

The Challenges – Teacher Resources

How Much Water? – Teacher Information Sheet

Like every living thing, plants need water in order to live and grow. However, how much water is enough? Did you know that too much water can harm plants? Let's see how much water certain plants need to survive. (This activity can be done as a class, with students individually, or in small groups, recording their observations on the Observation Sheet included.)

Materials (per group of three or four students)

- Three identical potted plants
- Labels
- Water
- Student Observation Sheet (two pages)

Directions

1. Place the potted plants in a sunny location and label them Plant 1, Plant 2, and Plant 3.
 2. Water each plant as follows:
 - Plant 1: 2 cups (500 milliliters) of water every other day
 - Plant 2: 1/3 cup (80 milliliters) of water every other day
 - Plant 3: 1/3 cup (80 milliliters) of water one time per week
 3. After one week, look at each plant. (Remember that the plants have had the same soil, the same amount of sun, and the same food or nutrients. The amount of water each has received is the only difference.) Record the following on your Observation Sheet:
 - Size of each plant
 - Color of each plant
 - Condition of each plant's leaves
 - Number of leaves and flowers on the plant
 - Strength of the plant's stem
 4. Observe the plants again after week 2, week 3, and week 4 and record your observations.
 5. After week 4, begin giving every plant 1/3 cup (80 milliliters) of water every other day. Record the length of time it takes for overwatered and under-watered plants to return to health.
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Name _____

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Observation Sheet I

Like every living thing, plants need water to live and grow. However, how much water is enough? Did you know that too much water can harm plants? Let's see how much water certain plants need to survive.

At the end of each week, carefully observe each plant and record your observations.

Be sure to include the following:

- Size of each plant
- Color of each plant
- Condition of each plant's leaves
- Number of leaves and flowers on the plant
- Strength of the plant's stem

Date	Plant 1	Plant 2	Plant 3
End of week 1			
End of week 2			
End of week 3			
End of week 4			

What do your observations indicate about the amount of water plants need?

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Observation Sheet 2

Throughout the next few days, all plants will be receiving the same amount of water. Record any changes in each plant you observe. Be sure to put the dates of your observations.

Date	Plant 1	Plant 2	Plant 3

Based on this activity, what happens when plants get too much or too little water?
