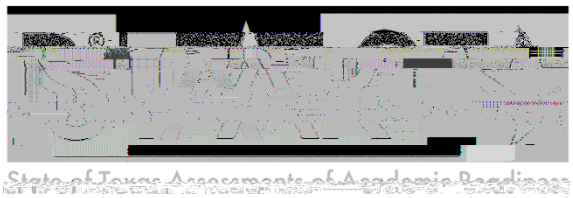

Grade 5
Science

Short Constructed-Response Scoring Guide

Spring 2024

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General Information

Beginning with the 2022–2023 school year, science assessments include short constructed-response questions at every assessed grade level. Students are asked to provide a short response to a question. Responses are scored using a prompt-specific, two-point rubric.

This State of Texas Assessments of Academic Readiness (STAAR®) constructed-response scoring guide provides student exemplars at all score points for a short constructed-response question from the STAAR grade 5 science operational test. The question is presented as it appeared on the test, and responses were scored based on the two-point rubric that was developed with the input of Texas educators. A response earns a specific score point based on the completeness of the response provided as measured against the rubric.

The responses in this guide are actual student responses submitted online during the testing window. To protect the privacy of individual students, all names and other references of a personal nature have been altered or removed. Otherwise, the responses appear as the students wrote them and have not been modified.

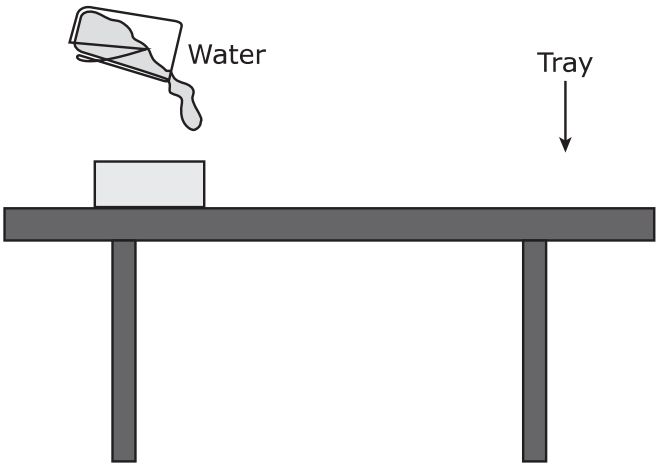
Grade 5 Science Short Constructed Response

Prompt

A group of students created a model to demonstrate some of the processes involved in the formation of sedimentary rock. The students used this procedure to create the model:

1. Put some sand into a rectangular tray and create a hill at one end with the sand.
2. Raise the end of the tray with the hill of sand by placing a block of wood under it.
3. Create a channel in the sand from the top of the sand hill to the bottom of the sand hill.
4. Pour water into the tray so that it flows through the channel.
5. Observe how the flowing water affects the sand.

The model is shown in the diagram.



Which TWO processes of sedimentary rock formation are being modeled AND how are they being modeled?

Read the procedure and look at the diagram carefully. Then enter your answer and explanation in the box provided.

Sample Student Responses

Score Point 0

Response 1

erosin is happening were they poor the water and condensation is happening because of the w ater

The response is incorrect or irrelevant and demonstrates little to no understanding. It includes neither of the required elements. Only one correct process is identified, and no correct description of the process is provided.

Erosion is correctly identified as a process, but the description of how this process is modeled is insufficient (Òerosin is happening were they poor the waterÓ). This is a step in creating the model, not a description of the process being modeled.

Condensation is not a process being modeled, so no correct description of how it is being modeled can be given (Ò condensation is happening because of the waterÓ).

Response 2

Number three and four because it tells you how they creat a sedimentary rock.

The response is incorrect or irrelevant and demonstrates little to no understanding. It includes neither of the required elements.

No processes are identified, nor any descriptions of how the processes are modeled (ÒNumber three and four because it tells you how they creat a sedimentary rockÓ). Including references to numbers may be referring to the numbered steps in creating the model shown in the prompt, but without additional explanation, these are vague and irrelevant, and no credit can be given.

