's
understanding of the
disciplinary core idea?
4- mostly
4.W Waves - 4.W Waves -
4.W.c/Is the performance
expectation too prescriptive or
too vague?
4- mostly
3- appropriate
3- grade level appropriate
4.W Waves - 4.W Waves -
4.W.c/Which of the following expectation to be more appropriate for a higher grade level?

4- mostly

4.W Waves - 4.W Waves -
4.W.c/How relevant is this crosscutting concept to the core idea?

4- mostly

4.W Waves - 4.W Waves -
4.W.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
4.W Waves - 4.W Waves -
4.W.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

3- grade level appropriate

4.W Waves - 4.W Waves -
4.W.d/How grade-appropriate is this performance expectation?

3- grade level appropriate

4.W Waves - 4.W Waves -
4.W.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- appropriate
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<td>4- mostly</td>
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4.W Waves - 4.W Waves -

4.W.e/Which of the following

4.W Waves - 4.W Waves -

4.W.e/How grade-appropriate

4.W Waves - 4.W Waves -

is this performance

expectation to be more

appropriate for a higher grade

level?

3- grade level appropriate

4- mostly
4.W Waves - 4.W Waves -
4.W.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
4.W Waves - 4.W Waves - Suggest possible changes for those performance expectations that need additional work:
4Wa - The vocabulary here requires quantitative understanding, yet 4Wb indicates qualitative understanding. A clarifying statement and/or example might be helpful in 4.W.a.
4.W.d replacing "solution to the problem of" with "a device to be used for" would make the intent more clear.
4We - This should probably specify physical model to distinguish this from other types of models if that is what is intended. use "how" rather than "that"
5.SPM Structures, Properties and Interactions of Matter - 5.SPM Structures, Properties and Interactions of Matter - 5.SPM Structures, Properties and Interactions of Matter - 5.SPM.a/Is the performance expectation too prescriptive or too vague? 2- somewhat too vague 5.SPM a/How grade-appropriate is this performance expectation? 2- slightly more appropriate for a lower grade level 5.SPM Structures, Properties and Interactions of Matter - 5.SPM Structures, Properties and Interactions of Matter - 5.SPM.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level? 2- somewhat too vague
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<td>3- somewhat</td>
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<td>5.SPM Structures, Properties and Interactions of Matter - 5.SPM.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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5.SPM Structures, Properties and Interactions of Matter -
5.SPM.b/How grade-appropriate is this performance expectation?
3- grade level appropriate

5.SPM Structures, Properties and Interactions of Matter -
5.SPM.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

5.SPM Structures, Properties and Interactions of Matter -
5.SPM.b/How relevant is this crosscutting concept to the core idea?
4- mostly
5.SPM Structures, Properties and Interactions of Matter -
5.SPM.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

5.SPM Structures, Properties and Interactions of Matter -
5.SPM.c/Is the performance expectation too prescriptive or too vague?
3- appropriate

5.SPM Structures, Properties and Interactions of Matter -
5.SPM.c/How grade-appropriate is this performance expectation?
3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
| 5.SPM Structures, Properties and Interactions of Matter - 5.SPM Structures, Properties and Interactions of Matter - 5.SPM.d/Is the performance expectation too prescriptive or too vague? 3- appropriate | 5.SPM Structures, Properties and Interactions of Matter - 5.SPM Structures, Properties and Interactions of Matter - 5.SPM.d/How grade-appropriate is this performance expectation? 3- grade level appropriate | 5.SPM Structures, Properties and Interactions of Matter - 5.SPM Structures, Properties and Interactions of Matter - 5.SPM.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level? 3- appropriate |
5.SPM Structures, Properties and Interactions of Matter -
5.SPM Structures, Properties and Interactions of Matter - 5.SPM.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
5.SPM Structures, Properties and Interactions of Matter - Suggest possible changes for those performance expectations that need additional work:
The mathematics of comparison would be enhanced by including density within DCI as a comparison.
SSPMa - The standard is vague - see the comment on the DCI for this standard - a bit more information about types of properties to be measured and measurement outcomes would be helpful. There is no clear connection to time due to the vagueness, also need to consider density.
5.SPM.b--awkward wording--suggestion: Plan and carry out investigations that mix two or more substances and determine whether or not a new substances with new properties was formed.

WARNING!--5.SPM.c-An assessment boundary is necessary here--although we are not yet distinguishing between mass and weight, to use weight here is actually incorrect if a gas is produced that is lighter than air--this will have mass, but not weight due to the upward bouyant force;m the statement in the PE is ONLY true if the gas is heavier than air--either change PE to mass, or simply limit to reactions that do not produce gas lighter than air. In order to not add in the weight/mass difference here an assesment boundary is needed and the clarification statement should be changed to reflect why this assessment boundary is necessary.
5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE.a/Is the performance expectation too prescriptive or too vague? 3- appropriate 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE.a/How grade-appropriate is this performance expectation? 3- grade level appropriate 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
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<tbody>
<tr>
<td>5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE.a/How relevant is this crosscutting concept to the core idea?</td>
<td>5- completely</td>
</tr>
<tr>
<td>5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE.b/Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
</tr>
<tr>
<td>5- completely</td>
<td>5- completely</td>
</tr>
<tr>
<td>5. MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>5- completely</td>
</tr>
<tr>
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<td>3- appropriate</td>
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<td>5- completely</td>
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5. MEOE Matter and Energy in Organisms and Ecosystems -

5. MEOE Matter and Energy in Organisms and Ecosystems - 5. MEOE Matter and Energy in Organisms and Ecosystems -

5. MEOE.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely  3- appropriate  3- grade level appropriate
5.MEOE.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

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<thead>
<tr>
<th>5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE.c</th>
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5- completely
5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEO.d/Is the performance expectation too prescriptive or too vague? 3- appropriate

5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEO.d/How grade-appropriate is this performance expectation? 3- grade level appropriate

5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEOE Matter and Energy in Organisms and Ecosystems - 5.MEO.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
5.MEOE Matter and Energy in Organisms and Ecosystems -
5.MEOE Matter and Energy in Organisms and Ecosystems -
5.MEOE.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely
5- completely
5.MEOE Matter and Energy in Organisms and Ecosystems - Suggest possible changes for those performance expectations that need additional work:
5.MEOE.b--Clarification statement--"Models should demonstrate that matter from one organism can..."
5.MEOE.c--Use models to demonstrate (display?) the energy that animals expend to move and generate body warmth can be traced back to the sun as its source.
5.MEOE.d--"in ecosystems" is unnecessary
5.ESP Earth's Surface Processes - 5.ESP Earth's Surface Processes -
5.ESP.a/Is the performance expectation too prescriptive or too vague?
5.ESP Earth's Surface Processes - 5.ESP Earth's Surface Processes - caused this performance
5.ESP.a/How grade-appropriate is this performance expectation to be more appropriate for a higher grade level?
5.ESP.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2- somewhat too vague
4- slightly more appropriate for a higher grade level
1- the level of this core idea
| 5.ESP Earth's Surface Processes - 5.ESP Earth's Surface Processes - |
| --- | --- | --- |
| 5.ESP Earth's Surface Processes - 5.ESP.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? |
| 5.ESP.a/How relevant is this crosscutting concept to the core idea? |
| 5.ESP.b/Is the performance expectation too prescriptive or too vague? |
| 4- mostly | 4- mostly | 3- appropriate |
5.ESP: Earth's Surface Processes -

5.ESP b/How grade-appropriate is this performance expectation?

5.ESP: Earth's Surface Processes -

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

5.ESP: Earth's Surface Processes -

How relevant is this crosscutting concept to the core idea?

3-grade level appropriate

4-mostly
5.ESP Earth's Surface Processes -
5.ESP Earth's Surface Processes -
5.ESP.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely

5.ESP Earth's Surface Processes -
5.ESP Earth's Surface Processes -
5.ESP.c/Is the performance expectation too prescriptive or too vague?
3- appropriate

5.ESP Earth's Surface Processes -
5.ESP Earth's Surface Processes -
5.ESP.c/How grade-appropriate is this performance expectation?
3- grade level appropriate
5.ESP Earth's Surface Processes -
5.ESP Earth's Surface Processes -
5.ESP.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
5.ESP Earth's Surface Processes -
5.ESP.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5.ESP Earth's Surface Processes -
5.ESP.c/How relevant is this crosscutting concept to the core idea?
5- completely
Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<tr>
<td>5.ESP Earth's Surface Processes -</td>
<td>5.ESP.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>5.ESP.e/Is the performance expectation too prescriptive or too vague?</td>
</tr>
<tr>
<td>4- mostly</td>
<td>4- mostly</td>
<td>4- somewhat too prescriptive</td>
</tr>
</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

- Slightly more appropriate for a higher grade level
- This practice paired with this core idea
- Somewhat
5.ESP Earth's Surface Processes -
5.ESP Earth's Surface Processes -
5.ESP.e/How well would
meeting this performance
expectation demonstrate a
student's understanding of the
disciplinary core idea?
3- somewhat
5.ESP Earth's Surface Processes - Suggest possible changes for those performance expectations that need additional work:

ESP a still needs more clarification other than just listing the earth's systems; Suggestion: Identify the limitations of models that describe the interactions among Earth's systems. (to identify the limitations, they will have to understand the interactions)

ESPe is too high for elementary students as written unless the designs could be "science fiction" type and disregard cost, material, etc limitations

It is obvious that life, physical, earth/space science are addressed at each grade level. It is not readily clear how one set of PEs in a topic connect with another set of PEs in a different topic. Tools for discerning these connections would be helpful.


5.SS Space Systems: Stars and the Solar System - 5.SS.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
5.SS Space Systems: Stars and the Solar System - 5.SS Space Systems: Stars and the Solar System - 5.SS.a/How relevant is this crosscutting concept to the core idea? 3- somewhat


Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- the level of this core idea
2- the crosscutting concept
3- the complexity of the core idea
4- slightly more appropriate for a higher grade level
5.SS Space Systems: Stars and the Solar System - 5.SS Space
5.SS Space Systems: Stars and the Solar System - 5.SS.b/How well would
meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat

5.SS Space Systems: Stars and the Solar System - 5.SS Space
5.SS Space Systems: Stars and the Solar System - 5.SS.c/Is the performance expectation too prescriptive or too vague?
3- appropriate

5.SS Space Systems: Stars and the Solar System - 5.SS Space
5.SS Space Systems: Stars and the Solar System - 5.SS.c/How grade-appropriate is this performance expectation?
3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
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<tbody>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
</tr>
<tr>
<td>How grade-appropriate is this performance expectation?</td>
<td>3- grade level appropriate</td>
</tr>
<tr>
<td>Which of the following caused this performance expectation to be more</td>
<td>5.SS Space Systems: Stars and</td>
</tr>
<tr>
<td>appropriate for a higher grade level?</td>
<td>the Solar System - 5.SS Space</td>
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<td>Systems: Stars and the Solar</td>
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<td>System - 5.SS.d/</td>
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<tr>
<td></td>
<td>Which of the</td>
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<td>following caused this</td>
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<td>performance expectation to be</td>
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<td></td>
<td>more appropriate for a higher</td>
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<tr>
<td></td>
<td>grade level?</td>
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</tbody>
</table>
5.SS Space Systems: Stars and the Solar System - 5.SS.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

5.SS Space Systems: Stars and the Solar System - 5.SS Space Systems: Stars and the Solar System - 5.SS.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat

5.SS Space Systems: Stars and the Solar System - 5.SS.e/Is the performance expectation too prescriptive or too vague?
3- appropriate
5.SS Space Systems: Stars and the Solar System - 5.SS e/How grade-appropriate is this performance expectation?
3- grade level appropriate

5.SS Space Systems: Stars and the Solar System - 5.SS.e/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

5.SS Space Systems: Stars and the Solar System - 5.SS Space Systems: Stars and the Solar System - 5.SS.e/How relevant is this crosscutting concept to the core idea?
4- mostly
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
- 4 - mostly appropriate
- 3 - appropriate

Is the performance expectation too prescriptive or too vague?
- 4 - mostly appropriate
- 3 - grade level appropriate

How grade-appropriate is this performance expectation?
- 4 - mostly appropriate
- 3 - grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

3- somewhat
5.SS Space Systems: Stars and the Solar System - Suggest possible changes for those performance expectations that need additional work:

This seems to be a quantum leap from the level that is addressed at first grade. Also, elementary needs to continue to push some opinion points for upper elementary. CCSS focuses on opinion at elementary as a precursor to argumentation. 5.SS.b addresses argumentation, but in this case the content of the argument is too difficult for grade 5.

5.SS.e is much more appropriate for PS4.b than 5.SS.a.

