



Coherence and Alignment Among Science Curriculum, Instruction, and Assessment (CASCIA) Project

Grade 5 Unit 3: Earth Systems and the Solution of Water Problems

Task 2 Prompt 2 Scored and Annotated Anchor Set

May 2025

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CASCIA Grade 5 EOU Assessment 3 Task 2: Searching for Freshwater

Prompt 2 Score Point 4

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) distinct interaction between two different spheres AND The distinct interaction includes both required aspects	Response includes two (2) distinct interactions between two different spheres AND At least one (1) of the two (2) distinct interactions includes both required aspects	Response includes three (3) distinct interactions between two different spheres AND At least two (2) of the three (3) distinct interactions include both required aspects	Response includes three (3) distinct interactions between two different spheres AND Each interaction includes the following aspects: - Identification of the components related to each sphere in the interaction AND - Description of how one component interacts with the other

Score Point 4 (3/3 aspects met)

- Includes **three (3)** distinct interactions between two different spheres.
- Identifies the components related to each sphere in the interaction.
- Includes a description of how one component interacts with the other.

Prompt 2

Josh and his friends leave the meadow and continue hiking. They hear fast-moving water before they see a stream. When they reach the stream, they see sand and pebbles tumbling along the bottom. As the water moves downstream, it carries twigs, leaves, and bits of soil. In sheltered water pools, insects hover in the air above the water. Toads are along the bank. A large fish is just under the water's surface.

Identify three interactions among the Earth's spheres that Josh and his friends observe.

For each interaction:

- Identify two spheres that interact.
- Describe the interactions of the components of the two spheres.

Interaction 1.

The Biosphere (sphere) is interacting with the Hydrosphere (sphere)

when the fish is in the water.

Interaction 2.

The Hydrosphere (sphere) is interacting with the Geosphere (sphere)

when the water that is flowing moves the rocks and sand downstream.

Interaction 3.

The Biosphere (sphere) is interacting with the Atmosphere (sphere)

when the insects are flying in the air.

CASCIA Grade 5 EOU Assessment 3 Task 2: Searching for Freshwater

Prompt 2 Score Point 3

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) distinct interaction between two different spheres AND The distinct interaction includes both required aspects	Response includes two (2) distinct interactions between two different spheres AND At least one (1) of the two (2) distinct interactions includes both required aspects	Response includes three (3) distinct interactions between two different spheres AND At least two (2) of the three (3) distinct interactions include both required aspects	Response includes three (3) distinct interactions between two different spheres AND Each interaction includes the following aspects: - Identification of the components related to each sphere in the interaction AND - Description of how one component interacts with the other

Score Point 3 (2/2 aspects met)

- Includes **three (3)** distinct interactions between two different spheres.
- Correctly identifies **two (2)** of the **three (3)** distinct interactions that include both required aspects.

NOTE: The second interaction does not describe the interaction of the toad, a component of the biosphere interacts with a component of the hydrosphere. Rater describes the toad's interaction with the bank (i.e., geosphere).

Prompt 2

Josh and his friends leave the meadow and continue hiking. They hear fast-moving water before they see a stream. When they reach the stream, they see sand and pebbles tumbling along the bottom. As the water moves downstream, it carries twigs, leaves, and bits of soil. In sheltered water pools, insects hover in the air above the water. Toads are along the bank. A large fish is just under the water's surface.

Identify **three** interactions among the Earth's spheres that Josh and his friends observe.

For **each** interaction:

- Identify two spheres that interact
- Describe the interactions of the components of the two spheres

Interaction 1.

The hydrosphere (sphere) is interacting with the geosphere (sphere)

when the pebbles are tumbling down the stream which makes sand

Interaction 2.

The biosphere (sphere) is interacting with the hydrosphere (sphere)

when the toad is along the bank

Interaction 3.

The hydrosphere (sphere) is interacting with the biosphere (sphere)

when a large fish is in the water

CASCIA Grade 5 EOU Assessment 3 Task 2: Searching for Freshwater

Prompt 2 Score Point 2

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) distinct interaction between two different spheres AND The distinct interaction includes both required aspects	Response includes two (2) distinct interactions between two different spheres AND At least one (1) of the two (2) distinct interactions includes both required aspects	Response includes three (3) distinct interactions between two different spheres AND At least two (2) of the three (3) distinct interactions include both required aspects	Response includes three (3) distinct interactions between two different spheres AND Each interaction includes the following aspects: - Identification of the components related to each sphere in the interaction AND - Description of how one component interacts with the other

Score Point 2 (2/2 aspects met)

- Response includes **two (2)** distinct interactions between two different spheres.
- Two (2)** distinct interactions that include **both** required aspects.

