

Name _____ Date _____ Block _____

Making a Home-to-School Connection

Family Science Night

Science in Plants:

The Effect of Acid Rain

Science can be fun for the whole family!

From time to time, Family Science Night Activities like this will go home with your child. It can be challenging to come up with new and interesting evening activities. These experiments are designed to involve the whole family and get parents and children communicating. Rated in difficulty from fairly simple to difficult, some of these activities are more challenging than others, but all of them should be fun and get your whole family to start asking questions about the world around them. By reinforcing science at home, you are showing your child that you support their education and efforts at school. Plus, students who participate and return this packet completely filled out and signed by a parent can get up to _____ points extra credit!

MATERIALS:

- Four of the same type of four inch potted plants (Marigolds work very well)
- Masking tape for labeling plants
- Water
- Vinegar
- $\frac{1}{4}$ measuring cup
- Spray bottle

COST OF THIS EXPERIMENT:

Less than \$20

CHALLENGE LEVEL:



MODERATE

* This activity takes about 10 minutes every other night for making observations.

TIME OF COMPLETE:

2 hours 30 minutes

Questions To Be Answered:

How does acidic rain water effect plants?

Hypothesis: (The hypothesis is your guess to the question asked above. It is o.k. to have a different guess than your family members.)

1. Which plant do you think will start being effected first? Why?

2. How do you think plant #1 will be effected by the acid rain? Why?

3. How do you think plant #2 will be effected by the acid rain? Why?

4. How do you think plant #3 will be effected by the acid rain? Why?

5. How do you think plant #4 will be effected by the acid rain? Why?

Procedures:

1. Purchase four of the same type of plants (like Marigolds)
2. With the masking tape, label each plant with one of the following labels:
 - (1) 2 sprays of plain water
 - (2) 2 sprays of "Acid Rain" mixture
 - (3) 4 sprays of "Acid Rain" mixture
 - (4) 6 sprays of "Acid Rain" mixture
3. Water each plant with $\frac{1}{4}$ cup of water every 3 days.
4. In the spray bottle, pour in $2 \frac{1}{2}$ cups plain water
5. In the data table below, record your first observations of your new plants.
6. Spray the flower and leaves of plant #1 as labeled (2 sprays with just water).
7. In the spray bottle, mix $\frac{1}{4}$ cup vinegar with the $2 \frac{1}{2}$ cups water.
8. Spray each of the other plants as labeled.
9. Rinse out the spray bottle and repeat steps #4 to 8 every two days as marked in the data table below.

Observations:

Daily Plant Observation Record:	Plant#1 Drawing: (use color)	Plant#2 Drawing: (use color)	Plant#3 Drawing: (use color)	Plant#4 Drawing: (use color)	What did you notice happen with each plant?
Day #1					
Day #3					
Day #5					

Observations:

Daily Plant Observation Record:	Plant#1 Drawing: (use color)	Plant#2 Drawing: (use color)	Plant#3 Drawing: (use color)	Plant#4 Drawing: (use color)	What did you notice happen with each plant?
Day #7					
Day #9					
Day #11					

Observations:

Daily Plant Observation Record:	Plant#1 Drawing: (use color)	Plant#2 Drawing: (use color)	Plant#3 Drawing: (use color)	Plant#4 Drawing: (use color)	What did you notice happen with each plant?
Day #13					
Day #15					
Day #17					

Observations:

Daily Plant Observation Record:	Plant#1 Drawing: (use color)	Plant#2 Drawing: (use color)	Plant#3 Drawing: (use color)	Plant#4 Drawing: (use color)	What did you notice happen with each plant?
Day #19					
Day #21					
Day #23					

Observations:

Daily Plant Observation Record:	Plant#1 Drawing: (use color)	Plant#2 Drawing: (use color)	Plant#3 Drawing: (use color)	Plant#4 Drawing: (use color)	What did you notice happen with each plant?
Day #25					
Day #27					
Day #29					

FINDING ADDITIONAL RESEARCH:

What additional questions would you like answered about acid rain?

Who participated in this Family Science Night Activity with you?

Parent Signature _____ Date _____