Wish there had been more at the lower grade levels leading up to this

Much of this standard only requires stating the facts - that is these could be looked up using Google. This one should be reworked to provide a performance that utilizes the knowledge rather than the knowledge being the sole piece of action. The PEs taken as a whole, while reflecting the knowledge that we would like, it is not as clear that these will lead to understanding.

many of the earth/space topics flow well thru the elementary, building on each year. Space is the exception. It starts in 1st grade, nothing else is mentioned till 5th grade, then there is a big leap from this content to the MS content."
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
2- slightly more appropriate for a lower grade level

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>Is the performance expectation too prescriptive or too vague?</td>
</tr>
<tr>
<td>4- mostly</td>
<td>4- mostly</td>
<td>3- appropriate</td>
</tr>
</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2- this practice paired with this core idea

4- mostly
MS.SPM Structure and Properties of Matter - MS.SPM.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 4- mostly

MS.SPM Structure and Properties of Matter - MS.SPM.c/Is the performance expectation too prescriptive or too vague? 3- appropriate

MS.SPM Structure and Properties of Matter - MS.SPM.c/How grade-appropriate is this performance expectation? 3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
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</tr>
</thead>
<tbody>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>How grade-appropriate is this performance expectation?</td>
<td>3- appropriate</td>
</tr>
<tr>
<td>3- grade level appropriate</td>
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<td>3- grade level appropriate</td>
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<tr>
<td>Question</td>
<td>Rating</td>
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<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>4 - mostly</td>
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<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>4 - mostly</td>
<td></td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>3 - appropriate</td>
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</tbody>
</table>
How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?
MS.SPM Structure and Properties of Matter - MS.SPM
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
MS.SPM Structure and Properties of Matter - MS.SPM Structure and Properties of Matter - Suggest possible changes for those performance expectations that need additional work:
MS.SPM.a--with varying complexity is not needed in the PE since it is in the the clarifying statement; crystals should be identified as "extended structures in the clarification statement"
MS.SPM.b--comes across as cookie cutter lab; suggestion: Plan and carry out an investigation that will evaluate the claim that one pure substance can be distinguished from another pure substance based on their characteristic properties; would leave off methane, propane, hydrogen, and oxygen as they would be difficult to actually test (and not just look up information about).
MS.SPM.c--unnecessarily complicated; suggestion: Manipulate simulations of the speed and position of atoms in solids, liquids and gases to determine the effect of adding thermal energy to the system.
<table>
<thead>
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<th>MS.CR Chemical Reactions -</th>
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<tbody>
<tr>
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<tr>
<td>MS.CR.a/Is the performance</td>
<td>MS.CR.a/How grade-appropriate is this performance</td>
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<td>expectation too prescriptive or</td>
<td>expectation?</td>
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<td>too vague?</td>
<td>2- slightly more appropriate for</td>
</tr>
<tr>
<td>2- somewhat too vague</td>
<td>a lower grade level</td>
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<td>MS.CR.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
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<tr>
<td>MS.CR Chemical Reactions -</td>
<td>MS.CR.a/How well would</td>
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<td>MS.CR Chemical Reactions -</td>
<td>meeting this performance</td>
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<td>MS.CR.a/How relevant is this</td>
<td>expectation demonstrate a</td>
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<td>crosscutting concept to the</td>
<td>student's understanding of the</td>
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<td>core idea?</td>
<td>disciplinary core idea?</td>
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<td>4- mostly</td>
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<td>3- appropriate</td>
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How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3- grade level appropriate

4- mostly
MS.CR Chemical Reactions - MS.CR Chemical Reactions - MS.CR.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 4- mostly

MS.CR Chemical Reactions - MS.CR Chemical Reactions - MS.CR.c/Is the performance expectation too prescriptive or too vague? 2- somewhat too vague

MS.CR Chemical Reactions - MS.CR Chemical Reactions - MS.CR.c/How grade-appropriate is this performance expectation? 4- slightly more appropriate for a higher grade level
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2. This practice paired with this core idea

How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?

4. Mostly

How relevant is this crosscutting concept to the core idea?

4. Mostly
Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- appropriate

3- grade level appropriate
How relevant is this crosscutting concept to the core idea?
4- mostly

MS.CR Chemical Reactions -
MS.CR Chemical Reactions -
MS.CR.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
MS.CR Chemical Reactions - Suggest possible changes for those performance expectations that need additional work:

MSCRa - Balancing equations seems to be a natural place to start during this stage. Simple reactions can be studied. It also introduces/reinforces the concepts of conservation. Maybe: Using atomic masses is beyond the scope of this performance expectation. Knowledge of chemical symbols and balancing more than the most basic equations are beyond the scope of this performance expectation.

MSCRc - word choice of “investigate” does not direct the use of an engineer design cycle. Suggestion for change: Design a system which uses various fuel sources to deliver a specified amount of energy (in quantitative terms).

MSCRd - the PE is vague making it difficult to determine what the appropriateness of the PE. The PE should be rewritten or the clarification statement should be expanded. There is an overall tendency in the MS area of physical science to focus on standard and common demonstrations. It appears at times that the authors had a demonstration or investigation that is considered critical and a PE is designed to be sure and do the demonstration. This is problematic. The PE should force us out of our box and not be a rehash of what we currently do... There is a need to expand the clarifications.
<table>
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<tr>
<th>Performance Expectation</th>
<th>Grade Level Appropriateness</th>
<th>Appropriateness for Higher Grade Level</th>
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<td>3- grade level appropriate</td>
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<tr>
<td>How grade-appropriate is this performance expectation?</td>
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<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
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MS.FM Forces and Motion - MS.FM Forces and Motion - MS.FM.a
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<td>MS.FM.b/Is the performance expectation too prescriptive or too vague?</td>
<td>MS.FM Forces and Motion -</td>
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<tr>
<td>MS.FM.a/How relevant is this crosscutting concept to the core idea?</td>
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<td>2- somewhat too vague</td>
</tr>
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<td>MS.FM.b/Is the performance expectation too prescriptive or too vague?</td>
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<tr>
<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td>MS.FM Forces and Motion - MS.FM.b/How grade-appropriate is this performance expectation? 4- slightly more appropriate for a higher grade level</td>
<td></td>
</tr>
<tr>
<td>The level of this core idea</td>
<td>MS.FM Forces and Motion - MS.FM.b/How relevant is this crosscutting concept to the core idea? 1- the level of this core idea</td>
<td></td>
</tr>
<tr>
<td>Somewhat</td>
<td>MS.FM Forces and Motion - MS.FM.b/How relevant is this crosscutting concept to the core idea? 3- somewhat</td>
<td></td>
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<tr>
<td>MS.FM.b</td>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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<td>MS.FM.c</td>
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<td>3- appropriate</td>
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| MS.FM Forces and Motion - | 3- grade level appropriate |
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
Is the performance expectation too prescriptive or too vague?
2- somewhat too vague
4- slightly more appropriate for a higher grade level

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
2- this practice paired with this core idea
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- How grade-appropriate is this performance expectation?

- 3-grade level appropriate

- 4-mostly
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4 - mostly

How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?

3 - somewhat
MS.FM Forces and Motion - Suggest possible changes for those performance expectations that need additional work:

FM.a. Seems to start in the middle of the design cycle.

What is the idea of Engineering Design? This should be a process, not a thing (which is, at first glance, what these are)

Investigate vs. design – engineers don’t investigate (or do they?) vs. scientists do more investigation

FMb - again, the vague nature of this makes it difficult to determine appropriateness; the design process would better be directed by including the need for students to propose the next iteration of the design based upon data related to a specific criterion, Suggestion for change: Analyze data from different design solutions to propose an improvement to the design given a specific criteria related to the acceleration of an object.

FMc - Here is a place that does ask for quantitative information. Good - but not in alignment with the qualitative asked for in other sections of MS. The other areas need to ramp up to the quantitative analysis - ie mathematical thinking such as here.

FM.d.-PE specifies manufacturing process but the Clarification Statement only mentions a lump of clay which is more like a science experiment. Suggestions for change: Provide some clarification statements that direct the audience to a manufacturing process, such as constructing a support for building or object that has to support a large amount of weight, which shape (circular, rectangle, triangle, etc) provides the greatest support with the least amount of building material?"

FMf - There is a need for further clarification. At this stage it appears as if the tried and true demonstrations run the show rather than the PE defining the content."
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<td>or too vague?</td>
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3- somewhat

How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?

4- mostly
MS.IF Interactions and Forces - Suggest possible changes for those performance expectations that need additional work:

"IFa - Need for further examples in the clarification. Again - is it the demonstrations run the PE or the PE determining the demonstrations. Core idea of ETS1.C is not met by this PE because students are not making a modification of an iteration of a design and then testing that new prototype. Choice of the word “investigate” does not adequately guide teachers to the engineering goals of this PE. As written, the PE is awkward and not helpful for teachers because it is trying to stay vague to not limit curriculum choices but as written does not provide enough guidance. Suggestion for change: Design an improvement for a device which uses an electromagnet. Clarification Statement: Suggestions for design improvements should be based upon systematically gathered data.

IFb - Why limit the universal law of gravitation. At least as a mathematical thinking tool it gives meaning to the suggested clarifications"

Add the concept of collaboration with the planning and carrying out. While collaboration may be understood in the terminology, some feel as though it should be stated specifically.
Is the performance expectation too prescriptive or too vague?
4- somewhat too prescriptive
3- grade level appropriate

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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3- appropriate

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How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
MS. Energy - Suggest possible changes for those performance expectations that need additional work:

E.a.- Core idea of ETS1.A. is not met by this PE because students are not directly involved in evaluating a design option based upon criteria or constraints. Students need to be involved with comparing specific design choices to specified constraints in order to evaluate whether that design choice will be acceptable or if they need to suggest a different design in order to satisfy a given constraint. Suggestion for change: Design a traffic pattern and set of speed limits for a given setting which takes into account the kinetic energy of various vehicles in the traffic pattern.

E.f.- This PE is well written as an engineering design PE. However, the Clarification Statements do not guide teachers to viable design items that can be constructed and evaluated by middle school students. Suggestions for change: Clarification Statement – Solutions can include use of lubricant on an axle for a wheel, etc. Everyday machines or systems such as wheels on toy cars, insulating cups, heat sinks on computers, etc... Solutions should focus on the use of various materials based upon the properties of those materials. There need to be further examples to support the the use of advances in technology. As now done, this is not addressed well or clear how one would do this.

"Some felt the math was not as explicit as it could be. For example, math isn't stated that it is used to analyze data. Teachers are required to access the math standards to teach the science standards. Perhaps it would be easier to specifically state the math standard to make it more user friendly (or hyperlink). Math terminology "linear relationships, analyzing data, simple functions" is acceptable as long as it's understood a 6th grader might have a different level of understanding than an 8th grader. Some want the engineering design process stated in a clear manner. Also, the concept of reverse engineering design (taking things apart) was suggested as a step before the engineering step. Needs to be cross referenced with the common core standards. Doesn't speak to the common core standards for math, what it speaks to is the mathematical practices and that is not giving teachers specific clues about what should be taught. Terminology needs to be more specific and consistent across the subjects.
| MS.WER Waves and Electromagnetic Radiation - MS.WER.a/Is the performance expectation too prescriptive or too vague? | 3- appropriate |
| MS.WER Waves and Electromagnetic Radiation - MS.WER.a/How grade-appropriate is this performance expectation? | 3- grade level appropriate |
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4- mostly | 3- appropriate |
| **MS.WER.c/Is the performance expectation too prescriptive or too vague?** | **MS.WER Waves and Electromagnetic Radiation -**  
4- slightly more appropriate for a higher grade level | |
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2- this practice paired with this core idea

How relevant is this crosscutting concept to the core idea?

3- somewhat

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat
Suggest possible changes for those performance expectations that need additional work:
Overall - needs to be more quantitative.

The concept of "fields" should be introduced here. For example, amateur radio information to reinforce the notion of fields. Computers access and send information through radio waves. Magnetic and electric fields should be made stronger.

WER.c.- This PE does address the DCI of PS4.C but does NOT address adequately the ETS1.C. of communicating the optimization of a design. Also, this PE as written is awkward in its connection to Nature of Science. Suggestion for Change: Select the best design of a human occupied structure that maximizes or minimizes the amount of wireless communications which can occur inside the structure. Clarification Statement: Students should communicate specific features of their chosen design and why those features made the design more successful than the other options.
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

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How relevant is this crosscutting concept to the core idea?

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How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

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How relevant is this crosscutting concept to the core idea?

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MS.SFIP Structure, Function and Information Processing - MS.SFIP Structure, Function and Information Processing - MS.SFIP Structure, Function and Information Processing - MS.SFIP.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

MS.SFIP Structure, Function and Information Processing - MS.SFIP Structure, Function and Information Processing - MS.SFIP.d/How grade-appropriate is this performance expectation?
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MS.SFIP Structure, Function and Information Processing - MS.SFIP.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
MS SFIP Structure, Function and Information Processing -

MS SFIP Structure, Function and Information Processing -

MS SFIP.d/How relevant is this crosscutting concept to the core idea?

4- mostly

2- somewhat too vague

MS SFIP Structure, Function and Information Processing -

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MS SFIP.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

MS SFIP Structure, Function and Information Processing -

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MS SFIP.e/Is the performance expectation too prescriptive or too vague?

