CAST Practice Test Scoring Guide—Grade Five

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Introduction to Practice Test Scoring Guide

This California Science Test (CAST) practice test scoring guide offers details about the items, student response types, correct responses, and related scoring considerations for the practice test items. These items have been selected to show some of the new approaches to measuring the California Next Generation Science Standards (CA NGSS) that can be found in the assessment. The practice test items are not fully representative of all possible item types included in the CAST. The practice test covers a selection of items from performance expectations assessed in grade five.

This scoring guide should be used alongside the online practice tests, which can be accessed at [http://www.caaspp.org/practice-and-training/index.html](http://www.caaspp.org/practice-and-training/index.html). Annotated responses are also available to help explain the rationale for each score point on selected constructed response items from the practice test at [https://www.caaspp.org/ta-resources/practice-training.html](https://www.caaspp.org/ta-resources/practice-training.html).

The following information is presented in a metadata table. Metadata contains specific information about each item including the alignment of the item with the CA NGSS standards.

- **Item**: The question number that corresponds to the question as it appears in the practice test
- **Key**: Represents the correct answer(s) to the item or question and includes the score point value for the item and its parts (Items are worth either one or two points. For some technology-enhanced items, a screen capture of the correct answers is included. Exemplars and rubrics are provided for constructed response items.)
- **Performance Expectations (PE) Code**: References the standards that describe what students should know and be able to do
- **Science and Engineering Practices (SEP)**: Descriptions of behaviors that students engage in as they investigate the natural world and design solutions
- **Disciplinary Core Ideas (DCI)**: Essential ideas in the science disciplines that all students should understand
- **Crosscutting Concepts (CCC)**: Interdisciplinary skills students should exhibit that unify the study of science and engineering through common application across fields
- **Item-Level Claim Statement (ILCS)**: A brief statement that illustrates how an item aligns with the PE
### Example of Metadata

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>4-ESS2-1</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>ESS2.A Earth Materials and Systems</td>
<td>2. Cause and Effect</td>
<td>Describe and identify observations that are relevant to investigating the effects of weathering or the rate of erosion.</td>
</tr>
</tbody>
</table>
## Grade Five Practice Test Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>4-ESS2-1</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>ESS2.A Earth Materials and Systems</td>
<td>2. Cause and Effect</td>
<td>Describe and identify observations that are relevant to investigating the effects of weathering or the rate of erosion.</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>5-PS1-4</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>PS1.B Chemical Reactions</td>
<td>2. Cause and Effect</td>
<td>Identify the properties to observe or measure that provide evidence of chemical change that would be useful to the investigation.</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>4-PS3-1</td>
<td>6. Constructing Explanations and Designing Solutions</td>
<td>PS3.A Definitions of Energy</td>
<td>5. Energy and Matter</td>
<td>Use a model to construct an explanation of how the speed of an object is related to its energy.</td>
</tr>
</tbody>
</table>

Two-point item: **Part A:** D (1 point) **Part B:** the more energy can be transferred to the stopper (1 point)
### Item metadata table continuation showing items 5–9

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>D</td>
<td>4-ESS3-2</td>
<td>6. Constructing Explanations and Designing Solutions</td>
<td>ETS1.B Developing Possible Solutions</td>
<td>2. Cause and Effect</td>
<td>Select the most appropriate design solution for a volcanic warning system.</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>3-5-ET1-3</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>ETS1.B Developing Possible Solutions</td>
<td>N/A</td>
<td>Identify factors that would need to be controlled to get a satisfactory measure of the functioning of the prototype.</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
<td>5-ESS1-2</td>
<td>4. Analyzing and Interpreting Data</td>
<td>ESS1.B Earth and the Solar System</td>
<td>1. Patterns</td>
<td>Use the data to correctly identify patterns and make a prediction about shadow movements caused by the changing daily position of the sun.</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>3-LS4-2</td>
<td>6. Constructing Explanations and Designing Solutions</td>
<td>LS4.B Natural Selection</td>
<td>2. Cause and Effect</td>
<td>Describe an advantage that character variation may confer on an individual hare in an arctic ecosystem throughout the year.</td>
</tr>
</tbody>
</table>
Exemplars and rubric for item 9:

2 point

Exemplar(s):

White fur is good camouflage in the snow, so the arctic hare can hide more easily from predators.

