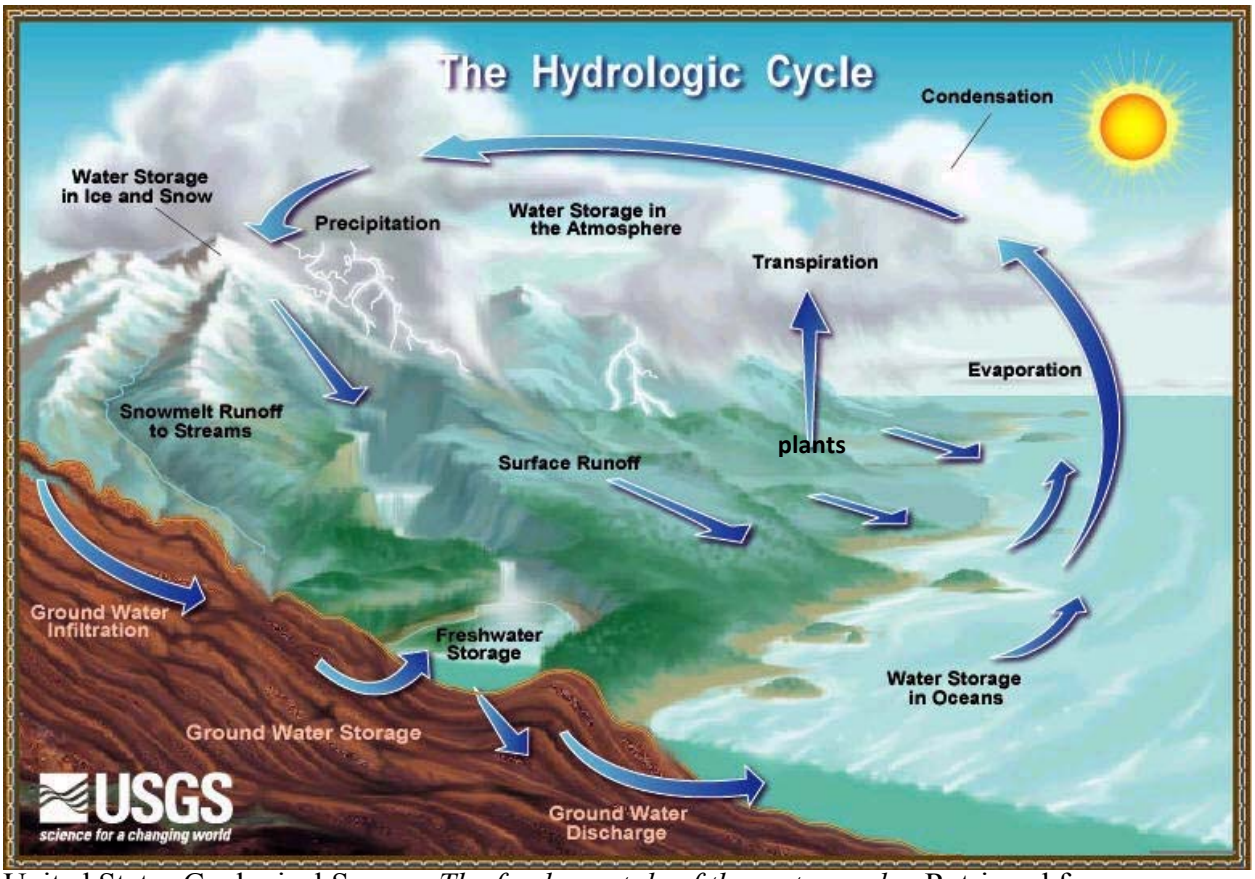
Name_____ Date _____ Period/Mod _____

HYDROLOGIC (OR WATER) CYCLE WORKSHEET

1. <u>Label the missing parts of the hydrologic (or water) cycle</u> (9 points)



United States Geological Survey. *The fundamentals of the water cycle.* Retrieved from https://water.usgs.gov/edu/watercyclesummary.html

Instructions: Label the missing terms on the hydrologic cycle using the words in the bank below.

<u>Word Bank:</u>

a) Condensation
b) Transpiration
c) Freshwater Storage
d) Water Storage in Ice and Snow
e) Water Storage in Oceans
f) Evaporation
g) Precipitation
h) Snowmelt Runoff to Streams
i) Ground Water Storage

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2. <u>Water Cycle Experiment</u> (3 points-1 point each for steps a, b, and c)
Instructions: This experiment is designed to help students understand how extreme climate events like drought and flooding will affect plant growth. Classes will prepare at least two control pots and two pots of each treatment to test the effects of different watering "treatments" on corn growth. In pairs or groups of three, complete each of the 3 steps below for one or two control pots or one or two of the three listed treatment pots. Your teacher will indicate how many pots to prepare. After following these steps in your group, check with your teacher to receive a stamp for following correct scientific procedure.

a) Fill your 4-inch pots with slightly moistened potting soil to the top of each pot.

b) Using a ruler and a marker, mark 3 cm on the eraser end of your pencil. Use your pencil to push 1 corn seed 3 cm deep in the middle of each pot.

c) Cover the seed with potting soil. Follow the watering directions below for control and treatment pots. With a pencil, write your and your partner's names, period/mod, and the water treatment on the label. Place the pot under a light source in the classroom or in the greenhouse as directed by the teacher.

Control and Treatments:

- Control = Water 3X a week starting at planting (100 ml each watering)
- Treatment 1 = Water at planting and then water 1X a week (100 ml each watering)
- Treatment 2 = Water at planting and then water 1X every 2 weeks (100 ml each watering)
- Treatment 3 = Flood with 400 ml of water at planting, no water for 4 weeks, and then flood again (400 ml)

3. <u>Hypothesis</u> (3 points)
Remember to use an if/then/because format and make your writing clear. Check with your teacher if you need some coaching.

<u>Think about these questions as you write your hypothesis:</u> What could you measure on the corn plants to determine if they have grown or not? How will water or the lack of water affect the growth of your corn plants? What is changing in the experiment, and what is staying the same? Which treatment will be the best/worse for plant growth?

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