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1- the level of this core idea
4- mostly

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
Suggest possible changes for those performance expectations that need additional work:

**MS.SFIP.a** "Discuss" is superfluous...only evaluate is needed

**MS.SFIP.b** not sure how you design an experiment to demonstrate that organisms survive by "having an environment in which to live"  Suggestion for change: Plan and carry out investigations to generate evidence about what organisms need to survive. [Clarification statement: Experiments should be designed so that things such as obtaining food and water, disposing of waste, or characteristics of the required environment for survival are determined.]

**MS.SFIP.c**: This is too vague to guide assessment--what should students be using to construct an explanation--this sounds very much like students should have all of the functions of organelles memorized and be able to explain what they are on an assessment. Either re-wording, a clarification statement, or an assessment boundary is needed.

**MS.SFIP.d**: "about how" rather than "for how" also needed here is the clarification that the students are communicating not just how the technology has revealed information, but what information was revealed

**MS.SFIP.f**: this seems to beyond the knowledge needed for all high school students--sure it would be great if everyone knew this, but the steps necessary to get to this content will require a significant chunk of class time.
| MS.GDRO Growth, Development and Reproduction of Organisms - MS.GDRO.a | Is the performance expectation too prescriptive or too vague? |
| MS.GDRO Growth, Development and Reproduction of Organisms - MS.GDRO.a | 2- somewhat too vague |
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MS.GDRO Growth, Development and Reproduction of Organisms - MS.GDRO

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Development and Reproduction
of Organisms - MS.GDRO
Growth, Development and
Reproduction of Organisms -
MS.LS-GDRO.h/How well would
meeting this performance
expectation demonstrate a
student's understanding of the
disciplinary core idea?
3- somewhat
Suggest possible changes for those performance expectations that need additional work:

MS.GDRO.a- this seems more like an argument than an explanation. Students are asked to make a claim as to whether or not a similarity between parent and offspring is due to environmental or genetic causes (or both) and then support this claim with evidence.

MS.GDRO.b--don't need generate and collect--generate is sufficient

MS.GDRO.c--it seems like saying that asexual reproduction results in identical individuals is an unnecessary oversimplification that doesn't acknowledge what we now know about epigenetics; should be sufficient to compare them in more relative terms--significantly more or less similar

MS.GDRO.d--specialized plant structures is too vague--a clarification and perhaps assessment boundary statement are needed

MS.GDRO.e--supporting a claim, not an argument--the argument is the connection between the evidence and the claim

MS.GDRO.--value neutral "changed" would be better than "improved"

MS.GDRO.h - needs clarification.
Is the performance expectation too prescriptive or too vague?  3- appropriate

How grade-appropriate is this performance expectation?  3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
MS.MEOE Matter and Energy in Organisms and Ecosystems -

MS.MEOE Matter and Energy in Organisms and Ecosystems -
MS.MEOE.a/How relevant is this crosscutting concept to the core idea?
4- mostly

MS.MEOE Matter and Energy in Organisms and Ecosystems -
MS.MEOE.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

MS.MEOE Matter and Energy in Organisms and Ecosystems -
MS.MEOE.b/Is the performance expectation too prescriptive or too vague?
2- somewhat too vague
How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?
MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEO.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEO.c/How relevant is this crosscutting concept to the core idea?

4- mostly

MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEO.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- appropriate
3- grade level appropriate
4- mostly 4- mostly 4- somewhat too prescriptive
4- slightly more appropriate for a higher grade level

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- the level of this core idea

How relevant is this crosscutting concept to the core idea?

4- mostly
MS.MEOE Matter and Energy in Organisms and Ecosystems -

MS.MEOE Matter and Energy in Organisms and Ecosystems -

MS.MEOE.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat  

MS.MEOE Matter and Energy in Organisms and Ecosystems -

MS.MEOE Matter and Energy in Organisms and Ecosystems -

MS.MEOE.f/Is the performance expectation too prescriptive or too vague?

2- somewhat too vague  

MS.MEOE Matter and Energy in Organisms and Ecosystems -

MS.MEOE Matter and Energy in Organisms and Ecosystems -

MS.MEOE.f/How grade-appropriate is this performance expectation?

3- grade level appropriate
MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE.f/Which of the following caused this performance expectation to be more appropriate for a higher grade level? 4- mostly

MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE.f/How relevant is this crosscutting concept to the core idea? 3- somewhat

MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE Matter and Energy in Organisms and Ecosystems - MS.MEOE.f/How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea? 3- somewhat
Is the performance expectation too prescriptive or too vague? 
2- somewhat too vague

How grade-appropriate is this performance expectation?
3- grade level appropriate
How relevant is this crosscutting concept to the core idea?  2- slightly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  3- somewhat
MS.MEOE Matter and Energy in Organisms and Ecosystems - Suggest possible changes for those performance expectations that need additional work:

When discussing models there was a question about clarification of what type of modeling is being implied. It's not necessarily that a particular type of model needs to be specified, but different levels of cognitive depth are connected to different types of models and their use--clarifications need to be carefully worded whenever "create models" or "use models" to indicate that multiple models are possible, but should only go to this depth.

MS.MEOE.a-really two separate explanations-- add "both" after "in"

MEOE.b.-The PE does not use language that suggest an engineering focus. Choice of the word “investigate” does not adequately guide teachers to the engineering goal of this PE. As written there are no engineering DCI’s specified for any of the MEOE PE’s. This PE may not be the best for attempting to integrate engineering practices. Suggestion for change: Design a composting system (for a home or school) which incorporates characteristics from a given ecosystem’s method for cycling matter. Clarification Statement: Design plan must include discussions about the flow of energy and the conservation of matter in both the composting system and the ecosystem from which the composting system was designed.

MEOE.f.- As written there are no engineering DCI’s specified for any of the MEOE PE’s. In addition, the choice of the words, “Use evidence to support arguments…” does not direct teachers to an engineering focus for this PE. Suggestion for change: Use a multi-variable simulation to design a resource management plan to sustain or drive to extinction a member of an ecosystem in a specified amount “cycles” of that ecosystem.

MEOE.g.- As written there are no engineering DCI’s specified for any of the MEOE PE’s. This PE’s language does not direct teachers to an engineering practice. Suggestion for change: Design a monitoring system for an ecosystem which addresses the type of data as well as the number of sensors required to adequately gather sufficient evidence to understand how to stabilize a target population within that ecosystem. Clarification statement: Designs should include a rationale for why specific data is essential for the specific monitoring challenge as well as a rationale for the number of data samples needed for the scale of the system under investigation."
<table>
<thead>
<tr>
<th>MS.IRE Interdependent Relationships in Ecosystems - MS.IRE.a</th>
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<tbody>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>How grade-appropriate is this performance expectation?</td>
<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
</tr>
<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
<td>3- appropriate</td>
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<tr>
<td>4- mostly</td>
<td>3- somewhat</td>
<td>3- appropriate</td>
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3- grade level appropriate

4- mostly
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|---|---|---|
| MS.IRE.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | MS.IRE.c/Is the performance expectation too prescriptive or too vague? | MS.IRE.c/How grade-appropriate is this performance expectation? |
| 4- mostly | 3- appropriate | 3- grade level appropriate |
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3- somewhat

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat
MS.IRE Interdependent Relationships in Ecosystems - MS.IRE Interdependent Relationships in Ecosystems - MS.IRE Interdependent Relationships in Ecosystems - MS.IRE.d/Is the performance expectation too prescriptive or too vague? 2- somewhat too vague

MS.IRE Interdependent Relationships in Ecosystems - MS.IRE Interdependent Relationships in Ecosystems - MS.IRE.d/How grade-appropriate is this performance expectation? 3- grade level appropriate

MS.IRE Interdependent Relationships in Ecosystems - MS.IRE.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<td>3- somewhat</td>
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<td>MS.IRE Interdependent Relationships in Ecosystems -</td>
<td>MS.IRE.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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How relevant is this crosscutting concept to the core idea?

3- grade level appropriate

4- mostly
MS.IRE Interdependent
Relationships in Ecosystems -
MS.IRE.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat

MS.IRE Interdependent
Relationships in Ecosystems -
MS.IRE.f/Is the performance expectation too prescriptive or too vague?
3- appropriate

MS.IRE Interdependent
Relationships in Ecosystems -
MS.IRE.f/How grade-appropriate is this performance expectation?
3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat
MS.IRE Interdependent Relationships in Ecosystems - MS.IRE Interdependent Relationships in Ecosystems - MS.IRE.g/Is the performance expectation too prescriptive or too vague? 3- appropriate

MS.IRE Interdependent Relationships in Ecosystems - MS.IRE Interdependent Relationships in Ecosystems - MS.IRE.g/How grade-appropriate is this performance expectation? 3- grade level appropriate

MS.IRE Interdependent Relationships in Ecosystems - MS.IRE Interdependent Relationships in Ecosystems - MS.IRE.g/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

3- somewhat
Suggest possible changes for those performance expectations that need additional work:

When discussing models there was a question about clarification of what type of modeling is being implied i.e. 3-D, paper pencil, etc. Some individuals indicated a need to make the integration seamless and more coherent.

There was a recommendation to Add SEP "pose model" in rather than "use model" for this PE.

MS.IRE.c-Ask questions that could be used to refine... the questions don't refine the model, researching the answers to the questions refines the model

MS.IRE.d. - As written this PE does not focus on an engineering perspective. This PE does address the DCI LS4.D. on biodiversity but does NOT address ETS1.B. on developoing possible solutions.

MS.IRE.d and IRE.e. can be combined into one PE. Suggestion for change: Use a multi-variable simulation to design an animal management plan to sustain a healthy ecosystem as defined by specific criteria and constraints. Clarification Statement: criteria should include both social and economic considerations.

MS.IRE.f-Ask questions with the intent of clarifying (...asking the questions doesn't clarify)

MS.IRE.g Our preference is that argumentation in NGSS focus on claims that can be supported by empirical data. The claim here—that science can't answer all aspects of a question is one that can be supported, but not primarily by empirical data. This PE sounds more like arguing than argumentation in a scientific context. Rather than engaging in argument about the limitations of science, we would rather focus on a core idea in this topic and have people develop an argument that utilizes empirical data AND social or economic arguments. Suggestion: Distinguish between scientific, economic, and social arguments while engaging in argument from evidence about the stability of a given natural environment. As it is, this PE is a forced connection to NOS.

In general, the phrase "Engage in arguments from evidence..." is problematic in that it invokes arguing. It should be either "Engage in Argumentation (or maybe argument--singular)" or engage WITH arguments—arguments is a noun in this discussion, not a verb.
<table>
<thead>
<tr>
<th>Question</th>
<th>3- appropriate</th>
<th>3- grade level appropriate</th>
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<tr>
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How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

Is the performance expectation too prescriptive or too vague?

3- appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate

How relevant is this crosscutting concept to the core idea?

4- mostly
MS.NSA Natural Selection and Adaptations - MS.NSANatural Selection and Adaptations - MS.NSA.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 4- mostly

MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA.c/Is the performance expectation too prescriptive or too vague? 3- appropriate

MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA.c/How grade-appropriate is this performance expectation? 3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<td>3-</td>
</tr>
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<td></td>
</tr>
<tr>
<td>3- somewhat</td>
<td>3-</td>
</tr>
<tr>
<td>MS.NSA.e/Is the performance expectation too prescriptive or too vague?</td>
<td>3-</td>
</tr>
<tr>
<td>3- appropriate</td>
<td>3-</td>
</tr>
</tbody>
</table>
MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA.e

How grade-appropriate is this performance expectation?
3- grade level appropriate

MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA.e

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA.e

How relevant is this crosscutting concept to the core idea?
3- somewhat
MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations -

MS.NSA.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  
3- somewhat

MS.NSA.f/Is the performance expectation too prescriptive or too vague?  
3- appropriate

MS.NSA.f/How grade-appropriate is this performance expectation?  
3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA.f/How relevant is this crosscutting concept to the core idea?
3- somewhat

MS.NSA Natural Selection and Adaptations - MS.NSA Natural Selection and Adaptations - MS.NSA.f/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
3- grade level appropriate

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<th>MS.NSA Natural Selection and Adaptations - MS.NSA.h</th>
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3- somewhat
MS.NSA Natural Selection and Adaptations - Suggest possible changes for those performance expectations that need additional work:

MS.NSA.a-Suggestion for change--Analyze data from the fossil record to determine the major patterns in the history of life on earth. [Clarification statement: The intent is not to memorize a timeline, but to analyze a set of data and recognize patterns such as cycles of mass extinctions, or simple before complex.]

MS.NSA.c- a re-write here could highlight the NOS by including an evaluation of explanations for scientific validity.

