

The 7 Steps of the Scientific Method: Black Test

Directions: Cut each piece of the puzzle out. Write down each of the 7 steps and paste each piece under the appropriate step. Some steps will have more than one piece. Some steps won't have any pieces.

1. Place two plants of the same type and size in identical pots.
2. Give both plants 1 cup of water every week.
3. Give both plants the same amount of light
4. Add 1 cup of fertilizer to the soil of one of the plants
5. Each week, measure how tall the plants are and count the number of leaves on the plants.
6. Record data for 4 weeks

PLANT GROWTH WITH FERTILIZER

If a plant is given fertilizer, then the plant will grow more leaves because fertilizer has nutrients in it that help plants grow more.

Plants need water and light in order to live and grow. They also need nutrients from the soil. Fertilizer adds extra nutrients to soil and helps the plant grow more (World Book Encyclopedia).

2 identical plants

6 cups of soil

1 bag of fertilizer (10 pounds)

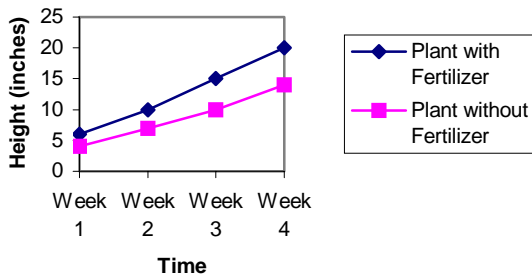
2 pots

1 spoon (to add the fertilizer)

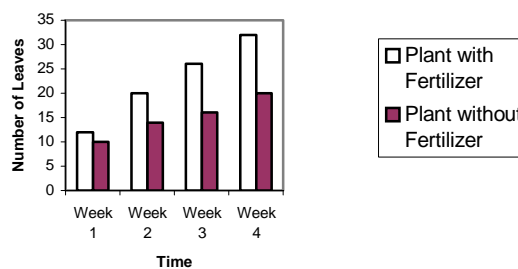
6 cups of water

	Plant with fertilizer	Plant without fertilizer
Week 1	6 inches, 12 leaves	4 inches, 10 leaves
Week 2	10 inches, 20 leaves	7 inches, 14 leaves
Week 3	15 inches, 26 leaves	10 inches, 16 leaves
Week 4	20 inches, 32 leaves	14 inches, 20 leaves

Plant Height



Number of Leaves



We were right. The plant with fertilizer did grow better. The plant with fertilizer grew taller and had more leaves than the plant without fertilizer. We think this is because the fertilizer has nutrients that will help any plant grow better. We may have made one mistake that affected our results. During week 2, I think we accidentally gave the plant with fertilizer 2 cups of water instead of one. Since plants need water to grow, this may have made the plant with fertilizer grow more than it would have without the extra water. Next time, we would write down when we gave the plant water so that we wouldn't accidentally water the plants twice. The information we learned from doing this lab could be useful to people who are deciding if it's worth it to buy fertilizer for their plants or not. It's also useful to anyone who needs their plants to grow faster, like farmers, for example. Now that we've done this experiment, we're wondering how the amount of fertilizer affects how well a plant will grow?

In this lab, we will grow two plants. We will answer the question: how does fertilizer affect how well a plant grows?