NOTE: The third interaction describes an interaction between the hydrosphere and geosphere, not the biosphere.

Prompt 2

Josh and his friends leave the meadow and continue hiking. They hear fast-moving water before they see a stream. When they reach the stream, they see sand and pebbles tumbling along the bottom. As the water moves downstream, it carries twigs, leaves, and bits of soil. In sheltered water pools, insects hover in the air above the water. Toads are along the bank. A large fish is just under the water's surface.

Identify **three** interactions among the Earth's spheres that Josh and his friends observe.

For each interaction:

- Identify two spheres that interact
- Describe the interactions of the components of the two spheres

Interaction 1.

The Atmosphere (sphere) is interacting with the Biosphere (sphere)
 when the carbon dioxide in the air feeds the grass to help it grow.

Interaction 2.

The Biosphere (sphere) is interacting with the Hydrosphere (sphere)
 when the sheep drink the water out of a freshwater spring.

Interaction 3.

The Hydrosphere (sphere) is interacting with the Biosphere (sphere)
 when the snow affects plants and animals by making the ground wet and cold.

CASCIA Grade 5 EOU Assessment 3 Task 2: Searching for Freshwater

Prompt 2 Score Point 1

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) distinct interaction between two different spheres AND The distinct interaction includes both required aspects	Response includes two (2) distinct interactions between two different spheres AND At least one (1) of the two (2) distinct interactions includes both required aspects	Response includes three (3) distinct interactions between two different spheres AND At least two (2) of the three (3) distinct interactions include both required aspects	Response includes three (3) distinct interactions between two different spheres AND Each interaction includes the following aspects: - Identification of the components related to each sphere in the interaction AND - Description of how one component interacts with the other

Score Point 1 (2/2 aspects met)

- Response includes at least **one (1)** distinct interaction between two different spheres (i.e., hydrosphere and geosphere).
- The one distinct interaction identifies and describes how the components interact with the other (i.e., “the river picks up the rocks”).

Prompt 2

Josh and his friends leave the meadow and continue hiking. They hear fast-moving water before they see a stream. When they reach the stream, they see sand and pebbles tumbling along the bottom. As the water moves downstream, it carries twigs, leaves, and bits of soil. In sheltered water pools, insects hover in the air above the water. Toads are along the bank. A large fish is just under the water's surface.

Identify **three** interactions among the Earth's spheres that Josh and his friends observe.

For each interaction:

- Identify two spheres that interact
- Describe the interactions of the components of the two spheres

Interaction 1.

The Hydrosphere (sphere) is interacting with the geosphere (sphere)
when the river picks up the rocks.

Interaction 2.

The Hydrosphere (sphere) is interacting with the _____ (sphere)
when _____

Interaction 3.

The _____ (sphere) is interacting with the _____ (sphere)
when _____

CASCIA Grade 5 EOU Assessment 3 Task 2: Searching for Freshwater

Prompt 2 Score Point 0

Prompt 2 Rubric

Prompt	Score Point 0	Score Point 1	Score Point 2	Score Point 3	Score Point 4
Prompt 2	No aspect of the response is correct	Response includes one (1) distinct interaction between two different spheres AND The distinct interaction includes both required aspects	Response includes two (2) distinct interactions between two different spheres AND At least one (1) of the two (2) distinct interactions includes both required aspects	Response includes three (3) distinct interactions between two different spheres AND At least two (2) of the three (3) distinct interactions include both required aspects	Response includes three (3) distinct interactions between two different spheres AND Each interaction includes the following aspects: - Identification of the components related to each sphere in the interaction AND - Description of how one component interacts with the other

Score Point 0 (0/2 aspects met)

- Does **NOT** include a distinct interaction between two different spheres.
- Does **NOT** identify and describe how any component interacts with the other.

Prompt 2

Josh and his friends leave the meadow and continue hiking. They hear fast-moving water before they see a stream. When they reach the stream, they see sand and pebbles tumbling along the bottom. As the water moves downstream, it carries logs, leaves, and lots of small sheltered water pools. Insects hover in the air above the water. Toads are along the bank. A large fish is just under the water's surface.

Identify three interactions among the Earth's spheres that Josh and his friends observe.

For each interaction:

- Identify two spheres that interact
- Describe the interactions of the components of the two spheres

Interaction 1.

The fast moving water is interacting with the stream
 (sphere) (sphere)
 when the water moves downstream.

Interaction 2.

The sand is interacting with the pebbles
 (sphere) (sphere)
when tumbling along the bottom

Interaction 3.

The logs and leaves is interacting with the soil
 (sphere) (sphere)
when sheltered water pools, insects hover in the air above the water, toads are along the bank, a big fish is just under the water's surface