MS.NSA.e-Sounds a lot like...repeat after me (in your own words)

MS.NSA.f-if there is just one model intended, it should be stated--if there really are multiple types of models that work here, leaving it more vague is ok

MS.NSA.g Seems this PE would fit better under Natural Selection and Evolution, since adaptation is secondary to reproductive isolation in this example.

a and h are redundant.
Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- appropriate

3- grade level appropriate
<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
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<tbody>
<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>5- completely</td>
</tr>
<tr>
<td>MS.SS Space Systems - MS.SS Space Systems - MS.SS.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>4- mostly</td>
</tr>
<tr>
<td>MS.SS Space Systems - MS.SS Space Systems - MS.SS.b/Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
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</table>
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3-grade level appropriate

5- completely
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<tr>
<th>Question</th>
<th>Grade</th>
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<tbody>
<tr>
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<td>5-</td>
<td>completely</td>
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<tr>
<td></td>
<td>3-</td>
<td>appropriate</td>
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<tr>
<td></td>
<td>3-</td>
<td>grade level appropriate</td>
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<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
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<td>grade-appropriate is this performance expectation?</td>
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</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level? A) How relevant is this crosscutting concept to the core idea? B) How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 

5- completely 
1- not at all
Is the performance expectation too prescriptive or too vague? 3- appropriate

How grade-appropriate is this performance expectation? 3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<tr>
<td>2- slightly</td>
<td>1- much too vague</td>
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<tr>
<td>Question</td>
<td>Response</td>
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<td>-------------------------------------------------------------------------</td>
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<tr>
<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td>2 - slightly</td>
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<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>2 - slightly</td>
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MS.SS Space Systems - MS.SS
Space Systems - MS.SS.e/How
well would meeting this
performance expectation
demonstrate a student's
understanding of the
disciplinary core idea?
2- slightly
MS.SS Space Systems - Suggest possible changes for those performance expectations that need additional work:
SS.c - nothing in this PE that addresses galaxies--doesn't match with foundation box (maybe c and d are switched in the foundation box?)
SS.d - PE Goes way beyond just the gravitational force that holds the SS together. That's ok, but its way deeper than the DCI
SS.e - PE is only understandable because of the clarification statement. Looks like they are trying to say "start to introduce BBT" with an attempt to spur teachers to reach for a connection to engineering. That's fine, but the PE is not well done. The NOS is a good fit here, but wording needs to be changed--either it is looking at the limitations of science in asking and answering questions to natural systems in the context of the origin of the universe, or it is trying to make sure students know about specific pieces of evidence
Is the performance expectation too prescriptive or too vague?

1- much too vague

Not Applicable - Not Sure

Which of the following caused this performance expectation to be more grade-appropriate for a higher grade level?
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<td>MS.HE History of Earth - MS.HE</td>
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<tr>
<td>History of Earth - MS.HE.b/Which of the following</td>
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How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat

3- appropriate

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
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<td>History of Earth - MS.HE.d/How grade-appropriate is this performance expectation?</td>
</tr>
</tbody>
</table>

4- slightly more appropriate for a higher grade level

1- the level of this core idea

MS.HE History of Earth - MS.HE History of Earth - MS.HE.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<table>
<thead>
<tr>
<th>Question</th>
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<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>3- somewhat</td>
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<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>5- completely</td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
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<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td></td>
</tr>
<tr>
<td>3-grade level appropriate</td>
<td>4-mostly</td>
</tr>
</tbody>
</table>
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
2- slightly
MS.HE History of Earth - Suggest possible changes for those performance expectations that need additional work:

MS.HE.a unnecessarily complex sentence structure; it is not at all clear what students would be expected to know/be able to do. It is not clear what is added here that goes beyond what is expected in c, d, and e.

Clarification statements are very helpful to make them grade appropriate.
<table>
<thead>
<tr>
<th>MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes - MS.EIP.a/Is the performance expectation too prescriptive or too vague?</th>
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**MS.EIP Earth's Interior Processes**

<table>
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<th>Question</th>
<th>Answer Options</th>
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<tr>
<td>MS.EIP.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>4- mostly 5- much too prescriptive 3- grade level appropriate</td>
</tr>
<tr>
<td>MS.EIP.c/Is the performance expectation too prescriptive or too vague?</td>
<td>5- much too prescriptive 3- grade level appropriate</td>
</tr>
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<td>MS.EIP.c/How grade-appropriate is this performance expectation?</td>
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MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes -
MS.EIP.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes -
MS.EIP.c/How relevant is this crosscutting concept to the core idea?
4- mostly

MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes -
MS.EIP.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
<table>
<thead>
<tr>
<th>MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes - MS.EIP.d/Is the performance expectation too prescriptive or too vague?</th>
<th>MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes - MS.EIP.d/How grade-appropriate is this performance expectation?</th>
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</thead>
<tbody>
<tr>
<td>3- appropriate</td>
<td>4- slightly more appropriate for a higher grade level</td>
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<tr>
<td></td>
<td>MS.EIP.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
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<tr>
<td></td>
<td>1- the level of this core idea</td>
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</tbody>
</table>
MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes - MS.EIP.d/How relevant is this crosscutting concept to the core idea?
1- not at all

MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes - MS.EIP.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely

MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes - MS.EIP.e/Is the performance expectation too prescriptive or too vague?
3- appropriate
<table>
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<td>2- this practice paired with this core idea</td>
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<td>4- mostly</td>
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</table>
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

2- somewhat too vague

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- somewhat
MS.EIP Earth's Interior Processes - MS.EIP Earth's Interior Processes - Suggest possible changes for those performance expectations that need additional work:
"plate" needs a modifier as these PEs need to stand independent of the topic--continental plates? plates of the earth's crust? tectonic plates? something

EIP.c the clarification statement is very specific.
EIP.d the PE seems to include a level of chemistry that MS students may not have had yet; clarification statement only really addresses physical processes
a and f are closely related--if both are needed, it would be helpful to either combine, or list together and more carefully distinguish between them
MS.ESP Earth's Surface Processes - MS.ESP Earth's Surface Processes - MS.ESP.a/Is the performance expectation too prescriptive or too vague?

1- too prescriptive
2- too vague
3- appropriate
4- slightly inappropriate

MS.ESP Earth's Surface Processes - MS.ESP Earth's Surface Processes - MS.ESP.a/How grade-appropriate is this performance expectation?

1- too low
2- slightly low
3- appropriate
4- slightly high
5- too high

MS.ESP Earth's Surface Processes - MS.ESP Earth's Surface Processes - MS.ESP.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- this practice paired with this core idea
2- this practice paired with another core idea
3- this practice paired with this other practice
4- this practice paired with both core ideas
<table>
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<tr>
<th>MS.ESP Earth's Surface Processes - MS.ESP Earth's Surface Processes - MS.ESP.a/How relevant is this crosscutting concept to the core idea?</th>
<th>MS.ESP.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>MS.ESP.b/Is the performance expectation too prescriptive or too vague?</th>
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<td>4- mostly</td>
<td>3- somewhat</td>
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<td>Question</td>
<td>Answer Options</td>
<td></td>
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<td>-------------------------------------------------------------------------</td>
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<td>Which of the following caused this performance expectation to be more</td>
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How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat

3- appropriate

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

2- slightly

3- somewhat
Is the performance expectation too prescriptive or too vague?

3- appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate
| MS.ESP Earth's Surface Processes - MS.ESP Earth's Surface Processes - MS.ESP.e/Is the performance expectation too prescriptive or too vague? |
| --- | --- | --- |
| MS.ESP Earth's Surface Processes - MS.ESP.e/Is the performance expectation too prescriptive or too vague? |
| MS.ESP.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? |
| 3- somewhat | 4- mostly | 3- appropriate |
How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?
MS.ESP Earth's Surface Processes - MS.ESP Earth's Surface Processes - MS.ESP Earth's Surface

MS.ESP.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 4- mostly 

MS.ESP f/Is the performance expectation too prescriptive or too vague? 5- much too prescriptive

MS.ESP.f/How grade-appropriate is this performance expectation? 3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

3- somewhat
MS.ESP Earth's Surface Processes - Suggest possible changes for those performance expectations that need additional work:

ESP. b - Temperature is doable, the aspect of Salinity and Global movements of water due to salinity seems a stretch for MS; suggestion--Plan and carry out investigations to determine the effect of temperature and salinity on water and apply this knowledge to construct explanations of ocean currents.

MS.ESP.f-Evaluate and revise engineered solutions designed to mitigate the effects of natural hazards connected to geologic and hydrologic systems.

Much different expectations (much higher) from the Secondary standards as compared to the Elementary Earth standards.
MS.WC Weather and Climate -
MS.WC.a/Is the performance expectation too prescriptive or too vague?
4- somewhat too prescriptive

MS.WC Weather and Climate -
MS.WC.a/How grade-appropriate is this performance expectation?
4- slightly more appropriate for a higher grade level

MS.WC Weather and Climate -
MS.WC.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
1- the level of this core idea
How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

Is the performance expectation too prescriptive or too vague?

4- mostly

2- somewhat too vague
How grade-appropriate is this performance expectation? 3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level? 5- completely

How relevant is this crosscutting concept to the core idea?
MS.WC.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat

MS.WC.c/Is the performance expectation too prescriptive or too vague?

3- appropriate

MS.WC.c/How grade-appropriate is this performance expectation?

4- slightly more appropriate for a higher grade level
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1. the level of this core idea

4. mostly

How relevant is this crosscutting concept to the core idea?

4. mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4. mostly
<p>| MS.WC Weather and Climate - MS.WC Weather and Climate - MS.WC.d/Is the performance expectation too prescriptive or too vague? | 3- appropriate |
| MS.WC Weather and Climate - MS.WC Weather and Climate - MS.WC.d/How grade-appropriate is this performance expectation? | 3- grade level appropriate |
| MS.WC Weather and Climate - MS.WC.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level? | 3- grade level appropriate |</p>
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<tr>
<td>MS.WC Weather and Climate</td>
<td>4- mostly</td>
<td>3- appropriate</td>
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</table>

4- mostly
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3-grade level appropriate

4- mostly
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3 - somewhat appropriate
2 - somewhat too vague
1 - too vague

Is the performance expectation too prescriptive or too vague?

3 - grade level appropriate
2 - somewhat too vague
1 - too vague

How grade-appropriate is this performance expectation?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

- MS.WC Weather and Climate
- MS.WC.f/How relevant is this crosscutting concept to the core idea?
- 4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

- MS.WC Weather and Climate
- MS.WC.f/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
- 4- mostly
MS.WC Weather and Climate - Suggest possible changes for those performance expectations that need additional work:

"WC.b.- This PE does fine for DCI ESS2.D. but does not mesh well with the ETS1.A. because the PE does not bring out the need to define/delimit the problem prior to formulating a design solution. Suggestion for change: Design a model which illustrates the impact of Greenhouse gases on the average surface temperature of the earth’s surface.

WC.f.-This PE does not have good language to promote the practices of engineering into the PE. “Analyzing” does not direct teachers to the engineering cycle. Suggestion for change: Design a weather monitoring station for a given location on earth which gathers sufficient data to more accurately predict severe weather for a specified local."
Human Impacts - MS.HI.a/Is the performance expectation too prescriptive or too vague?
1- much too vague

Human Impacts - MS.HI.a/How grade-appropriate is this performance expectation?
Not Applicable - Not Sure

Human Impacts - MS.HI.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
**Human Impacts - MS.HI**

Human Impacts - MS.HI.a/How relevant is this crosscutting concept to the core idea?

Not Applicable - Not Sure

**Human Impacts - MS.HI**

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

Not Applicable - Not Sure

**Human Impacts - MS.HI**

Is the performance expectation too prescriptive or too vague?

3- appropriate
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MS.HI Human Impacts - MS.HI
Human Impacts - MS.HI.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

MS.HI Human Impacts - MS.HI Human Impacts - MS.HI.c/Is the performance expectation too prescriptive or too vague?

3- appropriate

MS.HI Human Impacts - MS.HI Human Impacts - MS.HI.c/How grade-appropriate is this performance expectation?

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level? 

How relevant is this crosscutting concept to the core idea? 

4- mostly 

3- somewhat
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<td>3- somewhat</td>
<td>performance expectation</td>
<td>3- somewhat</td>
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<tr>
<td>3- somewhat</td>
<td>demonstrate a student's understanding of the disciplinary core idea?</td>
<td>3- somewhat</td>
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Which of the following caused this performance expectation to be more grade-appropriate for a higher grade level?

- 3-grade level appropriate
- 4-mostly

How relevant is this crosscutting concept to the core idea?
MS.HI Human Impacts - MS.HI
Human Impacts - MS.HI.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

MS.HI Human Impacts - MS.HI Human Impacts - MS.HI.f/Is the performance expectation too prescriptive or too vague?

2- somewhat too vague

MS.HI Human Impacts - MS.HI.f/How grade-appropriate is this performance expectation?

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?  

How relevant is this crosscutting concept to the core idea?  

