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Battle Creek Area Mathematics and Science Center Summative Assessment - End of Unit Exam

Attached is the Summative Assessment for the Battle Creek Area Mathematics and Science Center Science Unit, *Earth's Land and Water*. This assessment includes a number of multiple-choice questions, two constructed response questions, and several items from the unit's Student Journal. Summative assessment of targeted concepts and skills provides feedback to the individual student and the teacher on conceptual understanding, demonstration of achievement of selected content, and determination of readiness for refinement and application of new knowledge and skills. The inclusion of the Student Journal items provides the opportunity to determine the level of understanding and ability of key knowledge and skills targeted in this unit. The Student Journal items evaluate individual student learning and the effectiveness of instruction. Rubrics are included in the Summative Assessment to ensure consistent scoring of the items. All components of this assessment provide multiple opportunities to assess student understanding of each science content expectation addressed in the unit.

The BCAMSC Summative Assessments are in draft form and may change based on student performance and teacher feedback. The BCAMSC Outreach Staff will use data collected from participating districts to make adjustments for the following school year.

If you have any questions or suggestions regarding the Summative Assessment, please direct your calls to Nancy Karre at (269) 965-9584 or email: nancy@bcamsc.org.



A S S E S S M E N T



Name _____



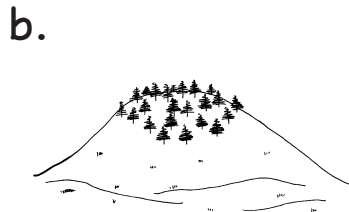
Date _____

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1. Choose the list that describes bodies of water on Earth.

- a. hill, valley, mountain, plain
- b. river, ocean, lake, pond
- c. clouds, rain, sleet, snow

2. Circle the picture that shows a plain.



3. Choose the word that describes the state of matter for water in a glass.

- a. solid
- b. liquid
- c. gas



Earth's Land and Water (cont.)

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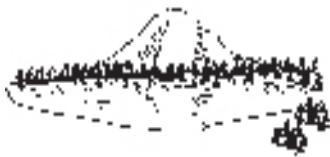
4. Choose the word that describes the state of matter for ice cubes.

- a. solid
- b. liquid
- c. gas

5. Choose the word that describes the state of matter for water vapor.

- a. solid
- b. liquid
- c. gas

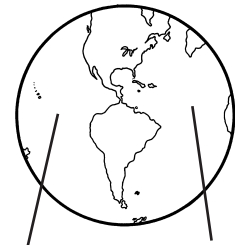
6. Circle the source of water that is not a source of drinking water.



a. lakes



b. rivers



ocean ocean

c. ocean



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7. Choose the **BEST** answer that describes the properties of water in its liquid state.
- a. cold, wet, melting, changing shape
 - b. invisible, foggy, dew, no definite shape
 - c. visible, flowing, takes shape of container

8. Choose the list of examples of water in its **SOLID** state.
- a. ice, snow, hail, sleet
 - b. rain, puddles, lakes, streams
 - c. fog, steam, dew, clouds

9. List two ways that you use water every day.

1. _____
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2. _____
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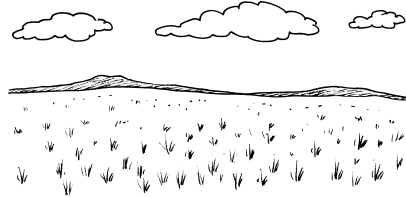
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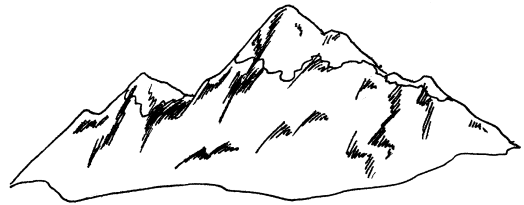
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11. Draw a line to match each picture to the correct word of that surface feature.

