

Name \_\_\_\_\_

Date \_\_\_\_\_

Period \_\_\_\_\_

## Unit 1 Study Guide

### Lab Equipment

1. Be able to identify lab equipment and understand how it is used. Use your lab equipment quiz and lab equipment sort in your IN to study.
2. Know how to properly read a triple beam balance to the tenth of a gram. Use [www.ohaus.com](http://www.ohaus.com) to practice (check links on teacher web pages).

→ Mrs. Stager's web site - Link - select Tutorials

### Science Inquiry and Investigations

3. Why do scientists repeat investigations more than once?  
To increase accuracy and reliability, to reduce mistakes, increases validity
4. Define and be able to identify the following types of variables in a lab experiment:

- Constant variable: controlled var.  
not changed in the experiment, kept the same
- Manipulated variable: independent var / cause  
changed on purpose in an experiment
- Responding variable: dependent var / effect  
responds to manipulated var, what we are measuring

P. 8, 9  
~ 4 MC

3-TBB readings

Class discussion

P. 18, 19, 20

le Fill in the blank

Identify the variables

1950 - 1955 - ... the new ... and ...  
T ...



of ... has ... of ...  
... ..

... ..

... ..  
... ..

... ..  
... ..

... ..  
... ..  
... ..

1950 - 1955

...

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...

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5. Know the difference between a testable and non-testable question.

Write a testable question using the following variables. *What is the effect of m.v. on the p.v.?*

- Bean plant growth, brand of fertilizer:

What is the effect of the brand of fertilizer on bean plant growth?

- Bean plant growth, type of music (country, rock, classical):

What is the effect of the type of music on bean plant growth?

*P. 22, 23, 24, 25  
Diff. formats  
Testable must have:  
M.V.  
I.V.  
C.V.*

*3 MC  
8 - circle A, B  
A test.  
B non-test.*

### Lab Safety

According to your lab safety contract or teacher's instructions, what is the correct way to handle the following situations in the lab:

- 6. Properly smelling a substance - *waffing - hold 6" away, wave hand over*
- 7. Eating and/or drinking in class - *Never*
- 8. Reporting accidents to the teacher - *Immediately notify*
- 9. Horseplay in the classroom - *acting responsibly*

*P. 6, 7*

### Observation/Inference

Explain the difference between an observation and an inference. Be able to identify an observation or inference from a scenario.

Obs - information learned by using 5 senses

Inf - a conclusion drawn based on observations.  
an educated guess

*P. 16, 17  
3 MC*

*know the parts of the Scientific Method p. 21*

What is the effect of M.V. on

What is the effect of the brand of fertilizer on bean plant growth?

What is the effect of the type of music on bean plant growth?

What is the effect of "old" brand of fertilizer on bean plant growth?

What is the effect of "new" brand of fertilizer on bean plant growth?

What is the effect of the brand of fertilizer on bean plant growth? - This information is based on observations. - This information is based on experiments.

What is the brand of the scientific method? - This

5.57.53.54.55  
Diff. format  
M.V. format  
C.V. format  
B. format  
B. format  
B. format  
B. format



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