

## Plant Fertilizers

Look back at the claim on page 306 in your student resource about how Multi-Gro Plant Fertilizer improves plant growth. Write it here.

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Does using plant fertilizers actually make plants grow twice as big as those grown without adding fertilizer?

### Safety Precautions



- To unplug a grow light, pull on the plug, not the cord.
- Clean up the work area and wash your hands thoroughly at the end of the activity.

### What You Need

- 2 identical potted house plants
- permanent marker
- 2 wooden craft sticks
- 10-10-10 pre-mixed liquid plant fertilizer
- 100 mL graduated cylinder
- ruler
- grow light or bright, sunny window

### What to Do

1. Work in teams of four.
2. Bring the house plants back to your work station. Use a permanent marker to write your names on your plant pots.
3. Label one wooden craft stick "water only." Carefully place the stick in the dirt beside one of the plants.
4. Label the second wooden craft stick "water and fertilizer." Carefully place this stick in the dirt beside the second plant.
5. **a)** Determine the amount of liquid that you will give your plants each time you water or fertilize. The amount will depend on the size of the plants and the diameter of the plant pot you are using.  
We will add \_\_\_\_\_ mL of water or water/fertilizer each time we water or fertilize.  
**b)** Add this volume of plain water to the plant labelled "water only."  
**c)** Add this volume of water and fertilizer to the plant labelled "water and fertilizer."

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**BLM 14-3**  
(continued)

**6.** Decide how often you will water your plants. For example, once or twice a week is usually enough for most house plants.

We will water our plants \_\_\_\_\_ times per week.

**7.** Decide how to measure any change in plants. You might measure plant growth.

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**8.** Place your plants in a bright, sunny window or under a grow light as instructed by your teacher.

### What Did You Observe?

**9.** Record your group's data in this table.

| <b>Week</b> | <b>Trait We Are Measuring:</b><br>_____<br><b>Plant: Water Only</b> | <b>Trait We Are Measuring</b><br>_____<br><b>Plant: Water and Fertilizer</b> |
|-------------|---|--|
| 0 – start   |   |  |
| 1           |   |  |
| 2           |   |  |
| 3           |   |  |

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### What Did You Discover?

**10.** On grid paper, draw a bar graph comparing the data of the two plants.

Remember to:

- Title your bar graph.
- Decide on a scale for the  $y$ -axis.
- Title and label the  $y$ -axis.
- Title and label the  $x$ -axis.

**11. a)** Was there a noticeable difference between the two plants at the end of this activity?      YES      NO

**b)** Give an explanation for the results you observed.

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### Making Connections

**12.** Did your results support the advertising claim?      YES      NO

Explain.

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