OR

When the summer ends and winter comes the color changes from brown to white so the hare can hide from predators because it blends into the white snow.

OR

Rubric continues on the next page.
The brown fur would be easily seen by a mountain lion or fox, it is good that the fur changes color from brown to white so they can hide in the snow.

**Rubric:**

The response indicates that changing from a brown fur color to white fur coat color helps arctic hares hide (or be camouflaged) in the snow.

AND

The response indicates that white fur coat color protects arctic hares from predators.

1 point

**Exemplar(s):**

The white fur helps arctic hares hide in the snow.

OR

The white fur helps prevent the arctic hare from being eaten.

OR

If the fur stayed brown in the winter, the hare couldn't hide from any predator that would be after it.

**Rubric:**

*Rubric continues on the next page.*
The response indicates that white fur coat color helps arctic hares hide (or be camouflaged) in the snow.

OR

The response indicates that white fur coat color protects the hare from predators.

0 point

Exemplar(s):

The white fur is lighter so the hare can run away faster.

OR

The white fur helps the arctic hares survive in the winter.

OR

*I don’t know; I was never taught this.*

Rubric:

0-point should be awarded if a student attempts to answer the prompt but the response is incorrect or too vague (insufficient information provided) to receive credit

A score of 0 should also be given to responses that consist only of:

*Rubric continues on the next page.*
Rubric continues from previous page.

No relevant content provided

- no response is provided (e.g., blank)
- random keystrokes or nonsense verbiage
- punctuation mark(s) (e.g., “.”)

Student's opinion of the test

Direct copy of the stimulus without any attempt to answer

Opinions or comments about random topics

I don’t know, IDK (without further elaboration)

Responses that go on to provide an answer to the prompt should be scored based on the relevant part of the response.
### Item metadata table continuation showing items 10–13

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
</table>
| 10   | Row 1: Quiet, Least harmful to the environment  
Row 2: Low cost (1 point) | 3-5-ETS1-2 | 6. Constructing Explanations and Designing Solutions | ETS1.B Developing Possible Solutions | N/A | Identify which wants/needs the design solution meets and which it failed to meet when sampling aquatic organisms. |
| 12   | battery (1 point) | 4-PS3-4 | 6. Constructing Explanations and Designing Solutions | PS3.B Conservation of Energy and Energy Transfer | 5. Energy and Matter | Select the design solution that best tests a simple electrical circuit. |
| 13   | **First drop-down menu:** frozen  
**Second drop-down menu:** lakes (1 point) | 5-ESS2-2 | 5. Using Mathematics and Computational Thinking | ESS2.C The Role of Water in Earth's Surface Processes | 3. Scale, Proportion, and Quantity | Identify patterns or relationships revealed in the diagrams or graphs about the hydrosphere. |
### Item metadata table continuation showing items 14–15

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
</table>
| 14   | **Row 1:** Model of erosion by running water, Model of erosion by glaciers  
**Row 2:** Model of erosion by running water  
**Row 3:** Model of erosion by running water, Model of erosion by glaciers  
**Row 4:** Model of erosion by glaciers  
(1 point) | 5-ESS2-1  
| 15   | Fourth and fifth options  
(1 point) | 3-PS2-2  
(1 point) | 3. Planning and Carrying Out Investigations | PS2.A Forces and Motion | 1. Patterns | Identify the plan that will provide the best evidence of a pattern that can be used to make a prediction about future motion of a swing. |
Item metadata table continuation showing item 16

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td></td>
<td>3-LS3-2</td>
<td>6. Constructing Explanations and Designing Solutions</td>
<td>LS3.A Inheritance of Traits</td>
<td>2. Cause and Effect</td>
<td>Use data to support an explanatory account of the effects watering has on plant growth.</td>
</tr>
</tbody>
</table>

Exemplars and rubric for item 16:

**2 point**

**Exemplar(s):**

The plant that got watered every day, grew taller and had more flowers than the plant that only got watered once a week. That plant was short and had only a few flowers. So, water was the factor that made the plants different.