2- slightly  

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  

3- somewhat
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<td>MS.HI Human Impacts - MS.HI Human Impacts - MS.HI.h/Is the performance expectation too prescriptive or too vague?</td>
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<td>4- mostly</td>
<td>performance expectation to demonstrate a student's understanding of the disciplinary core idea?</td>
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</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level? How relevant is this crosscutting concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
MS.HI Human Impacts - Suggest possible changes for those performance expectations that need additional work:

HI.a - if the clarification statement has to be that long, there is an issue in understanding what the PE is asking for,... the questions don't develop and refine, but the answers to the questions might...

HI.b- This PE is only trying focus on the first step of the engineering design cycle which we believe is wise. We like the idea of the inclusion of the word, “solvable” problems to guide students toward evaluating if a problem is able to be address by science and engineering or not.

HI.d.- This PE as written is too long. There needs to be a discussion of the limitation of the modeling simulation but this should be in the Clarification Statements not as part of the PE. As written the PE does not provide a clear indication of the engineering design cycle. Suggestion for change: Use a multi-variable computer simulation to evaluate various industrial regulations plans for their potential ability to reduce the magnitude of changes in Earth’s mean surface temperatures.

HI.e. This PE does a nice job of incorporating the engineering idea of combining elements from various solutions to design a better system.

HI.f.- This PE’s wording does not guide readers easily to the engineering practices. Words like “read critically and evaluation” are general process skills but not unique to an engineering design cycle. Suggestion for change: Evaluate multiple proposed energy production and management plans for a community based upon a defined set of criteria which consider both renewable and non-renewable energy options.

HI.g.- This PE does a nice job of explicitly bringing in the engineering practices in the context of human impacts. This entire standard could be re-names to “Interdisciplinary Societal Challenges” better represent the need for engineered solutions to global and local problems."

There is no MS.HI.h unless I am missing something...
Is the performance expectation too prescriptive or too vague?

2- somewhat too vague

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
MS.ED Engineering Design -
CR.c/How well would meeting
this performance expectation
demonstrate a student's
understanding of the
disciplinary core idea?

4- mostly

MS.ED Engineering Design -
FM.b/Is the performance
expectation too prescriptive or
too vague?

3- appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3 - grade level appropriate
2 - slightly
How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea? 

2- somewhat too vague
3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
Is the performance expectation too prescriptive or too vague?
2- somewhat too vague
3- grade level appropriate

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<tr>
<td>IF.a/How well would meeting this performance expectation demonstrate</td>
<td>1- not at all</td>
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<td>a student's understanding of the disciplinary core idea?</td>
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<td>E.a/Is the performance expectation too prescriptive or too vague?</td>
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E.a/How grade-appropriate is this performance expectation? 3- grade level appropriate
E.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level? MS.
E.a/How relevant is this crosscutting concept to the core idea? 4- mostly
E.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

1- not at all  
3- appropriate  
3- grade level appropriate

E.f/Is the performance expectation too prescriptive or too vague?

E.f/How grade-appropriate is this performance expectation?
E.f/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

E.f/How relevant is this crosscutting concept to the core idea?
5- completely

E.f/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
Is the performance expectation too prescriptive or too vague? 
2- somewhat too vague

How grade-appropriate is this performance expectation? 
3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<p>| MS.ED Engineering Design | MS.ED Engineering Design | MS- \nMS.ED Engineering Design | WER.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | MEOE.g/Is the performance expectation too prescriptive or too vague? | 2- slightly | 2- slightly | 3- appropriate |</p>
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<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>1</td>
</tr>
</tbody>
</table>

1- not at all
<table>
<thead>
<tr>
<th>Performance Expectation</th>
<th>Rating Scale</th>
</tr>
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<tbody>
<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>1- much too vague, 2- slightly, 3- grade level appropriate</td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>1- much too vague, 2- slightly, 3- grade level appropriate</td>
</tr>
<tr>
<td>How grade-appropriate is this performance expectation?</td>
<td>1- much too vague, 2- slightly, 3- grade level appropriate</td>
</tr>
</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

1- not at all
<table>
<thead>
<tr>
<th>MS.ED Engineering Design - MS.ED Engineering Design - MS-IRE.e</th>
<th>MS.ED Engineering Design - MS.ED Engineering Design - MS-IRE.e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
</tr>
<tr>
<td>1- much too vague</td>
<td>3- grade level appropriate</td>
</tr>
</tbody>
</table>

How grade-appropriate is this performance expectation?
<p>| MS.ED Engineering Design - | MS.ED Engineering Design - MS-IRE.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | MS.ED Engineering Design - MS-IRE.e/How relevant is this crosscutting concept to the core idea? | 4- mostly | 2- slightly | 3- appropriate | MS.ED Engineering Design - MS-IRE.HI.b/Is the performance expectation too prescriptive or too vague? |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td>3- grade level appropriate</td>
</tr>
<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>4- mostly</td>
</tr>
</tbody>
</table>
Hi.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

Hi.d/Is the performance expectation too prescriptive or too vague?

5- much too prescriptive

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat
Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- appropriate

3- grade level appropriate
HI.e/How relevant is this crosscutting concept to the core idea?  
3- somewhat  

HI.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  
5- completely  

HI.f/Is the performance expectation too prescriptive or too vague?  
2- somewhat too vague
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3- grade level appropriate

2- slightly
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

<table>
<thead>
<tr>
<th>4- mostly</th>
<th>3- appropriate</th>
<th>3- grade level appropriate</th>
</tr>
</thead>
</table>

Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
Is the performance expectation too prescriptive or too vague?

2- somewhat too vague

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate
How relevant is this crosscutting concept to the core idea?

4 - mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4 - mostly
MS.ED Engineering Design - MS.ED Engineering Design - Suggest possible changes for those performance expectations that need additional work:

“CR.c- word choice of “investigate” does not direct the use of an engineer design cycle. Suggestion for change: Design a system which uses various fuel sources to deliver a specified amount of energy (in quantitative terms).

FM.b.-the design process would better be directed by including the need for students to propose the next iteration of the design based upon data related to a specific criterion. Suggestion for change: Analyze data from different design solutions to propose an improvement to the design given a specific criteria related to the acceleration of an object.

FM.d.-PE specifies manufacturing process but the Clarification Statement only mentions a lump of clay which is more like a science experiment. Suggestions for change: Provide some clarification statements that direct the audience to a manufacturing process, such as constructing a support for building or object that has to support a large amount of weight, which shape (circular, rectangle, triangle, etc) provides the greatest support with the least amount of building material?

IF.a.- Need for further examples in the clarification. Again - is it the demonstrations run the PE or the PE determining the demonstrations. Confusing thing is that some states have really high speed limits and others have rather conservative limits - does it have to be specific to speed limits? Core idea of ETS1.C is not met by this PE because students are not making a modification of an iteration of a design and then testing that new prototype. Choice of the word “investigate” does not adequately guide teachers to the engineering goals of this PE. As written, the PE is awkward and not helpful for teachers because it is trying to stay vague to not limit curriculum choices but as written does not provide enough guidance. Suggestion for change: Design an improvement for a device which uses an electromagnet. Clarification Statement: Suggestions for design improvements should be based upon systematically gathered data…. Add the concept of collaboration with the planning and carrying out. While collaboration may be understood in the terminology, some feel as though it should be stated specifically.

E.a.- Core idea of ETS1.A. is not met by this PE because students are not directly involved in evaluating a design option based upon criteria or constraints. Students need to be involved with comparing specific design choices...
Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

Is the performance expectation too prescriptive or too vague?
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?
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<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>MS.ETSS Links Among Engineering, Technology, Science and Society - Under Construction - MS.ETSS.c/How grade-appropriate is this performance expectation too prescriptive or too vague?</td>
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<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>MS.ETSS Links Among Engineering, Technology, Science and Society - Under Construction - MS.ETSS.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
Is the performance expectation too prescriptive or too vague? How grade-appropriate is this performance expectation? Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea? How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
Suggest possible changes for those performance expectations that need additional work:

HS.SPM Structure and Properties of Matter - HS.SPM.a/Is the performance expectation too prescriptive or too vague?
2 - somewhat too vague
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3-grade level appropriate
4-mostly
<table>
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<th>HS.SPM Structure and Properties of Matter - HS.SPM.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
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<tbody>
<tr>
<td>HS.SPM Structure and Properties of Matter - HS.SPM.b/Is the performance expectation too prescriptive or too vague?</td>
</tr>
<tr>
<td>HS.SPM Structure and Properties of Matter - HS.SPM.b/How grade-appropriate is this performance expectation?</td>
</tr>
</tbody>
</table>

| 2- slightly |
| 3- appropriate |
| 3- grade level appropriate |
HS.SPM Structure and Properties of Matter - HS.SPM
Structure and Properties of Matter - HS.SPM.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.SPM Structure and Properties of Matter - HS.SPM
Structure and Properties of Matter - HS.SPM.b/How relevant is this crosscutting concept to the core idea?
5- completely

HS.SPM Structure and Properties of Matter - HS.SPM
Structure and Properties of Matter - HS.SPM.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely
HS.SPM Structure and Properties of Matter - HS.SPM.c/Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.SPM Structure and Properties of Matter - HS.SPM Structure and Properties of Matter - HS.SPM.c/How grade-appropriate is this performance expectation?
3- grade level appropriate

HS.SPM Structure and Properties of Matter - HS.SPM.c/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<td>c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>d/Is the performance expectation too prescriptive or too vague?</td>
<td>4- mostly</td>
</tr>
<tr>
<td>4- mostly</td>
<td></td>
<td></td>
<td>3- appropriate</td>
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How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?
| HS.SPM Structure and Properties of Matter - HS.SPM.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | 4- mostly | HS.SPM Structure and Properties of Matter - HS.SPM.e/Is the performance expectation too prescriptive or too vague? | 3- appropriate | HS.SPM Structure and Properties of Matter - HS.SPM.e/How grade-appropriate is this performance expectation? | 3- grade level appropriate |
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

4- mostly
HS.SPM Structure and Properties of Matter - HS.SPM

Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.SPM Structure and Properties of Matter - HS.SPM
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<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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<td>Is the performance expectation too prescriptive or too vague?</td>
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</table>
How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?

2- mostly
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<td>How grade-appropriate is this performance expectation?</td>
</tr>
<tr>
<td>4- mostly</td>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
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</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly
changes for those performance expectations that need additional work:
SPMa seems to match the DCI about structure and interactions of matter better than the atomic structure
statement in PS1.a. A suggestion for the PE is to evaluate various representations of single and multiple atom
systems in terms of the representation’s strength in the explanation of a given property of matter and the
limitations of that specific representation of matter.
SPM.a.- PE suggestion for change: Evaluate various representations of single and multiple atom systems in
terms of the representation's strength in the explanation of a given property of matter and the limitations of
that specific representation of matter.

SPMd is not listed in the crosscutting concept column. It could fit into structure and function.

SPMh – The PE as written implies a bias toward the use of nuclear energy. This PE needs to be rewritten in a
more neutral manner to assure that students examine the merit and drawbacks of all types of energy
production.

DCI includes strong and weak interactions that are not explicitly included in the PE.s.

A great deal of professional development will be needed to construct or work through the data needed to teach
g and h.
<table>
<thead>
<tr>
<th>HS.CR Chemical Reactions -</th>
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</tr>
</thead>
<tbody>
<tr>
<td>HS.CR Chemical Reactions -</td>
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</tr>
<tr>
<td>HS.CR.a/Is the performance expectation too prescriptive or too vague?</td>
<td>HS.CR.a/How grade-appropriate is this performance expectation?</td>
</tr>
<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
</tr>
<tr>
<td>HS.CR Chemical Reactions -</td>
<td>HS.CR Chemical Reactions -</td>
</tr>
<tr>
<td>HS.CR.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td></td>
</tr>
<tr>
<td>HS.CR Chemical Reactions -</td>
<td>HS.CR.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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<td>--------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>HS.CR Chemical Reactions -</td>
<td>HS.CR.b/Is the performance expectation too prescriptive or too vague?</td>
</tr>
</tbody>
</table>

5- completely

3- appropriate
HS.CR Chemical Reactions -
HS.CR Chemical Reactions -
HS.CR Chemical Reactions -

HS.CR.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.CR Chemical Reactions -
HS.CR Chemical Reactions -
HS.CR.b/How relevant is this crosscutting concept to the core idea?

3- grade level appropriate
5- completely

HS.CR Chemical Reactions -
HS.CR.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  
5- completely  
3- appropriate

HS.CR.c/Is the performance expectation too prescriptive or too vague?  
3- grade level appropriate

HS.CR.c/How grade-appropriate is this performance expectation?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5 - completely

5 - completely
<table>
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<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
</tr>
<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
<td></td>
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</table>

**HS.CR Chemical Reactions - HS.CR Chemical Reactions -**

**HS.CR.d**/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

Is the performance expectation too prescriptive or too vague?

