

Incredible Journey Questions

1. Grades 3–5 Science Constructed Response Item

In the space below, draw a picture that shows the water cycle. Be sure to label and title your drawing.

2. Grades 3–5 Science Selected Response Item

Water needs which of the following in order to evaporate?

- | | |
|-----------------------|-----------------|
| A. Saturation | C. Condensation |
| B. Gravitational pull | D. Heat energy |

3. Grades 3–5 Science Constructed Response Item

Write a short story in the space below that describes your week as a water molecule. Tell what happened to you as you moved through the water cycle.

Incredible Journey Responses

1. Sample Top-Scoring Response

1. A drawing that shows a multidimensional water cycle. For example: Water condenses from clouds and falls on soil, into lakes or oceans, or as snow on a glacier. Water that falls on soil is absorbed by plants or percolates into an aquifer; plants conserve some water in cells and transpire other water out through leaves. Water that falls into lakes or rivers is consumed by animals. Water that falls on a glacier is frozen into the glacier.

4-Point Response

1. The student correctly represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.
2. The student demonstrates an understanding that the water cycle is multidimensional. Examples might include evaporation of water from

oceans, lakes, and rivers to clouds; runoff of water from land to rivers, lakes, and oceans; percolation of water from the ground surface into the soil and groundwater; seepage of groundwater into a river or lake; water flow from rivers to a lake or ocean; water absorbed by plant roots, water transpired by plants; water remaining in plant cells; water drunk by animals; water passed through animals by perspiring or urinating; animals conserving water in cells; water circulating in oceans; glacial ice melting and flowing into rivers or oceans, water evaporating into clouds, or percolating into the ground; water remaining locked in glaciers; or water clinging to dust particles in the air. The student correctly labels and titles the drawing.

3-Point Response

1. The student correctly represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.
2. The student correctly labels the drawing.
3. The student correctly titles the drawing.

OR

1. The student demonstrates an understanding that the water cycle is multidimensional, but does not sequence events properly. Examples might include evaporation of water from oceans, lakes, and rivers to clouds; runoff of water from land to rivers, lakes, and oceans; percolation of water from the ground surface into the soil and groundwater; seepage of groundwater into a river or lake; water flow from rivers to a lake or ocean; water absorbed by plant roots, water transpired by plants; water remaining in plant cells; animals drinking water; animals urinating or perspiring out water; animals conserving water in cells; water circulating in oceans; glacial ice melts and flows into rivers, evaporates into clouds, or percolates into the grounds; ice remains locked in glaciers; or water clinging to dust particles in the air.
2. The student correctly labels the drawing.
3. The student correctly titles the drawing.

2-Point Response

1. The student correctly represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.
2. The student correctly labels the drawing.

OR

1. The student correctly represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.
2. The student correctly titles the drawing.

1-Point Response

1. The student correctly represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.

OR

1. The student incorrectly represents the sequencing of water molecules through the water cycle.
2. The student correctly titles the drawing.

OR

1. The student incorrectly represents the sequencing of water molecules through the water cycle.
2. The student correctly labels the drawing.

Benchmark: Grades 3–5 — SC.A.1.2.2, SC.A.2.2.1, SC.D.1.2.3, SC.H.2.2.1

Difficulty Level: Grades 3–5 — Medium

2. **Correct Response:** E. Heat energy

Benchmarks: Grades 3–5 — SC.A.1.2.2, SC.D.1.2.3, SC.H.2.2.1

Difficulty Level: Grades 3–5 — Medium

3. Sample Top-Scoring Response

Hello. My name is Walter. I am a water molecule. Last week I was floating through the sky as an ice crystal in a cloud. A big wind blew my cloud over Florida, and I rained down on Gainesville. After sitting on the ground for a while, I sneaked between the sand grains in the soil and made my way into

the Floridan aquifer. A few days later, I was pumped up through a well and sprinkled on a person's yard. I sank back into the ground again, but a tree sucked me up through its roots. It pumped me up, up, up into its leaves. Then it transpired me out into the air. I kept rising higher and higher in the sky until finally I was back in a cloud. You just never know where you might end up as a water molecule. Life can be very exciting.

2-Point Response

1. The student correctly represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.
2. The student demonstrates an understanding that the water cycle is multidimensional. Examples might include a water molecule traveling two different routes from one location; a general indication that water molecule travels are not in narrowly established patterns, etc.

1-Point Response

The student correctly represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.

OR

1. The student *incorrectly* represents the sequencing of water molecules through the water cycle: evapotranspiration and transpiration to clouds to condensation as rain, sleet, or snow to percolation into soils and aquifers or runoff to rivers, lakes, and oceans to absorption by plants or consumption by animals, etc.
2. The student demonstrates an understanding that the water cycle is multidimensional. Examples might include a water molecule traveling two different routes from one location; a general indication that water molecule travels are not in narrowly established patterns, etc.

Benchmarks: **Grades 3–5 — SC.A.1.2.2, SC.A.2.2.1, SC.D.1.2.3, SC.H.2.2.1**

Difficulty Level: **Grades 3–5 — Easy**