OR

Watering the plants daily compared to once a week, made the plants grow taller and have more flowers, than only watering them once a week. That plant didn't grow and didn't produce a lot of flowers.

*Rubric continues on the next page.*
Rubric continues from previous page.

Rubric:

The response includes that the traits for plant 1 are tall with lots of flowers and the traits for plant 2 are short with few flowers.

AND

The response includes that water is the factor that influences the traits.

1 point

Exemplar(s):

Plant 1 was watered daily and grew tall and had a lot of flowers.

OR

Watering plant 1 every day gave the plant what it needed to grow tall.

OR

Plant 2 was only watered once a week, so it didn’t grow tall and didn’t have a lot of flowers.

OR

The environment can affect the plants traits by having a lot of flowers or only a few flowers or by growing tall or staying short.

Rubric continues on the next page.
Rubric continues from previous page.

Rubric:

The response includes that the traits for plant 1 are tall with lots of flowers and the traits for plant 2 are short with few flowers.

OR

The response includes that water is the factor that influences the traits.

NOTE: 1 score point can be given to responses that state the traits of one plant (with no comparison to the other plant) and include water being that factor.

0 point

Exemplar(s):

Water supplies the plants with energy so they can grow and produce flowers.

OR

Plant 2 only got food once a week, that’s not enough for it to grow.

OR

Less water is better, so the plants don’t drown.

OR

*YTT%$#$D

Rubric continues on the next page.
Rubric continues from previous page.

OR

I don't know; I was never taught this.

Rubric:

0-point should be awarded if a student attempts to answer the prompt but the response is incorrect or too vague (insufficient information provided) to receive credit

A score of 0 should also be given to responses that consist only of:

No relevant content provided

- no response is provided (e.g., blank)
- random keystrokes or nonsense verbiage
- punctuation mark(s) (e.g., ".")

Student's opinion of the test

Direct copy of the stimulus without any attempt to answer

Opinions or comments about random topics

I don't know, IDK (without further elaboration)

Responses that go on to provide an answer to the prompt should be scored based on the relevant part of the response.

Additional annotated samples for this prompt can be found at https://www.caaspp.org/ta-resources/practice-training.html.
## Item metadata table continuation showing items 17–19

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Two-point item: Part A: First drop-down menu: June Second drop-down menu: January (1 point) Part B: C (1 point)</td>
<td>3-ESS2-1</td>
<td>4. Analyzing and Interpreting Data</td>
<td>ESS2.D Weather and Climate</td>
<td>1. Patterns</td>
<td>Use data represented in tables and graphical displays to describe typical weather conditions expected during a particular season.</td>
</tr>
<tr>
<td>18</td>
<td>C (1 point)</td>
<td>3-LS4-4</td>
<td>7. Engaging in Argument from Evidence</td>
<td>LS2.C Ecosystem Dynamics, Functioning, and Resilience</td>
<td>4. Systems and System Models</td>
<td>Evaluate the competing solutions and select the most appropriate one given certain criteria and constraints for reversing the decrease of the frog population.</td>
</tr>
<tr>
<td>19</td>
<td>First drop-down menu: different from Second drop-down menu: exists (1 point)</td>
<td>3-LS3-1</td>
<td>4. Analyzing and Interpreting Data</td>
<td>LS3.B Variation of Traits</td>
<td>1. Patterns</td>
<td>Analyze and interpret patterns in data about body length in hedgehogs to identify the inheritance of this trait.</td>
</tr>
</tbody>
</table>
Item metadata table continuation showing items 20–22