5- completely

5- completely

3- appropriate
<table>
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<tr>
<th>HS.CR Chemical Reactions -</th>
<th>HS.CR.e/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</th>
<th>HS.CR Chemical Reactions -</th>
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<tbody>
<tr>
<td>3- grade level appropriate</td>
<td>HS.CR Chemical Reactions -</td>
<td>HS.CR Chemical Reactions -</td>
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<td></td>
<td>HS.CR.e/How relevant is this crosscutting concept to the core idea?</td>
<td>5- completely</td>
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<td></td>
<td>3- grade level appropriate</td>
<td>5- completely</td>
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</tbody>
</table>
HS.CR Chemical Reactions - HS.CR Chemical Reactions -
HS.CR.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely

HS.CR Chemical Reactions - HS.CRF(Is the performance expectation too prescriptive or too vague?
2- somewhat too vague

HS.CR Chemical Reactions -
HS.CR.f/How grade-appropriate is this performance expectation?
2- slightly more appropriate for a lower grade level
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

Not Applicable - Not Sure

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5 - completely
HS.CR Chemical Reactions - Suggest possible changes for those performance expectations that need additional work:

CR.f.- The PE is too vague on what a student should be able to do. Suggestion for change: Identify and communicate numerous chemical processes and/or properties of materials which are central to biological and geophysical systems.

No crosscutting concept is identified for HS.CR.f
<p>| HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| HS.FI.a/Is the performance expectation too prescriptive or too vague? | HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - HS.FI Forces and Interactions - |
| 3- appropriate | HS.FI.a/How grade-appropriate is this performance expectation? | 3- grade level appropriate | HS.FI.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level? |</p>
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HS.FI Forces and Interactions -

HS.FI Forces and Interactions -

HS.FI.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.FI Forces and Interactions -

HS.FI.b/How relevant is this crosscutting concept to the core idea?

3- grade level appropriate

5- completely
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely

3- appropriate

2- slightly more appropriate for a lower grade level

Is the performance expectation too prescriptive or too vague?

2- slightly more appropriate for a lower grade level

How grade-appropriate is this performance expectation?
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<td>caused this performance</td>
<td>meeting this performance</td>
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<tr>
<td>expectation to be more</td>
<td>expectation demonstrate a</td>
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<td>appropriate for a higher grade</td>
<td>student's understanding of the</td>
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<td>level?</td>
<td>disciplinary core idea?</td>
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<tr>
<td>5- completely</td>
<td>5- completely</td>
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is this performance expectation?
3- grade level appropriate

HS.FI Forces and Interactions -
HS.FI.e/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.FI Forces and Interactions -
HS.FI.e/How relevant is this crosscutting concept to the core idea?

5- completely
HS.FI Forces and Interactions -

HS.FI.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely

HS.FI Forces and Interactions -

HS.FI.f/Is the performance expectation too prescriptive or too vague?

2- somewhat too vague

HS.FI Forces and Interactions -

HS.FI.f/How grade-appropriate is this performance expectation?

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
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How relevant is this crosscutting concept to the core idea?

5 - completely
HS.FI Forces and Interactions - Suggest possible changes for those performance expectations that need additional work:

"Fl.c. - in this PE the clarification statement only requires the evaluation to involve qualitative data (which is what is required at a middle school level), At the HS level, students should be challenged to evaluate both qualitative and quantitative data related to collisions.

Fl.f. - this PE is attempting to incorporate the engineering design cycle however, better language should be found in the engineering community which includes such phrases as "prototype" for communicating the improvement of a design through numerous iterations.

Newton’s second law here, third law was in MS standards but don’t recall first law anywhere.
HS.E Energy - HS.E Energy -
HS.E.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.E Energy - HS.E Energy -
HS.E.a/How grade-appropriate is this performance expectation?
3- grade level appropriate

HS.E Energy - HS.E Energy -
HS.E.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<tr>
<td>HS.E.b/Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
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HS.E Energy - HS.E Energy -
HS.E.b/Which of the following
caused this performance
expectation to be more
appropriate for a higher grade
level?
3- grade level appropriate

HS.E Energy - HS.E Energy -
HS.E.b/How relevant is this
crosscutting concept to the
core idea?
5- completely
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this performance expectation
HS.E Energy - HS.E Energy -
demonstrate a student's
HS.E Energy - HS.E Energy -
understanding of the
HS.E.c/Is the performance
disciplinary core idea? expectation too prescriptive or
to vague? HS.E.c/How grade-appropriate
HS.E Energy - HS.E Energy -
is this performance
expectation?
3- grade level appropriate
HS.E Energy - HS.E Energy -
HS.E.c/Which of the following
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level?

HS.E Energy - HS.E Energy -
HS.E.c/How relevant is this
crosscutting concept to the
core idea?
5- completely

HS.E Energy - HS.E Energy -
HS.E.c/How well would meeting
this performance expectation
demonstrate a student's
understanding of the
disciplinary core idea?
5- completely
HS.E Energy - HS.E Energy - HS.E Energy -
HS.E.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.E Energy - HS.E Energy - HS.E Energy -
HS.E.d/How grade-appropriate is this performance expectation?
3- grade level appropriate

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<td>HS.E Energy - HS.E Energy - HS.E.e/Is the performance expectation too prescriptive or too vague?</td>
<td>2- somewhat too vague</td>
</tr>
<tr>
<td>Question</td>
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<td>------------------------------------------------------------------------</td>
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3- appropriate

HS.E Energy - HS.E Energy -
HS.E.f/Is the performance expectation too prescriptive or too vague?
4- slightly more appropriate for a higher grade level

HS.E Energy - HS.E Energy -
HS.E.f/How grade-appropriate is this performance expectation?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2- this practice paired with this core idea

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely

How relevant is this crosscutting concept to the core idea?

5- completely
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<p>| | | |</p>
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<td></td>
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<tr>
<td>5- completely</td>
<td>5- completely</td>
<td>3- appropriate</td>
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HS.E.h/ Which of the following
caused this performance
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level?
3- grade level appropriate

HS.E Energy - HS.E Energy -
HS.E.h/ How relevant is this
crosscutting concept to the
core idea?
5- completely
HS.E Energy - HS.E Energy -
HS.E.h/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely
HS.E Energy - Suggest possible changes for those performance expectations that need additional work:
E.e could be clarified by adding the phrase "with its surroundings." To me, minimizing the flow in or out of the system would not affect the equilibrium within the system.
HS.WER Waves and Electromagnetic Radiation

HS.WER Waves and Electromagnetic Radiation - HS.WER Waves and Electromagnetic Radiation - HS.WER.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.WER Waves and Electromagnetic Radiation - HS.WER Waves and Electromagnetic Radiation - HS.WER.a/How grade-appropriate is this performance expectation?
3- grade level appropriate

HS.WER Waves and Electromagnetic Radiation - HS.WER.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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| HS.WER Waves and Electromagnetic Radiation - HS.WER.b/Is the performance expectation too prescriptive or too vague? | 2- somewhat too vague |</p>
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<td>Not Applicable - Not Sure</td>
<td>4- mostly</td>
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3- appropriate

HS.WER Waves and Electromagnetic Radiation -
HS.WER.d/How grade-appropriate is this performance expectation?
3- grade level appropriate

HS.WER Waves and Electromagnetic Radiation -
HS.WER.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
HS.WER Waves and Electromagnetic Radiation -

HS.WER.d/How relevant is this crosscutting concept to the core idea?
4- mostly

HS.WER Waves and Electromagnetic Radiation -

HS.WER.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

HS.WER Waves and Electromagnetic Radiation -

HS.WER.e/Is the performance expectation too prescriptive or too vague?
3- appropriate
HS.WER Waves and Electromagnetic Radiation -

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- grade level appropriate

How relevant is this crosscutting concept to the core idea?

4- mostly
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Is the performance expectation too prescriptive or too vague?
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3- grade level appropriate

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4- mostly

HS.WER.i/Is the performance expectation too prescriptive or too vague?

3- appropriate

HS.WER.i/How grade-appropriate is this performance expectation?

3- grade level appropriate
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HS.WER.i/How relevant is this crosscutting concept to the core idea?

4- mostly

HS.WER Waves and Electromagnetic Radiation -
HS.WER Waves and Electromagnetic Radiation -
HS.WER.i/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
HS.WER Waves and Electromagnetic Radiation - Suggest possible changes for those performance expectations that need additional work:

Specific Points

WERa: The clarification might include glass as a medium in alignment with DCI PS4A.

WERb: There were no CC’s linked to the PE.

WERc: There were no CC’s linked to the PE.

General Observations

One item to consider is the balance between looking up information vs. engaging the students in investigations. The impression for this standard was that it may lean too heavily on the former. This was also a concern with other standards in the Physical Science Section. During the next revision a close look at the balance between finding information and producing information that the students are to interpret.

It was noted that there will need to be professional development for WER d and e. A few more explicit clarifications, without being overly prescriptive, would be useful.
HS.SFIP Structure, Function and Information Processing -

HS.SFIP.a/Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.SFIP Structure, Function and Information Processing -

HS.SFIP.a/How grade-appropriate is this performance expectation?
2- slightly more appropriate for a lower grade level

HS.SFIP.a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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How grade-appropriate is this performance expectation?

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2- slightly more appropriate for a lower grade level

4- mostly

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HS.SFIP Structure, Function and Information Processing -

**Which of the following caused this performance expectation to be more appropriate for a higher grade level?**

4- mostly

HS.SFIP Structure, Function and Information Processing -

**How relevant is this crosscutting concept to the core idea?**

4- mostly

HS.SFIP Structure, Function and Information Processing -

**How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?**

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3- appropriate

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3- grade level appropriate

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How relevant is this crosscutting concept to the core idea?
4- mostly

HS.SFIP Structure, Function and Information Processing -

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely

HS.SFIP Structure, Function and Information Processing -

Is the performance expectation too prescriptive or too vague?
3- appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- this practice paired with this core idea
2- mostly
3- slightly more appropriate for a higher grade level
4- mostly
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How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
HS.SFIP Structure, Function and Information Processing -
Suggest possible changes for those performance expectations that need additional work:
Topic title suggestion: H.S. H.S.I.P. (Structure, Function, and Information Processing) could be titled Structure, Function, and Integrated Systems. This shifts from rudimentary data information processing to integrating concepts to making relationships across multiple systems. Increase the infusion of biotechnology to facilitate understanding of the role of engineering design in explaining DNA, models of feedback mechanisms, and organismic behaviors. The biotechnology angle here would definitely be a way to incorporate more engineering into the Life Science area...Construct an explanation of how a given sequence of DNA would need to be changed to make the resulting protein meet specific criteria.

HS.SFIP.f-the questions don't establish the strength..."Ask questions that could be used to evaluate the strength...."


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<td>appropriate</td>
</tr>
<tr>
<td>2-</td>
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HS.IVT Inheritance and Variation of Traits - HS.IVT

Inheritance and Variation of Traits - HS.IVT.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

4- mostly

3- appropriate
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3-grade level appropriate

4-mostly
HS.IVT Inheritance and Variation of Traits - HS.IVT

b/How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?
4- mostly

HS.IVT Inheritance and Variation of Traits - HS.IVT

Inheritance and Variation of Traits - HS.IVT.c/Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.IVT Inheritance and Variation of Traits - HS.IVT

How grade-appropriate is this performance expectation?
3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly
HS.IVT Inheritance and Variation of Traits - HS.IVT

Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.IVT Inheritance and Variation of Traits - HS.IVT

How grade-appropriate is this performance expectation?
3- grade level appropriate

HS.IVT Inheritance and Variation of Traits - HS.IVT

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3- grade level appropriate
HS.IVT Inheritance and Variation of Traits - HS.IVT
Inheritance and Variation of Traits - HS.IVT

How relevant is this crosscutting concept to the core idea?
4- mostly

HS.IVT Inheritance and Variation of Traits - HS.IVT.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly

HS.IVT Inheritance and Variation of Traits - HS.IVT.e/Is the performance expectation too prescriptive or too vague?
3- appropriate
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<td>5- completely</td>
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HS.IVT Inheritance and Variation of Traits - HS.IVT

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely

HS.IVT Inheritance and Variation of Traits - HS.IVT

Is the performance expectation too prescriptive or too vague?

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3- appropriate

(Repetition of the last line)
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How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- mostly

How relevant is this crosscutting concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
Suggest possible changes for those performance expectations that need additional work:

HS.IVT.a-Ask questions aimed at trying to determine...or...that will reveal critical information about...

HS.IVT.e-Construct an explanation and create a model about how a chromosome is changed during meiosis should begin the statement for HS.IVT.e. This strengthens the critical imperative to compare and contrast mitosis and meiosis from a illuminating genetic variability and natural selection. Once again leaving out the processes involved in passing genetic information reduces the concept to individual facts that do not make sense out of context.

