Name- Date- Period-

**Water Cycle Webquest: Student Capture Sheet**

**Go to** [**http://pmm.nasa.gov/education/interactive/water-cycle-webquest**](http://pmm.nasa.gov/education/interactive/water-cycle-webquest) **to find this webquest. You can also pull up the direct links on my blog:** <https://griffinsixthscience.weebly.com/mrs-sprinkle>

Let’s begin by following a molecule of water as it makes its way through the water cycle in this short animation. <http://pmm.nasa.gov/education/videos/tour-water-cycle>

* Is there a specific beginning or end in the water cycle? Why or why not?

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* What “powers” the water cycle?

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Scan the article titled, “The Water Cycle” from the following link to answer the questions below: <http://earthobservatory.nasa.gov/Features/Water/>

* How much of Earth’s water is found in our oceans? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* How much water is stored in polar icecaps, glaciers, and permanent snow? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* How much water is stored in groundwater, lakes, rivers, soil, and streams? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Why is the amount of freshwater on Earth important for human needs? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Next, click on “*A Multi-Phased Journey*” at the bottom of the page, and use that information to do the following:

* Look at the diagram of the hydrologic cycle, and use it to help you to write a paragraph (5 sentences) that explains how a droplet of water that falls as rain can move through the Earth. Be specific as you explain the processes (evaporation, condensation, transpiration) that occur because of the interaction across Earth.

Let’s learn more about how our water cycle is able to distribute both water and [heat](http://pmm.nasa.gov/education/glossary#heat) as it moves through the water cycle: <http://pmm.nasa.gov/education/videos/earths-water-cycle>. Watch this video before going to the next link/questions.

At this website, <http://pmm.nasa.gov/education/videos/water-cycle-heating-ocean>, you will find out more about how the oceans impact the water cycle.

* How are the land, air, and water heated each day? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Look at the second animation. Explain the differences that the data shows between the heating of the land and the water during the day and night cycle.

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The next website will focus on how evaporation and winds combine to move water from the oceans to the land. <http://pmm.nasa.gov/education/videos/water-cycle-steaming-air>

* How does the ocean lose water to the air? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Why doesn’t the water vapor just stay over the ocean? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Why don’t the oceans simply reabsorb the water that evaporates? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Why does more water evaporate off of oceans than off of land? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* About how long does [water vapor](http://pmm.nasa.gov/education/glossary#water_vapor) remain in the air? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

We know that everything needs freshwater to survive. Go to this site and find the answers to these questions:

<http://www.epa.gov/WaterSense/our_water/water_use_today.html>

* Where does the freshwater that you use in your home come from? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* About how much water does the average American family of four use per day in their home? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
* What percentage of water do we use for washing our clothing? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* What percentage of water do we use for flushing our toilets? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at the pie graph depicting how freshwater is used for industrial, agricultural, and electric water use, and use that information to answer these questions.

* What percentage more of water is used to provide us with electricity versus for irrigation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Do we use more freshwater in our homes or to provide us with electricity? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

At this website, <http://pmm.nasa.gov/education/videos/water-cycle-watering-land> you will find out the processes of condensation and precipitation. Read the description, and then answer these questions.

* How do clouds form? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* What role do clouds play in regulating Earth’s energy balance? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* About how much of Earth is covered by clouds at any one time? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* What is the ratio of water than falls on land as compared to the amount that falls onto the oceans? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Now sit back and enjoy this video about the water cycle and the importance of water to life on Earth. <http://pmm.nasa.gov/education/videos/water-water-everywhere>

Turn this in when you are done and complete your Ticket out the Door