hill



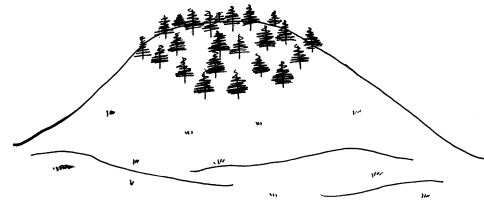
plain



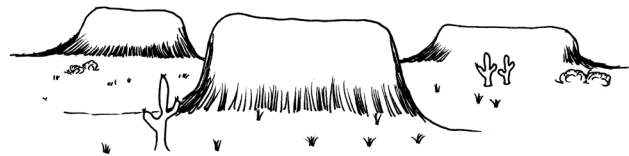
plateau



valley



mountain

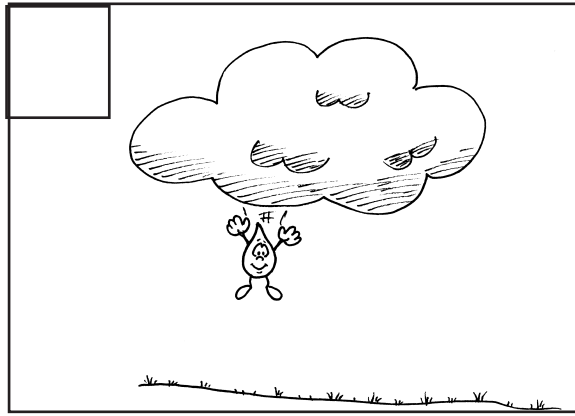
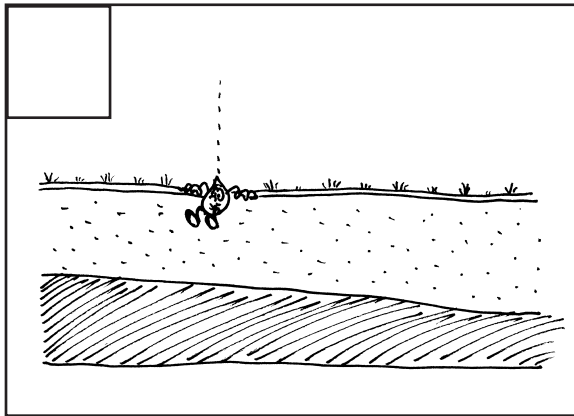
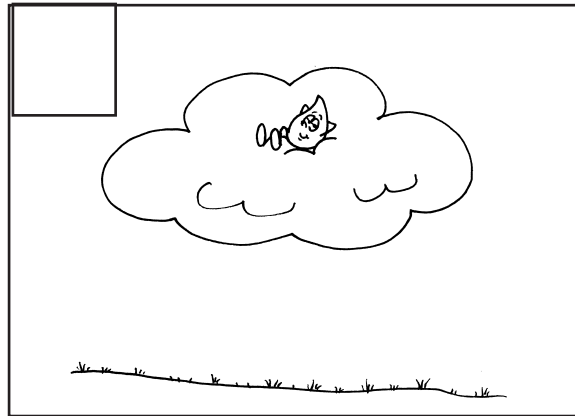
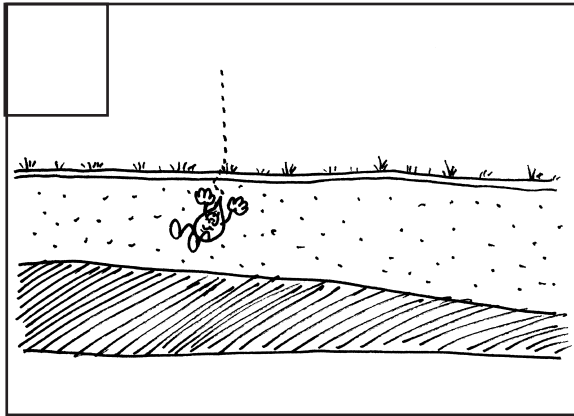




Earth's Land and Water
Answer Key (cont.)