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>B (1 point)</td>
<td>5-PS1-1</td>
<td>2. Developing and Using Models</td>
<td>PS1.A Structure and Properties of Matter</td>
<td>3. Scale, Proportion, and Quantity</td>
<td>Develop a model that correctly portrays evaporation or condensation as the movement of particles in the air from or to a surface, respectively.</td>
</tr>
<tr>
<td>21</td>
<td>Need to Know Now: Amount of money in the budget and Types of plants that attract butterflies in the region Might Need to Know Later: How to expand the layout of the butterfly garden (1 point)</td>
<td>3-5-ETS1-1</td>
<td>1. Asking questions (for science) and defining problems (for engineering)</td>
<td>ETS1.A Defining and Delimiting an Engineering Problem</td>
<td>N/A</td>
<td>Select relevant constraints on potential solutions.</td>
</tr>
</tbody>
</table>
### Item metadata table continuation showing items 23–27

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
</table>
| 23   | Two-point item:  
Part A: B  
(1 point)  
Part B: decomposers  
| 24   | First drop-down menu: above the shoulder  
Second drop-down menu: below the waist  
(1 point) | 4-PS4-1 | 2. Developing and Using Models | PS4.A Wave Properties | 1. Patterns | Select the components to develop a wave model that illustrates/explains the volume level of sound waves. |
| 25   | A  
(1 point) | 5-PS2-1 | 7. Engaging in Argument from Evidence | PS2.B Types of Interactions | 2. Cause and Effect | Describe the force that causes falling objects to move toward the Earth’s center. |
| 26   | C  
(1 point) | 4-LS1-1 | 7. Engaging in Argument from Evidence | LS1.A Structure and Function | 4. Systems and System Models | Identify the correct claim that was missing from the argument about the structural function of cacti. |
| 27   | A  
(1 point) | 3-LS3-1 | 4. Analyzing and Interpreting Data | LS3.B Variation of Traits | 1. Patterns | Identify the patterns in the variation between the parents and the offspring. |
Grade Five Practice Test Items

Item metadata table continuation showing items 28–29

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>First, third, and fifth options (1 point)</td>
<td>3-LS3-2</td>
<td>6. Constructing Explanations and Designing Solutions</td>
<td>LS3.B Variation of Traits</td>
<td>2. Cause and Effect</td>
<td>Use data to refute an explanatory account of a different dairy production between cattle ranches.</td>
</tr>
<tr>
<td>29</td>
<td>Exemplars and rubric provided below.</td>
<td>3-LS3-1</td>
<td>4. Analyzing and Interpreting Data</td>
<td>LS3.B Variation of Traits</td>
<td>1. Patterns</td>
<td>Identify patterns in the data about production rates in different cattle ranches.</td>
</tr>
</tbody>
</table>

Exemplars and rubric for item 29:

2 point

Exemplar(s):

Cows A, B, C at the McCoy farm made less milk in April than in March while at the Origin farm, while cows at the Kim farm made more milk in April than at the Origin farm.

OR

Cows A, B, and C made more milk in March while cows D, E, and F made less milk in March. The Kim farm cows made more milk in April, while the McCoy cows made less milk in April.

OR

Rubric continues on the next page.
Rubric continues from previous page.

Cows A, B, and C made less milk at the McCoy farm than at the Origin farm and Cows D, E, and F produced more milk at the Kim farm than at the Origin farm.

Rubric:

The response includes that the amount of milk produced by Cows A, B, and C went down from March to April.

AND

The response includes that the milk produced by Cows D, E, and F went up from March to April.

NOTE: Responses that reference the name of the farms, without a reference to the months, should receive score points as shown in the third exemplar.

1 point

Exemplar(s):

The amount of milk that cows A, B, and C made went down in April when compared to March.

OR

Cows D, E, and F made more milk in April than they did in March.

OR

Cows at the McCoy farm produced less milk than at the Origin farm.

OR

Rubric continues on the next page.
Cows at the Kim farm made more milk in April than they did when they were at the Origin farm.

**Rubric:**

The response includes that the amount of milk produced by Cows A, B, and C went down from March to April.

OR

The response includes that the milk produced by Cows D, E, and F went up from March to April.

