Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Class Period:\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_

Earth Wheel iQuest - Formative Assessment

**Background Knowledge: (3 points total)**

1. How would you describe water?

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2. How is water made?

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3. How did Earth get its water?

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**Read the article “Water’s Family Tree” and answer the following questions using complete sentences.**

1. What is the chemical formula for water? (1 pt)

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| H2O – two hydrogen atoms and one oxygen atom |
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2. Where are molecules of water created? (1 pt)

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| -created in space; hydrogen was present after the Big Bang, and |
| oxygen is created from dying stars |
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3. Why was it important for Earth to develop an atmosphere for water to exist on Earth? (1 pt)

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| -Earth’s atmosphere acts like a ‘lid’ to keep the water from |
| evaporating back into space |
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4. How do scientists think water arrived on Earth? (1 pt)

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| -bombardments from asteroids and comets |
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5. Why can’t we just combine two atoms of hydrogen and one atom of oxygen and make water? (2 pts)

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| -combining hydrogen and oxygen requires a source of energy like |
| electricity; hydrogen is flammable and oxygen supports  |
| combustion…the results would be a dangerous explosion |
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**Watch the video “The Water Cycle featuring Molecule Man” and answer the following questions using complete sentences.**

6. Name two parts of the water cycle that are being monitored using satellites and satellite data. (2 pt)

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| -precipitation |
| -condensation (cloud formation) |
| -evaporation (monitoring transpiration) |
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7. How much freshwater does a typical family in the United States use per day? (1 pt)

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| -one person uses over 100 gallons of water per day |
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8. How much freshwater is on Earth and where is most of the freshwater found (2 pts)

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| -the water on Earth is 3% freshwater and most of this water is |
| frozen in the polar ice caps |
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9. Why do scientists believe the cycling of water on Earth is speeding up? (1 pt)

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| -global warming; steadily increasing temps are impacting the |
| processes in the water cycle |
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