HS.IVT.f-not sure what is meant by "viable" in #2--it gives the impression that inheritable genetic information is only affected by "positive" replication errors; if it means errors that don't prevent the cell from surviving, that is not clear with this wording; could be changed to (2) inaccuracies during replication that aren't severe enough to prevent the cell's survival.
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HS.MEOE Matter and Energy in Organisms and Ecosystems -

HS.MEOE.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

4- mostly

3- appropriate
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HS.MEOE Matter and Energy in Organisms and Ecosystems -

**HS.MEOE.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?**

4- mostly

**HS.MEOE Matter and Energy in Organisms and Ecosystems -**

**HS.MEOE.c/Is the performance expectation too prescriptive or too vague?**

3- appropriate

**HS.MEOE Matter and Energy in Organisms and Ecosystems -**

**HS.MEOE.c/How grade-appropriate is this performance expectation?**

3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
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HS.MEO.E.d/How relevant is this crosscutting concept to the core idea?
5- completely

HS.MEOE Matter and Energy in Organisms and Ecosystems -

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How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4 - mostly

5 - completely
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
2- slightly more appropriate for a lower grade level

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

3- somewhat

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

Is the performance expectation too prescriptive or too vague?

2- somewhat too vague
<table>
<thead>
<tr>
<th>HS.MEOE Matter and Energy in Organisms and Ecosystems -</th>
<th>HS.MEOE Matter and Energy in Organisms and Ecosystems -</th>
<th>HS.MEOE Matter and Energy in Organisms and Ecosystems -</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS.LS-MEOE.h/How grade-appropriate is this performance expectation?</td>
<td>HS.LS-MEOE.h/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td>HS.LS-MEOE.h/How relevant is this crosscutting concept to the core idea?</td>
</tr>
<tr>
<td>3- grade level appropriate</td>
<td>4- mostly</td>
<td>4- mostly</td>
</tr>
</tbody>
</table>
HS.MEOE Matter and Energy in Organisms and Ecosystems -
HS.MEOE Matter and Energy in Organisms and Ecosystems -
HS.LS-MEOE.h/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
HS.MEOE Matter and Energy in Organisms and Ecosystems - Suggest possible changes for those performance expectations that need additional work:

HS.MEOE.b - Construct an explanation that explains how... and put "from sugar molecules produced through photosynthesis" in parentheses, or set apart with dashes.

HS.MEOE.c - Use a model to explain cellular respiration as a chemical process that results in a net transfer of energy through the process of breaking of bonds in food and oxygen molecules and forming bonds in new compounds.

HS.MEOE.e - "Communicate descriptions" should be changed to "create and explain models" of the roles of photosynthesis and cellular respiration in... Communicate descriptions does not fully support demonstration of conceptual understanding.

HS.LS-MEOE.g - Ask questions that provide insights about... to... Ask questions that guide information gathering about... (the questions don't provide the insights)
HS.IRE Interdependent Relationships in Ecosystems -

Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
3- grade level appropriate

HS.IRE Interdependent Relationships in Ecosystems -

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
3- grade level appropriate
HS.IRE Interdependent
Relationships in Ecosystems -

HS.IRE Interdependent
Relationships in Ecosystems -

HS.IRE Interdependent
Relationships in Ecosystems -

HS.IRE Interdependent
Relationships in Ecosystems -

HS.IRE.a/How well would
meeting this performance
expectation demonstrate a
student's understanding of the
disciplinary core idea?

3- somewhat

4- mostly

3- appropriate
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
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<tbody>
<tr>
<td>Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td>3- grade level appropriate</td>
</tr>
<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>3- somewhat</td>
</tr>
<tr>
<td>HS.IRE Interdependent Relationships in Ecosystems -</td>
<td>HS.IRE Interdependent Relationships in Ecosystems -</td>
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<tr>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td><strong>b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</strong></td>
<td><strong>c/Is the performance expectation too prescriptive or too vague?</strong></td>
</tr>
<tr>
<td>4- mostly</td>
<td>3- appropriate</td>
</tr>
</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- somewhat

How relevant is this crosscutting concept to the core idea?

3- somewhat

How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?

3- somewhat
HS.IRE Interdependent Relationships in Ecosystems -

HS.IRE Interdependent Relationships in Ecosystems -
HS.IRE Interdependent Relationships in Ecosystems -
HS.IRE.d/Is the performance expectation too prescriptive or too vague?
2- somewhat too vague
3- grade level appropriate

HS.IRE Interdependent Relationships in Ecosystems -
HS.IRE Interdependent Relationships in Ecosystems -
HS.IRE.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
2- somewhat too vague
3- grade level appropriate
<table>
<thead>
<tr>
<th>HS.IRE Interdependent Relationships in Ecosystems -</th>
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<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>Is the performance expectation too prescriptive or too vague?</td>
</tr>
<tr>
<td>3- somewhat</td>
<td>3- somewhat</td>
<td>3- appropriate</td>
</tr>
</tbody>
</table>
HS.IRE Interdependent Relationships in Ecosystems -

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- slightly more appropriate for a lower grade level
2- slightly more appropriate for a lower grade level
3- somewhat

How relevant is this crosscutting concept to the core idea?
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
<tr>
<td>HS.IRE.e/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>HS.IRE.f/Is the performance expectation too prescriptive or too vague?</td>
</tr>
<tr>
<td>3- somewhat</td>
<td>3- appropriate</td>
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<tr>
<td></td>
<td>3- grade level appropriate</td>
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</tbody>
</table>
HS.IRE Interdependent Relationships in Ecosystems -

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- somewhat

HS.IRE Interdependent Relationships in Ecosystems -

How relevant is this crosscutting concept to the core idea?

3- somewhat

HS.IRE Interdependent Relationships in Ecosystems -

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat
<table>
<thead>
<tr>
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<tr>
<td>Relationships in Ecosystems - HS.IRE Interdependent Relationships in Ecosystems - HS.IRE Interdependent Relationships in Ecosystems - HS.IRE.g/Is the performance expectation too prescriptive or too vague?</td>
<td>Relationships in Ecosystems - HS.IRE Interdependent Relationships in Ecosystems - HS.IRE.g/How grade-appropriate is this performance expectation?</td>
</tr>
<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
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<tr>
<td>HS.IRE Interdependent Relationships in Ecosystems - HS.IRE.g/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</td>
<td></td>
</tr>
</tbody>
</table>
How relevant is this crosscutting concept to the core idea?
3- somewhat

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
HS.IRE Interdependent Relationships in Ecosystems - Suggest possible changes for those performance expectations that need additional work:

**LS2A** - Disciplinary Core Ideas should specifically include the role of symbiosis in maintaining or altering relationships in ecosystems.

**HS.IRE.b** - Using the phrase "Design solutions" makes this PE seem engineering-ish, but the rest of the PE doesn't continue to support this. Either revise so that "Design solutions is more sciencey, or ramp up the engineering to be something like...Evaluate proposals for technological solutions that will maintain or increase biodiversity of a given ecosystem based on the criteria of cost, total footprint of development and use, and potential overall effectiveness."

**HS.IRE.d** - In general, the phrase "Engage in arguments from evidence..." is problematic in that it invokes arguing. It should be either "Engage in Argumentation" or engage WITH arguments or Evaluate arguments—“arguments” are things in this discussion, not processes. Actually, Engage in argument isn't quite right either...Develop (or evaluate competing) an argument

**HS.IRE.g** - forced NOS-The mathematical comparisons aren't describing the tentative nature of science, rather the uncertainties in the models represent the attempt to quantify how tentative the proposed answer is. The clarification statement is a better PE.
<table>
<thead>
<tr>
<th>HS.NE Natural Selection and Evolution - HS.NE Natural Selection and Evolution - HS.NE.a/Is the performance expectation too prescriptive or too vague?</th>
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<td>3- appropriate</td>
<td>3- grade level appropriate</td>
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</tr>
<tr>
<td>4- mostly</td>
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</table>
How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- somewhat

How relevant is this crosscutting concept to the core idea?

3- somewhat
<table>
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<tr>
<th>Question</th>
<th>4 - mostly</th>
<th>3 - appropriate</th>
<th>3 - grade level appropriate</th>
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<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
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3- somewhat

How relevant is this crosscutting concept to the core idea?

3- somewhat

How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?

3- somewhat
HS.NE Natural Selection and Evolution - HS.NE Natural Selection and Evolution - HS.NE.d/Is the performance expectation too prescriptive or too vague?
3- appropriate

HS.NE Natural Selection and Evolution - HS.NE Natural Selection and Evolution - HS.NE.d/How grade-appropriate is this performance expectation?
3- grade level appropriate

HS.NE Natural Selection and Evolution - HS.NE Natural Selection and Evolution - HS.NE.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<tr>
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</table>
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
4- mostly
HS.NSE Natural Selection and Evolution - Suggest possible changes for those performance expectations that need additional work:

Natural selection and evolution (common ancestry) are separate concepts: common ancestry is inferred from many sources of evidence (see HS.LS-NSE-e), and natural selection is ONE mechanism affecting the outcome of common ancestry. As in the MS standards, natural selection and adaptation are closely related. In short, not all natural selection results in evolution, and not all evolution results from natural selection. Natural selection is one of many mechanisms affecting evolution (common ancestry), but none of the additional ones are included in any of these statements. There is nothing on neutral evolution (genetic drift), or speciation, much less endosymbiosis, horizontal gene transfer, epigenetics – or even cladistics, which is the normal way that classification is performed these days. Combining “Natural Selection and Adaptation” (a middle school standard) makes a lot of sense, because natural selection is all about adaptation. Maybe call this Evolution through Natural Selection?

HS.NSE.d could be strengthened by incorporating mathematical modeling to communicate information describing how changes in environmental conditions affect the distribution of traits in a population causing: 1) increases in population of some species, 2) the emergence over time of new species, and 3) the extinction of other species.

no place to evaluate HS.NSE.e.--this PE would definitely be strengthened with a clarification statement and/or assessment boundary to establish more clarity about the scope of these experiments
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<table>
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<tr>
<th>HS.SS Space Systems - HS.SS</th>
<th>Space Systems - HS.SS.a/How relevant is this crosscutting concept to the core idea?</th>
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<tr>
<td>HS.SS Space Systems - HS.SS</td>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
</tr>
<tr>
<td>Space Systems - HS.SS.b/Is the performance expectation too prescriptive or too vague?</td>
<td></td>
</tr>
<tr>
<td>5- completely</td>
<td>4- mostly</td>
</tr>
<tr>
<td>3- appropriate</td>
<td></td>
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<tr>
<td>Performance Expectation</td>
<td>Grade Appropriateness</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>HS.SS Space Systems - HS.SS Space Systems - HS.SS.b/Which grade-appropriate is this performance expectation?</td>
<td>3-grade level appropriate</td>
</tr>
</tbody>
</table>
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  

3- completely appropriate  

Is the performance expectation too prescriptive or too vague?  

3- grade-appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

5 - completely

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4 - mostly
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

Is the performance expectation too prescriptive or too vague?

5- completely

5- completely

3- appropriate
HS.SS Space Systems - HS.SS
Space Systems - HS.SS.e/Which

of the following caused this
performance expectation to be
more appropriate for a higher
grade level?

HS.SS Space Systems - HS.SS
Space Systems - HS.SS.e/How
relevant is this crosscutting
concept to the core idea?

4- slightly more appropriate for
a higher grade level

1- the level of this core idea

4- mostly
How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea? Is the performance expectation too prescriptive or too vague? Grade-appropriate is this performance expectation? 3- somewhat 3- appropriate 4- slightly more appropriate for a higher grade level
Which of the following caused this performance expectation to be more appropriate for a higher grade level?
1- the level of this core idea
3- somewhat

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

5- much more appropriate for a higher grade level

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- the level of this core idea
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<tr>
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<th>Space Systems - HS.SS.g/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
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<tr>
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<tr>
<td>3- somewhat</td>
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<td>3- appropriate</td>
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</table>
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3-grade level appropriate

5- completely
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
5- completely
HS.SS Space Systems - Suggest possible changes for those performance expectations that need additional work:
e, f, g extend beyond what every student needs to know by the time they graduate HS.
Is the performance expectation too prescriptive or too vague? 3- appropriate

How grade-appropriate is this performance expectation? 3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

HS.HS History of Earth - HS.HE

3- appropriate

HS.HS History of Earth - HS.HE.a/How

5- completely

HS.HS History of Earth - HS.HE.b/Is the performance expectation too prescriptive or too vague?

5- completely
HS.HE History of Earth - HS.HE
History of Earth -
HS.HE.b/Which of the following
caused this performance
expectation to be more
appropriate for a higher grade
level?