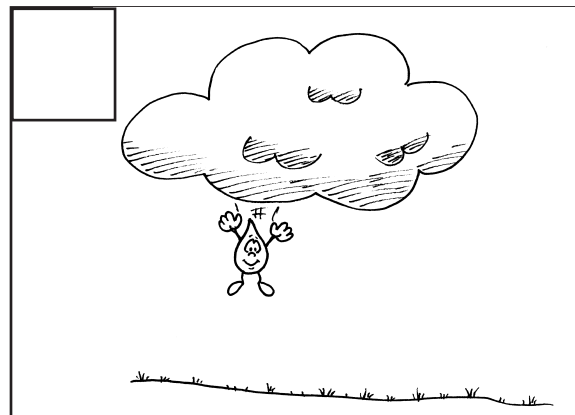
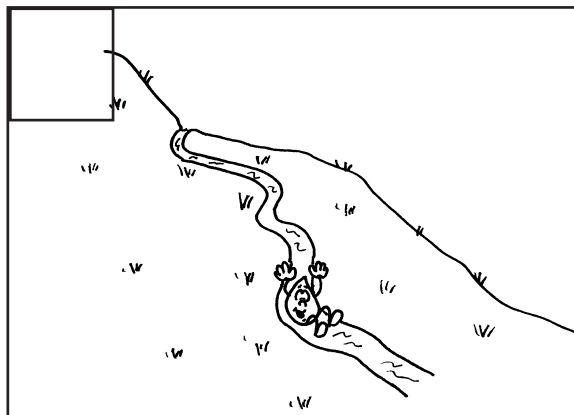
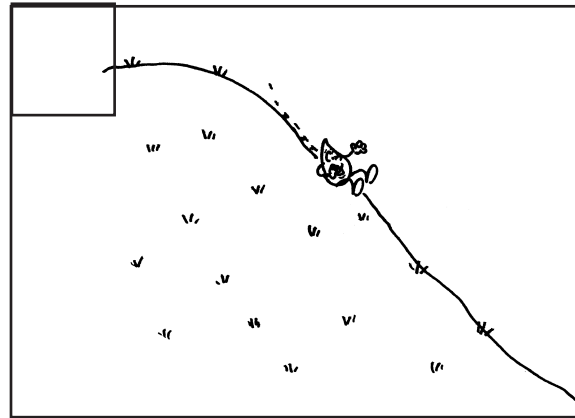
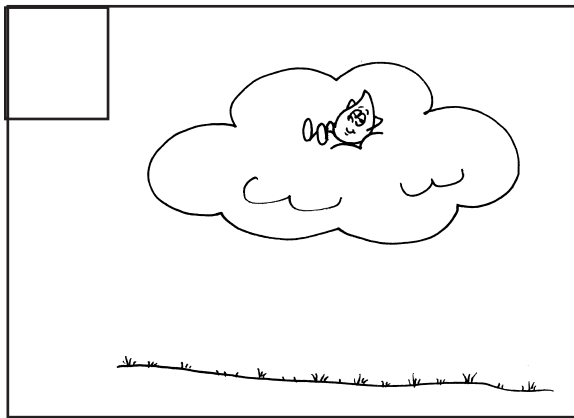
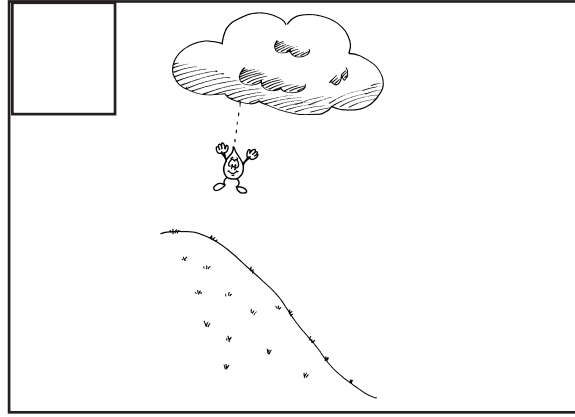
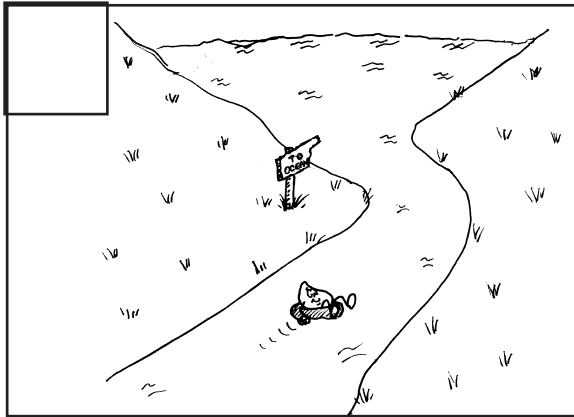
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12. Where does the raindrop go when it hits the flat ground? Write the correct order of the path of the raindrop. (1,2,3,4)





