

Name \_\_\_\_\_

Science Pretest-Posttest

You will be asked to think like a scientist on this test. Write a question and hypothesis for the following topic. Give the variables. Write the procedures. Create and label a graph from the data table. Write three true statements about the data. Write a conclusion. Questions are worth two points each.

**Topic: You want to know about sunlight and plant growth.**

Problem: \_\_\_\_\_

\_\_\_\_\_

Hypothesis: \_\_\_\_\_

\_\_\_\_\_

Independent variable: \_\_\_\_\_

Dependent variable: \_\_\_\_\_

Constant variable: \_\_\_\_\_

\_\_\_\_\_

Procedures:

Materials:

Steps:

Data Table:

Plants	Week One	Week Two	Week Three	Week Four
Plants on window sill	grew 5 cm	grew 6 cm	grew 4 cm	grew 5 cm
Plants in closet	Grew .5 cm	no growth leaves are wilting	no growth, leaves turning yellow	no growth, leaves falling off
Plants on shelf away from window	grew 3 cm	grew 1 cm	grew 2 cm	grew 1 cm

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True Statements or inferences:

- 1.
- 2.
- 3.

On the back of this paper write a conclusion.

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**Topic: You want to know about sunlight and plant growth.**

Problem: Possible answers:

Does light affect plant growth?

Does the amount of water affect plant growth?

Does the type of soil affect plant growth?

Hypothesis: Possible answers:

If a plant does not receive light, then it will not grow.

If a plant receives too much water, then it will not grow.

If a plant is potted in sandy soil, then it will not grow.

Independent variable: Possible answers: light, water, or soil

Dependent variable: Possible answers: amount of light, amount of water, type of soil.

Constant variable: Possible answers: same plants, same soil, same amount of light or water, same size pots, same growing period.

Procedures: possible answer

Materials: one bag of potting soil, six plants, 1 liter water, six pots, sunlight

Steps: Possible steps

1. Put 400 ml of soil into a pot
2. Plant the plant in the soil tap down.
3. Water with 250ml of water.
4. Repeat steps 1 through 3 five more times.
5. Place two plants in the closet
6. Place two plants on the window sill
7. Place two plants on the shelf away from light
8. Water all six plants with 250 ml of water every week
9. Observe every three days. Sketch plants and measure growth.



# Scientific Inquiry Open-end Checklist

Science  
Vocabulary

Definition of the word and its importance (3 point per question)

Problem	
Hypothesis	
Procedures	
Variables	
Data and Results	
Conclusion	

