

Name: _____

Date: _____

ENVIRONMENTAL INFLUENCE ON TRAITS: HYDRANGEAS | FORMATIVE ASSESSMENT TASK 3-LS3-2

Kelsey's aunt has pink hydrangea flowers planted around her house. She decided to paint her house blue and wanted her hydrangeas to be blue to match it. Kelsey asked her if she was going to buy new plants. Her aunt said, "I heard you can make pink hydrangeas turn blue if you add certain types of food to the soil around the flowers." Kelsey looked on the internet and read that there are some types of food and some special fertilizers that help to turn pink hydrangeas blue. To help her aunt, she decided to do an investigation to see which one of these would work best to change pink hydrangeas blue.



This was Kelsey's investigation:

- Her mom bought five pink hydrangea plants in pots for Kelsey to use.
- Kelsey put all of the plants outdoors. She **watered** them every day.
- She added something different to each plant to see if it would change the flower color.
- She observed the plants for three months and recorded the data in a table.



Kelsey's table is shown below. It shows what she added to the soil of each plant and what happened to the color of the flowers.

	PLANT 1	PLANT 2	PLANT 3	PLANT 4	PLANT 5
What Kelsey added to the soil around the plant	Wet coffee grounds	Lemon peels cut into small pieces	Crushed egg shells	Special fertilizer from the garden store	Added nothing except water
Flower color at the start of the experiment	Pink	Pink	Pink	Pink	Pink
Flower color 2 weeks later	Pink	Light Purple	Light Purple	Pink	Pink
Flower color 1 month later	Light Purple	Purple	Purple	Pink	Pink
Flower color 2 months later	Purple	Blue	Light Blue	Light Purple	Pink
Flower color 3 months later	Light Blue	Blue	Blue	Purple	Pink

Color Key



TASK 1

1. Kelsey read on the internet that coffee grounds, lemon peels, crushed egg shells, and fertilizer can all help pink hydrangeas turn blue. Describe patterns you see in the data table that provide evidence that this information might be correct.

2. Kelsey included one plant in her investigation that did not get any added materials except for water. Why do you think she did this?

3. Based on the results from Kelsey's experiment, which material from the experiment should she tell her aunt to add to the soil around the pink hydrangeas to turn them blue?

- 3A. Use evidence from the data table to explain why you think she should add this material instead of the others.

TASK 2



Central Oklahoma Rural Partnership For Science

4. What are two other types of things Kelsey could investigate that might affect the way the hydrangeas look and grow?