Response 3

The two type of sedimentary rocks are sedimentary and dissovel rock they are made by a hill with dead orgamisms are covered by layer of dirt for millions of years .

The response is incorrect or irrelevant and demonstrates little to no understanding. It includes neither of the required elements.

No processes are identified , and the description provided is an attempt to discuss fossil fuel formation (Òthey are made by a hill with dead orgamisms are covered by layer of dirt for millions of yearsÓ). This is irrelevant to this prompt, and no credit can be given.

Response 4

The two processes they are showing for the formation of sedimentary rock is that they are making the layers by putting the sand then puutting a rock under one side of the tray to make then and then doing it again and again while addin g the water and sand to stack

Score Point 1

Response 1

Weathering and deposition are being modeled. I know this because weathering is the formation of moving sediments and the water is carrying the sand with it. I also think that deposition is being modeled in this image because deposition is the formation of dropping off sediments and as you can see the water ended up by the end of the channel.

The response addresses half of the question correctly and demonstrates partial understanding. The student identifies and correctly describes ONE valid process being modeled. While two correct processes are included, only one is correctly described.

- Deposition is correctly identified as a process, and how it is modeled is correctly described (Ò deposition is the formation of dropping off sediments and as you can see the water ended up by the end of the channelÓ).

Weathering is correctly identified as a process, but how it is modeled is incorrectly described (Òweathering is the formation of moving sediments and the water is carrying the sand with itÓ). The description of weathering does not describe the breaking down or wearing away of sand.

Response 2). e).

its creating a delta and erosion where it transfers sediments from one place to another.

Response 4

One of the two processes of the formation of sedimentary rock formation is a body of water moves sand and rocks from a place to another and then pressurse it alltogether and dose it again and again. The second way is the wind moves rocks and sannd and then pressures it together.

The response addresses half of the question correctly and demonstrates partial understanding. The student correctly describes TWO valid processes being modeled without identifying the processes .

- Correct descriptions of how erosion and compaction are modeled are provided, but no attempt is made to provide the process names. Although the response does not identify the process of erosion, it accurately and correctly describes the process being modeled (Òwater moves sand and rocks from a place to anotherÓ) and sufficiently and correctly describes the process of compaction as it is being modeled (Òand then pressurse it alltogetherÓ). The additional discussion of wind eroding sand (ÒThe second way is the wind moves rocks and sanndÓ) is not relevant and does not impact the score.

Response 3

The two processes of sedimentary rock are erosion and compaction. In this model, it mainly shows what happens during erosion, but it does include compaction as well. While the water is flowing down, itÕs moving the sand with it, causing erosion. When the s and reachs the bottom, the water flowing down pushes down on the sand while pressure begins, causing compaction.

The response demonstrates complete and correct understanding. It includes each of the two required elements: correctly identifies TWO processes of sedimentary rock formation that are being modeled in the prompt diagram , AND correctly describes how each of the two processes are being modeled.

- Erosion is correctly identified as a process (ÒerosionÓ), and how this process is modeled is correctly described (ÒWhile the water is flowing down, itÕs moving the sand with it, causing erosionÓ).
- Compaction is correctly identified as a process (Òand compactionÓ), and a complete description of how this process is modeled is provided (ÒWhen the sand reachs the bottom, the water flowing down pushes down on the sand while pressure begins, causing compactionÓ).

Response 4

first when the water droped down it broke the sand down ,weathering,. second the water carred the sand away,erosion,.Finaly the sand is droped into a new location,deposition,.

The response demonstrates complete and correct understanding. It includes each of the two required elements: correctly identifies TWO processes of sedimentary rock formation that are being modeled in the prompt diagram, AND correctly describes how each of the two processes are being modeled. Although the student need only provide two processes, three are given and sufficiently explained.

- Erosion is correctly identified as a process, and how it is modeled is correctly described (Òsecond the water carred the sand away,erosionÓ).
- Deposition is correctly identified as a process, and how it is modeled is correctly described (ÒFinaly the sand is droped into a new location,depositionÓ).
- Weathering is correctly identified as a process, and how it is modeled is correctly described (Ò first when the water droped down it broke the sand down ,weatheringÓ).