*0 point*

**Exemplar(s):**

The cows at the McCoy farm didn’t produce any milk in April.

OR

Cows A, B and C made more milk when they were with Cows D, E and F.

OR

They should not have moved the cows to a different farm.

OR

*\&YTT%$#$D*

*Rubric continues on the next page.*
Rubric continues from previous page.

OR

I don't know; I was never taught this.

Rubric:

0-point should be awarded if a student attempts to answer the prompt but the response is incorrect or too vague (insufficient information provided) to receive credit

A score of 0 should also be given to responses that consist only of:

No relevant content provided

• no response is provided (e.g., blank)
• random keystrokes or nonsense verbiage
• punctuation mark(s) (e.g., “.”)

Student's opinion of the test

Direct copy of the stimulus without any attempt to answer

Opinions or comments about random topics

I don't know, IDK (without further elaboration)

Responses that go on to provide an answer to the prompt should be scored based on the relevant part of the response.
## Item metadata table continuation showing items 30–34

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>D</td>
<td>3-LS3-2</td>
<td>6. Constructing Explanations and Designing Solutions</td>
<td>LS3.A Inheritance of Traits</td>
<td>2. Cause and Effect</td>
<td>Make a qualitative conclusion regarding the relationships between dependent and independent variables based on data from dairy production ranches.</td>
</tr>
<tr>
<td>31</td>
<td>First drop-down menu: McCoy Second drop-down menu: April (1 point)</td>
<td>3-LS3-2</td>
<td>6. Constructing Explanations and Designing Solutions</td>
<td>LS3.A Inheritance of Traits</td>
<td>2. Cause and Effect</td>
<td>Make a qualitative conclusion regarding the relationships between dependent and independent variables in a dairy ranch.</td>
</tr>
<tr>
<td>32</td>
<td>First drop-down menu: move toward Kristen Second drop-down menu: unbalanced (1 point)</td>
<td>3-PS2-2</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>PS2.A Forces and Motion</td>
<td>1. Patterns</td>
<td>Use the data or observations to make a prediction about future motion.</td>
</tr>
<tr>
<td>33</td>
<td>A</td>
<td>3-PS2-2</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>PS2.A Forces and Motion</td>
<td>1. Patterns</td>
<td>Identify the data that explains an observation of the rope.</td>
</tr>
<tr>
<td>34</td>
<td>C</td>
<td>3-PS2-1</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>PS2.B Types of Interactions</td>
<td>2. Cause and Effect</td>
<td>Identify the data that explains an observation of the rope.</td>
</tr>
</tbody>
</table>
Item metadata table continuation showing item 35–36

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>First drop-down menu: increase</td>
<td>3-PS2-1</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>PS2.A Forces and Motion</td>
<td>2. Cause and Effect</td>
<td>Use the data or observations to make a prediction about future motion.</td>
</tr>
<tr>
<td></td>
<td>Second drop-down menu: moves toward Maria (1 point)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Exemplars and rubric provided below.</td>
<td>3-PS2-2</td>
<td>3. Planning and Carrying Out Investigations</td>
<td>PS2.A Forces and Motion</td>
<td>1. Patterns</td>
<td>Identify and describe observations that support a given prediction of future motion.</td>
</tr>
</tbody>
</table>

Exemplars and rubric for item 36:

2 point

**Exemplar(s):**

Since John and Pablo are providing a balanced force and Kristen and Maria are providing an unbalanced force where the force is bigger in Kristen’s direction, the total force will be unbalanced towards Kristen’s team.

OR

The practice results show that Kristen’s force combined with Pablo’s is going to be greater than Maria’s force combined with John’s. So the unbalanced forces result in Kristen and Pablo winning.

*Rubric continues on the next page.*
Rubric continues from previous page.

Rubric:

The response includes all four of the forces each student contributes to the combined overall force of the team

- Kristen pulls with the most force / is strongest / beats everyone.
- Maria pulls with more force than Pablo or John but less than Kristen.
- Pablo and John pull with the same force / are weaker than Kristen or Maria.