13. Where does the raindrop go when it falls on the side of a hill? Write the correct order of the path of the raindrop that falls on the side of the hill. (1,2,3,4,5,6)





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15. Complete the chart and write the properties of water as a liquid. Give at least three examples of water found on Earth as a liquid.

Properties of Water as a Liquid	Examples of Water as a Liquid



**Earth's Land and Water
Answer Key (cont.)**

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16. Complete the chart and write the properties of water as a solid. Give at least three examples of water found on Earth as a solid.

Properties of Water as a Solid	Examples of Water as a Solid



17. Draw and label one way water is used at home.



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Rubric for *Earth's Land and Water* Summative Assessment
(Total Possible Points - 44)

Question #1: *Choose the list that describes bodies of water on Earth.* (E.FE.02.22)

Answer: b (1 point)

Question #2: *Circle the picture that shows a plain.* (E.SE.02.21)

Answer: c (1 point)

Question #3: *Choose the word that describes the state of water for water in a glass.* (E.FE.02.13)

Answer: b (1 point)

Question #4: *Choose the word that describes the state of matter for ice cubes.* (E.FE.02.14)

Answer: a (1 point)

Question #5: *Choose the word that describes the state of matter for water vapor.* (E.FE.02.13, E.FE.02.14)

Answer: c (1 point)

Question #6: *Circle the source of water that is not a source of drinking water.* (E.FE.02.12)

Answer: c (1 point)

Question #7: *Choose the BEST answer that describes the properties of water in its liquid state.* (E.FE.02.13)

Answer: c (1 point)

Question #8: *Choose the list of examples of water in its SOLID state.* (E.FE.02.14)

Answer: a (1 point)



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Question #9: *List two ways that you use water every day.* (E.FE.02.12)

Elements:

- a. drinking (water, tea, Kool-Aid, juices, etc.)
- b. cleaning (dishes, clothes, bathing car wash, moping, etc.)
- c. cooking (soups, boiling pasta, steaming vegetables, baking, etc.)
- d. irrigation (lawn sprinkling)

Scoring (2 points)

2 - Response includes at least two elements

1 - Response includes one element

0 - No response, no elements, can't read the answer

Question #10: *Write about one way that drinking water can become polluted. Include how the pollution might reach the drinking water.* (E.FE.02.12, E.FE.02.21)

Elements

- a. oil spills
- b. toxic waste dumping
- c. litter
- d. factory waste
- e. agriculture (fertilizers, manure, pesticides, herbicides)
- f. other reasonable processes that lead to polluted water
- g. run-off into streams, rivers, and lakes
- h. run-off into the soil and ground water

Scoring (2 points)

2 - Response includes at least one reasonable representation of elements from a - f and one element from g - h

1 - Response includes only one element from a - h

0 - No response, no elements, can't read the answer



Summative Assessment: Student Journal

Question #11 - Activity #2, Journal Entry Question #1: *Draw a line to match each picture to the correct word of that surface feature.* (E.SE.02.21)

Elements

- a. hill - matched to 4th picture
- b. plain - matched to 1st picture
- c. plateau - matched to 5th picture
- d. valley - matched to 3rd picture
- e. mountain - matched to 2nd picture

Scoring (5 points)

