

## Review – Variables (IV, DV, CV)

Name \_\_\_\_\_ Date \_\_\_\_\_ Core \_\_\_\_\_

LT1: I can identify and explain three different types of experimental variables.

LT2: I can write a formal hypothesis.

Directions: Watch the Video clip: *Scientific Variables* and answer the following questions.

1. An **independent variable (IV)** is \_\_\_\_\_
2. What was the independent variable in Mr. Koning's plant experiment?  
\_\_\_\_\_
3. **Controlled variables (Constants)** are \_\_\_\_\_  
\_\_\_\_\_
4. It is important to have controlled variables because they keep the experiment \_\_\_\_\_.
5. List 3 controlled Variables (*constants*) in Mr. Koning's the plant experiment?
  - A. \_\_\_\_\_
  - B. \_\_\_\_\_
  - C. \_\_\_\_\_
6. A **dependent variable (DV)** is \_\_\_\_\_
7. What was the dependent variable in Mr. Koning's plant experiment?  
\_\_\_\_\_
8. **Recap:** Why is it important to only have 1 Independent Variable in an experiment?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. In the space below, **draw a picture** that explains Mr. Koning's plant experiment.

## IV, DV, CV & Hypothesis Practice

Directions: Identify the variables (IV, DV, and CV) for each of the following questions.

Question	Independent Variable IV	Dependent Variable DV	Constants CV
How does the day of the week affect how much time 6 <sup>th</sup> graders spend exercising?			
How does the frequency in which 6 <sup>th</sup> graders get colds affect their body weight?			
How does the presence of dams affect the number of fish living in a river?			
How does a person's age affect their ability to see road hazards?			

Formal Hypotheses (singular = hypothesis.....plural = hypotheses)

A good hypothesis is an IF/Then statement that includes the following:

- ✓ The IV and DV
- ✓ A specific prediction about what will happen during your experiment.
- ✓ Explains why you made that prediction. This is reasoning. Your reasoning should be logical and include background knowledge that helped you make your prediction.

If \_\_\_\_\_ affects \_\_\_\_\_, then \_\_\_\_\_  
(IV) (DV) (prediction)

**Because** \_\_\_\_\_  
(Reasoning - explain why you made that prediction!)

Directions: Choose one of the questions from the above table and write a formal hypothesis for that question.

If \_\_\_\_\_ affects \_\_\_\_\_

Then \_\_\_\_\_

Because \_\_\_\_\_

\_\_\_\_\_