

Brandon Valley School District

District Learning Plan

March 16-19, 2020

Grade 5 Science



Brandon Valley School District Distance Learning Plan

LESSON/UNIT: Water Cycle

SUBJECT/GRADE: Science/5th

DATES: March 16 - 19, 2020



What do students need to do?	Monday (3/16): *Read the attached "Water Cycle" article. *Complete the "Water Cycle Review" handout Tuesday (3/17): *Begin Water Cycle project (attached below) Wednesday (3/18): *Continue working on Water Cycle projects Thursday (3/19): *Finish Water Cycle project
What do students need to bring back when school resumes?	They need to return their completed water cycle project.
What standards do the lessons cover?	5-ESS2-2: Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. 5-ESS2-1: Develop a model describing the interaction of geosphere, biosphere, hydrosphere, and atmosphere.
What materials do students need? What extra resources can students use?	Students need the following attached handouts: <ul style="list-style-type: none"> • "Water Cycle" article and Water Cycle Review handout • Water Cycle Project
What can students do if they finish early?	<ul style="list-style-type: none"> • Watch the study jams video on the water cycle: http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/water-cycle.htm • Go to Mysteryscience.com and watch Mystery Science Videos • Practice test for the Science AIR test: https://sd.portal.airast.org/training-tests.shtml
Who can we contact if we have questions?	Mrs. Sershen- gina.sershen@k12.sd.us Mr. Stroh- nick.stroh@k12.sd.us Mr. Metzger- tyson@metzger.k12.sd.us Mr. Wiese- alex.wiese@k12.sd.us Mrs. Woodard- kathy.woodard@k12.sd.us Mrs. Johnson- jaimie.johnson@k12.sd.us Ms. Murtha- Christine.murtha@k12.sd.us
Notes: Have a great week!	

Water Cycle Project

You have been learning about the water cycle. The water cycle is continually changing from liquid water to water vapor to ice. One way to think about the water cycle is to follow a drop of water around as it moves its way through the cycle. You will be creating your own water cycle through the eyes of a water molecule. Below is the information we have learned so far. Use the check off list to help you create your water cycle.

Water can be stored in different ways. We learned that water can be stored in:

- surface water (lakes, streams, rivers, etc.)-97% is stored in oceans.
 - atmosphere (clouds, fog, humidity)
 - precipitation (rain, sleet, snow, hail)
 - glaciers (these giants, slowly moving ice sheets form from snow that compacts. About 75% of the Earth's fresh water is stored as glaciers (most in the north and south poles)
 - Groundwater
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The parts of the water cycle:

- Evaporation: water changes into water vapor
 - Condensation: process of water vapor changing into tiny liquid droplets and creating clouds
 - Precipitation: more and more vapor condenses until the cloud becomes too heavy and water droplets fall to Earth.
 - Run-off: Water flows off the land and mountains and into different places.
 - Collection: Where water comes together and accumulates
 - Groundwater: This water collects underground in storage areas such as reservoirs or aquifers.
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Use your water cycle information handout to complete your water cycle, these vocabulary words and definitions must be in your water cycle

- *Evaporation
- *Condensation
- *Precipitation
- *Run-off
- *Collection
- *Groundwater

~You will also be graded on your neatness and creativity.

Water Cycle

The **water cycle** is a continuous process of water moving from Earth to the atmosphere and returning back to Earth. There is no beginning or end to this cycle. Heat from the sun causes the water to rise from Earth and the cold temperatures in the atmosphere cause the water to return to Earth.

The sun warms the water on Earth's surface. The heat causes the water to **evaporate**, or change into water vapor. Water vapor is an invisible gas. The water vapor rises up into the atmosphere. Evaporation causes puddles to disappear and wet clothes to dry on the clothesline.



As the water vapor rises higher into the atmosphere, the temperature becomes colder. The water vapor gets cold and condenses. **Condensation** is the process of water vapor changing into tiny liquid droplets. These tiny water droplets form a cloud. Clouds are not the only place we see condensation. Fog, dew, frost, and the tiny drops that form on the outside of your drinking glass are also forms of condensation.



More and more vapor condenses until the cloud becomes too heavy with water. **Precipitation** occurs. The water droplets fall to Earth. Depending upon weather conditions, precipitation may be in the form of rain, snow, sleet, and hail.



Some precipitation becomes **run-off**. It flows off the land and mountains and into different places of **collection**. Some precipitation sinks into the ground and becomes **ground water**. This water may collect in underground storage areas such as **reservoirs** or **aquifers**. Some precipitation falls into the **freshwater** bodies of rivers and lakes. Precipitation may also fall into the **saltwater** of oceans. Oceans cover about 75% of Earth, so they provide the most water for the water cycle.

After precipitation falls into various places, the process continues. **Heat gain** melts ice and causes liquid water to become water vapor. This gas form of water rises into the cold atmosphere where **heat loss** causes water vapor to condense into tiny droplets that form clouds. The clouds become heavy with droplets and precipitation occurs again.

Solid Water (ice) + Heat Gain = Melting (liquid water)

Liquid Water + Heat Gain = Evaporation (water vapor)

Water Vapor (gas) + Heat Loss = Condensation (clouds)

Liquid Water + Heat Loss = Freezing (ice)

Water Cycle Review!

Name: _____

1. The _____ is a continuous process of water moving from Earth to the _____ and returning back to Earth. There is no beginning or end to this _____.
2. What causes the water to evaporate or change into water vapor? _____
3. What is water vapor? _____
4. As water vapor rises higher into the atmosphere, the temperatures become _____. The water vapor gets cold and _____.
5. What are three examples of condensation?
6. When does precipitation occur?
7. What are the four types of precipitation?
8. Some precipitation becomes _____. It flows off the land and mountains and into different places of _____. Some precipitations sinks into the ground and becomes _____.
9. What are the underwater storage areas called? _____
10. How much of the Earth is covered with the ocean? _____
11. How does heat gain effect the water cycle?
12. How does heat loss effect the water cycle?