- 5 - All terms and pictures are correctly matched
- 4 - Four terms and pictures are correctly matched
- 3 - Three terms and pictures are correctly matched
- 2 - Two terms and pictures are correctly matched
- 1 - One term and picture are correctly matched
- 0 - No response, no correctly matched terms and pictures

Question #12 - *Where does the raindrop go when it hits the flat ground? Write the correct order of the path of the raindrop.* Activity #4, "Where Does A Raindrop Go? Path 1:" (E.FE.02.21)

Elements (See Student Journal Answer Key)

- a. Four illustrations are in the correct order.
- b. Two illustrations are in the correct order.
- c. One illustration is in the correct order.

Scoring (4 points)

- 4 - Response includes element "a"
- 2 - Response includes element "b"
- 1 - Response includes element "c"
- 0 - No response, no correct order of illustrations



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Question #13 - *Where does the raindrop go when it falls on the side of a hill? Write the correct order of the path of the raindrop that falls on the side of the hill. Activity #4, "Where Does A Raindrop Go? Path 2:" (E.FE.02.21)*

Elements (See Student Journal Answer Key)

- a. Six illustrations are in the correct order.
- b. Four illustrations are in the correct order.
- c. Three illustrations are in the correct order.
- d. Two illustrations are in the correct order.
- e. One illustration is in the correct order.

Scoring (6 points)

- 6 - Response includes element "a"
- 4 - Response includes element "b"
- 3 - Response includes element "c"
- 2 - Response includes element "d"
- 1 - Response includes element "e"
- 0 - No response, no correct order of illustrations

Question #14 - *To show how lakes, rivers, ponds, and streams are formed, the students in a second grade class made a model and dripped water over different landforms made of sand and soil. Activity #4, Journal Entry Question #4: Write how the dripping water on the landforms shows how bodies of water are formed. (E.FE.02.21)*

Elements

- a. Rain collects on the surface of the Earth.
- b. Rain flows downhill over the surface of the landforms.
- c. Bodies of water are formed as streams, rivers, lakes, oceans, etc.

Scoring (3 points)

- 3 - Response includes all three elements
- 2 - Response includes two elements
- 1 - Response includes one element
- 0 - No response, no element, can't read the answer



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Question #15 - Activity #5, Journal Entry Question #1: *Complete the chart and write the properties of water as a liquid. Give at least three examples of water found on Earth as a liquid.* (E.FE.02.13)

Elements

- a. visible
- b. flowing (able to pour)
- c. shape of container
- d. rain
- e. dew
- f. fog
- g. other appropriate examples of water in its liquid state (clouds, puddles, lakes, rivers, streams, etc.)

Scoring (6 points)

- 6 - Response includes at least six elements
- 5 - Response includes five elements
- 4 - Response includes four elements
- 3 - Response includes three elements
- 2 - Response includes two elements
- 1 - Response includes one element
- 0 - No response, no elements, can't read the answer

Question #16 - Activity #5, Journal Entry Question #2: *Complete the chart and write and properties of water as a solid. Give at least three examples of water found on Earth as a solid.* (E.FE.02.14)

Elements

- a. hard
- b. visible
- c. frozen/cold
- d. keeps its own shape
- e. ice
- f. snow
- g. hail
- h. other appropriate examples of water as a solid (sleet, ice pond/rink, ice cubes, frozen bodies of water, iceberg, etc.)



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Scoring (6 points)

- 6 - Response includes at least six elements
- 5 - Response includes five elements
- 4 - Response includes four elements
- 3 - Response includes three elements
- 2 - Response includes two elements
- 1 - Response includes one element
- 0 - No response, no elements, can't read the answer

Question #17 - Activity #10, Journal Entry Question #1: *Draw and label one way water is used at home.*
(E.FE.02.12)

Elements

- a. Drawing includes one use of water in the home (cooking, cleaning, drinking, etc.)
- b. Drawing includes labels.

Scoring (2 points)

- 2 - Response includes both elements
- 1 - Response includes one element
- 0 - No response, no elements, can't read the answer