

Name: _____ Date: _____ Core: _____

The Scientific Method

LT: I can describe the steps of the Scientific Method.

Step 1: _____

The question must be Testable / Untestable (circle one)

Testable means that you can _____ , _____ ,
and _____ to answer the question.

Practice: Remember -the key to a good research question is that it can be tested. If the question is based on opinions or personal preferences, then it is not testable.

Read each research question below. If it is testable, circle "YES". If it cannot be tested, circle "NO".

- | | | |
|--|-----|----|
| 1. Does the amount of fertilizer affect how tall a flower grows? | YES | NO |
| 2. Are roses prettier flowers than tulips? | YES | NO |
| 3. How can we make cut flowers stay fresher for a longer time? | YES | NO |
| 4. Can daisies grow in different types of soil? | YES | NO |
| 5. Do daffodils smell better than carnations? | YES | NO |

Step 2: _____

Find information about your topic and determine your variables.

A variable is _____

There are 3 types of variables:

1. IV or _____. This is the _____ factor that the _____.
2. DV or _____. This is the factor that can be _____
or _____ as a result of changing the _____.
This is the factor we _____.
3. CV or _____. These factors are kept the _____
during an experiment.

Practice: *Determine the IV and DV for each inquiry. Suggest at least 3 constant variables (CV) for each.*

1. What amount of sunlight makes pea plants grow tallest?

IV: _____

DV: _____

CVs: _____

2. Which type of soda has more sugar?

IV: _____

DV: _____

CVs: _____

3. Is a ball's bounce affected by the height from which it is bounced?

IV: _____

DV: _____

CVs: _____

Step 3: _____

A _____ is a _____ of the outcome of an experiment based on _____.

A hypothesis is usually written in the form: _____

Practice: *Identify the IV, DV and write a hypothesis for the following questions.*

1. What type of music quiets a crying baby faster: jazz, classical or rock?

IV: _____ DV: _____

Hypothesis: _____

2. Is the number of eggs a chicken lays affected by the hours of daylight?

IV: _____ DV: _____

Hypothesis: _____

3. Will a rubber band or string hold more weight without breaking?

IV: _____ DV: _____

Hypothesis: _____

Step 4: _____

Write a _____ .

Your procedure should be _____ that _____ could repeat the steps without your input.

Step 5: _____

Use _____ to make observations.

There are 2 types of observations:

1. _____ These observations involve _____.
2. _____ These observations are _____.

Step 6: _____

What did you learn?

_____ your findings.

List the six steps of the Scientific Method:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.