1 point

Exemplar(s):

Kristen beat Maria, so Kristen applies a larger force to the rope than Maria does.

OR

Pablo and John apply equal forces and don’t make a difference.

Rubric continues on the next page.
Rubric continues from previous page

Rubric:

The response includes two to three of the forces each student contributes to the combined overall force of the team:

- Kristen pulls with the most force / is strongest / beats everyone.
- Maria pulls with more force than Pablo or John but less than Kristen.
- Pablo and John pull with the same force / are weaker than Kristen or Maria.

0 point

Exemplar(s):

Kristen’s team wins because they pull harder.

OR

The boys are stronger than the girls.

OR

Kristen’s team wins if you add up the results.

Rubric continues on the next page.
Rubric continues from previous page

OR

*YTT%#$D

OR

I don’t know; I was never taught this.

Rubric:

0-point should be awarded if a student attempts to answer the prompt but the response is incorrect or too vague (insufficient information provided) to receive credit.

A score of 0 should also be given to responses that consist only of:

No relevant content provided

- no response is provided (e.g., blank)
- random keystrokes or nonsense verbiage
- punctuation mark(s) (e.g., “.”)

Student’s opinion of the test

Direct copy of the stimulus without any attempt to answer

Opinions or comments about random topics

I don’t know, IDK (without further elaboration)

Responses that go on to provide an answer to the prompt should be scored based on the relevant part of the response.
<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>PE</th>
<th>SEP</th>
<th>DCI</th>
<th>CCC</th>
<th>ILCS</th>
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</table>
| 37   | First drop-down menu: hydrosphere  
| 38   | changed over time (1 point) | 4-ESS1-1 | 6. Constructing Explanations and Designing Solutions | ESS1.C The History of Planet Earth | 1. Patterns | Describe the reasoning for how the data support an explanation of marine fossils found in a terrestrial location. |
| 39   | C   (1 point) | 4-ESS1-1 | 6. Constructing Explanations and Designing Solutions | ESS1.C The History of Planet Earth | 1. Patterns | Describe the reasoning to support an explanation of fossil deposition and stratigraphy. |
| 40   | D   (1 point) | 4-ESS1-1 | 6. Constructing Explanations and Designing Solutions | ESS1.C The History of Planet Earth | 1. Patterns | Identify data that support the explanation of fossil deposition. |
Exemplars and rubric for item 41:

2 point

Exemplar(s):

The marine fossil layer of rock is older than the land fossil layer because the marine fossils are in the lower layer of rock. The landscape where the rock was formed changed from water to land.

OR

The rock layer with the marine fossils is older because it’s at the bottom. When the lower layer of rock was forming the area was an ocean, but it changed to land over time.

Rubric:

The response includes that the rock layer with marine fossils is older than the layers with land fossils.

AND

The response includes that the landscape where the rock formed changed from being an ocean to a land environment.

Rubric continues on the next page.
Rubric continues from previous page.

1 point

Exemplar(s):

The bottom layer of rock is the oldest.

OR

The rock layer with the marine fossils is older because it was formed first.

OR

The earth was once an ocean when the fossils formed and it is now land, so that’s why we find ocean fossils on the land.

Rubric:

The response includes that the rock layer with the marine fossils is older than the layers with the land fossils.

OR

The response includes that where the rock formed was an ocean and it changed to land.

0 point

Exemplar(s):

The rocks were moved by plate tectonics.

OR

Rubric continues on the next page.
Rubric continues from previous page.
The rock layers have all kinds of fossils in them.

OR

The land fossils are older because they are found in the higher layers.

OR

*YTT%$#$D

OR

I don’t know; I was never taught this.

Rubric:

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Student’s opinion of the test

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Direct copy of the stimulus without any attempt to answer
Opinions or comments about random topics
I don’t know, IDK (without further elaboration)
Responses that go on to provide an answer to the prompt should be scored based on the relevant part of the response.
Additional annotated samples for this prompt can be found at https://www.caaspp.org/ta-resources/practice-training.html.