4- slightly more appropriate for
a higher grade level

1- the level of this core idea
3- somewhat

HS.HE History of Earth - HS.HE
History of Earth -
HS.HE.b/How
relevant is this crosscutting
concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 3- completely appropriate 3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

Well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
4- mostly
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
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<tbody>
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<td>5- completely</td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>4- mostly</td>
</tr>
<tr>
<td>3- appropriate</td>
<td></td>
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</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- the level of this core idea
4- mostly

How relevant is this crosscutting concept to the core idea?
History of Earth - HS.HE
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat
HS.HE History of Earth - Suggest possible changes for those performance expectations that need additional work:
The overall concern that I have is that several of these PE's are great for a complete understanding of Earth Science, but not a realistic goal for what every student needs to know by the end of HS. Many of these topics are not even taught in entry level college courses.
HS.ES Earth’s Systems - HS.ES
Earth’s Systems - HS.ES.a/Is the
performance expectation too
prescriptive or too vague?
3- appropriate

HS.ES Earth’s Systems - HS.ES
Earth’s Systems - HS.ES.a/How
grade-appropriate is this
performance expectation?
3- grade level appropriate

HS.ES Earth’s Systems - HS.ES
Earth’s Systems - HS.ES.a/Which
of the following caused this
performance expectation to be
more appropriate for a higher
grade level?
| HS.ES Earth's Systems - HS.ES Earth's Systems - HS.ES.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | 5- completely | HS.ES Earth's Systems - HS.ES Earth's Systems - HS.ES.b/Is the performance expectation too prescriptive or too vague? | 3- appropriate |
Which of the following caused this performance expectation to be more grade-appropriate for a higher grade level?
HS.ES Earth's Systems - HS.ES Earth's Systems - HS.ES.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 5- completely

HS.ES Earth's Systems - HS.ES Earth's Systems - HS.ES.c/Is the performance expectation too prescriptive or too vague? 3- appropriate

HS.ES Earth's Systems - HS.ES Earth's Systems - HS.ES.c/How grade-appropriate is this performance expectation? 3- grade level appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

5- completely

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

3- somewhat
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
| HS.ES Earth's Systems - HS.ES Earth's Systems - HS.ES.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | 4- mostly 5- completely |
| HS.ES Earth's Systems - HS.ES Earth's Systems - HS.ES.e/Is the performance expectation too prescriptive or too vague? | 3- appropriate |
Which of the following caused this performance expectation to be more grade-appropriate for a higher grade level?

3-grade level appropriate

How relevant is this crosscutting concept to the core idea?

5-completely

HS.EE Earth's Systems - HS.EE
Earth's Systems - HS.EE.e/Which of the following
Earth's Systems - HS.EE.e/How grade-appropriate is this performance expectation?
3-grade level appropriate

HS.EE Earth's Systems - HS.EE
Earth's Systems - HS.EE.e/How relevant is this crosscutting concept to the core idea?
5-completely
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
Suggest possible changes for those performance expectations that need additional work:

There is no ES.f or ESS-ES.g, but they have questions in the survey.
<table>
<thead>
<tr>
<th>HS.WC Weather and Climate -</th>
<th>HS.WC Weather and Climate -</th>
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<tbody>
<tr>
<td>HS.WC a/Is the performance expectation too prescriptive or too vague?</td>
<td>HS.WC a/How grade-appropriate is this performance expectation?</td>
</tr>
<tr>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
</tr>
</tbody>
</table>

HS.WC a/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
HS.WC Weather and Climate
How relevant is this crosscutting concept to the core idea?

HS.WC.a/How well would meeting this performance expectation demonstrate a student’s understanding of the disciplinary core idea?

HS.WC.b/Is the performance expectation too prescriptive or too vague?

4- mostly appropriate
5- completely appropriate

3- appropriate
2- somewhat appropriate
1- not appropriate
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

- 1- the level of this core idea
- 5- completely

How relevant is this crosscutting concept to the core idea?

- 5- completely

How grade-appropriate is this performance expectation?

- 5- much more appropriate for a higher grade level
<table>
<thead>
<tr>
<th>HS.WC.b/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>HS.WC Weather and Climate - c/Is the performance expectation too prescriptive or too vague?</th>
<th>HS.WC Weather and Climate - c/How grade-appropriate is this performance expectation?</th>
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<tr>
<td>3- somewhat</td>
<td>3- appropriate</td>
<td>4- slightly more appropriate for a higher grade level</td>
</tr>
</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level? 2- this practice paired with this core idea 5- completely

How relevant is this crosscutting concept to the core idea? 3- somewhat

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? 5- completely
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
5- much more appropriate for a higher grade level

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
1- the level of this core idea
How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

Is the performance expectation too prescriptive or too vague?

3- appropriate
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- the level of this core idea
2- the general quality of instruction
3- somewhat
4- slightly more appropriate for a higher grade level

How relevant is this crosscutting concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly

Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

4- slightly more appropriate for a higher grade level
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

1- the level of this core idea

How relevant is this crosscutting concept to the core idea?

4- mostly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely
Is the performance expectation too prescriptive or too vague?
3- appropriate

How grade-appropriate is this performance expectation?
5- much more appropriate for a higher grade level

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
1- the level of this core idea

HS.WC Weather and Climate - HS.WC_g/Is the performance expectation too prescriptive or too vague?
HS.WC Weather and Climate - HS.WC_g/How grade-appropriate is this performance expectation?
HS.WC.g/Which of the following caused this performance expectation to be more appropriate for a higher grade level?
<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td>5- completely</td>
</tr>
<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>5- completely</td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
</tr>
</tbody>
</table>
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3- grade level appropriate

4- mostly
<table>
<thead>
<tr>
<th>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>Is the performance expectation too prescriptive or too vague?</th>
<th>How grade-appropriate is this performance expectation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5- completely</td>
<td>3- appropriate</td>
<td>3- grade level appropriate</td>
</tr>
</tbody>
</table>
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.WC Weather and Climate -

How relevant is this crosscutting concept to the core idea?

HS.WC.i/How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

5- completely

4- mostly
HS.WC Weather and Climate - Suggest possible changes for those performance expectations that need additional work:
There is much in this that is too much to expect to be learned in HS.
Is the performance expectation too prescriptive or too vague?

3- appropriate

How grade-appropriate is this performance expectation?

3- grade level appropriate

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

3- appropriate

3- grade level appropriate
<table>
<thead>
<tr>
<th>HS.HS Human Sustainability -</th>
<th>HS.HS.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</th>
<th>HS.HS Human Sustainability -</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS.HS Human Sustainability -</td>
<td>4- mostly</td>
<td>HS.HS Human Sustainability -</td>
</tr>
<tr>
<td>HS.HS Human Sustainability -</td>
<td>4- mostly</td>
<td>HS.HS Human Sustainability -</td>
</tr>
<tr>
<td>HS.HS.a/How relevant is this crosscutting concept to the core idea?</td>
<td></td>
<td>HS.HS.b/Is the performance expectation too prescriptive or too vague?</td>
</tr>
<tr>
<td>4- mostly</td>
<td></td>
<td>3- appropriate</td>
</tr>
</tbody>
</table>
HS.HS.b/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

4- slightly more appropriate for a higher grade level

2- this practice paired with this core idea

4- mostly

HS.HS.b/How relevant is this crosscutting concept to the core idea?
<table>
<thead>
<tr>
<th>Question</th>
<th>Rating Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>1- much too vague 4- mostly</td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td>5- much more appropriate for a higher grade level</td>
</tr>
<tr>
<td>How grade-appropriate is this performance expectation?</td>
<td>1- much too vague 4- mostly</td>
</tr>
</tbody>
</table>

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**HS.HS Human Sustainability**

**HS.HS.b**

**HS.HS Human Sustainability**

**HS.HS.c**

**HS.HS Human Sustainability**

**HS.HS.c**

**HS.HS Human Sustainability**
Which of the following caused this performance expectation to be more appropriate for a higher grade level?
2- this practice paired with this core idea
2- slightly

How relevant is this crosscutting concept to the core idea?
2- this practice paired with this core idea
2- slightly

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
3- somewhat
<table>
<thead>
<tr>
<th>HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS.d/Is the performance expectation too prescriptive or too vague?</th>
<th>HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS.d/How grade-appropriate is this performance expectation?</th>
<th>HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2- somewhat too vague</td>
<td>5- much more appropriate for a higher grade level</td>
<td>1- the level of this core idea</td>
</tr>
<tr>
<td>Question</td>
<td>Rating</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>HS.HS Human Sustainability - How relevant is this crosscutting concept to the core idea?</td>
<td>4- mostly</td>
<td></td>
</tr>
<tr>
<td>HS.HS.d/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td>4- mostly</td>
<td></td>
</tr>
<tr>
<td>HS.HS Human Sustainability - Is the performance expectation too prescriptive or too vague?</td>
<td>3- appropriate</td>
<td></td>
</tr>
</tbody>
</table>
HS.HS Human Sustainability -

HS.HS Human Sustainability -

HS.HS.e/How grade-appropriate
is this performance expectation?

3- grade level appropriate

HS.HS.e/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

2- slightly

HS.HS.e/How relevant is this crosscutting concept to the core idea?
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? | 2- slightly  
                     3- appropriate  
  3- grade level appropriate                                            |
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

3- somewhat

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

4- mostly
<table>
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<tr>
<th>HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS,g/Is the performance expectation too prescriptive or too vague?</th>
<th>4- somewhat too prescriptive</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS.g/How grade-appropriate is this performance expectation?</th>
<th>5- much more appropriate for a higher grade level</th>
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<table>
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<tr>
<th>HS.HS Human Sustainability - HS.HS Human Sustainability - HS.HS,g/Which of the following caused this performance expectation to be more appropriate for a higher grade level?</th>
<th>1- the level of this core idea</th>
</tr>
</thead>
</table>
How relevant is this crosscutting concept to the core idea?
1- not at all

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
1- not at all
Suggest possible changes for those performance expectations that need additional work:

Is the performance expectation too prescriptive or too vague?
HS.ED Engineering Design -
Under Construction - HS.ED

HS.ED Engineering Design -
Under Construction - HS.ED

HS.ED Engineering Design -
Under Construction - HS.ED

HS.ED.a/Which of the following
caused this performance
expectation to be more
appropriate for a higher grade
level?

HS.ED.a/How grade-appropriate
is this performance
expectation?

HS.ED.a/How relevant is this
crosscutting concept to the
core idea?
HS.ED Engineering Design - Under Construction - HS.ED Engineering Design -  
HS.ED.a/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?  

HS.ED Engineering Design - Under Construction - HS.ED Engineering Design -  
HS.ED.b/Is the performance expectation too prescriptive or too vague?  

HS.ED Engineering Design - Under Construction - HS.ED Engineering Design -  
HS.ED.b/How grade-appropriate is this performance expectation?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?
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<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How relevant is this crosscutting concept to the core idea?</td>
<td><strong>HS.ED Engineering Design - Under Construction - HS.ED Engineering Design - HS.ED.c</strong></td>
</tr>
<tr>
<td>How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?</td>
<td><strong>HS.ED Engineering Design - Under Construction - HS.ED Engineering Design - HS.ED.d</strong></td>
</tr>
<tr>
<td>Is the performance expectation too prescriptive or too vague?</td>
<td><strong>HS.ED Engineering Design - Under Construction - HS.ED Engineering Design - HS.ED.d</strong></td>
</tr>
</tbody>
</table>
HS.ED Engineering Design - Under Construction - HS.ED

HS.ED Engineering Design - Under Construction - HS.ED

HS.ED Engineering Design - Under Construction - HS.ED

HS.ED.d/Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.ED.d/How relevant is this crosscutting concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

Is the performance expectation too prescriptive or too vague?

How grade-appropriate is this performance expectation?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
Is the performance expectation too prescriptive or too vague? How grade-appropriate is this performance expectation? Which of the following caused this performance expectation to be more appropriate for a higher grade level?
How relevant is this crosscutting concept to the core idea?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
HS.ED Engineering Design - Under Construction - HS.ED Engineering Design - Suggest possible changes for those performance expectations that need additional work:

HS.ETSS Links Among Engineering, Technology, Science and Society - Under Construction - HS.ETSS Links Among Engineering, Technology, Science and Society - HS.ETSS.a/Is the performance expectation too prescriptive or too vague?
How grade-appropriate is this performance expectation?

Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How relevant is this crosscutting concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea? Would meeting this performance expectation too prescriptive or too vague? Is the performance expectation too grade-appropriate?
Which of the following caused this performance expectation to be more appropriate for a higher grade level?

How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?
Is the performance expectation too prescriptive or too vague? How grade-appropriate is this performance expectation? Which of the following caused this performance expectation to be more appropriate for a higher grade level?
HS.ETSS Links Among Engineering, Technology, Science and Society - Under Construction - HS.ETSS Links Among Engineering, Technology, Science and Society - HS.ETSS.c/How relevant is this crosscutting concept to the core idea?

HS.ETSS Links Among Engineering, Technology, Science and Society - Under Construction - HS.ETSS Links Among Engineering, Technology, Science and Society - HS.ETSS.c/How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?

HS.ETSS Links Among Engineering, Technology, Science and Society - Under Construction - HS.ETSS Links Among Engineering, Technology, Science and Society - HS.ETSS.d/Is the performance expectation too prescriptive or too vague?
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Which of the following caused this performance expectation to be more appropriate for a higher grade level?

HS.ETSS Links Among Engineering, Technology, Science and Society - HS.ETSS.d/How relevant is this crosscutting concept to the core idea?
How well would meeting this performance expectation demonstrate a student's understanding of the disciplinary core idea?