REVIEW

Chapter 1 : Lesson 1C

1. Select the statement that best describes what a Model in Science is.

A) A tentative scientific explanation for a specific phenomenon that needs further testing.

B) A thoroughly tested and widely accepted explanation for a scientific phenomenon or observation.

C) A simplified representation of a system, object or phenomenon.

D) Absolute truths that cannot change.

2. Select the statement that best describes what an Hypothesis is.

A) A tentative scientific explanation for a specific phenomenon that needs further testing.

B) A thoroughly tested and widely accepted explanation for a scientific phenomenon or observation.

C) A simplified representation of a system, object or phenomenon.

D) Absolute truths that cannot change.

3. Select the statement that best describes what a scientific Theory is.

A) A tentative scientific explanation for a specific phenomenon that needs further testing.

B) A thoroughly tested and widely accepted explanation for a scientific phenomenon or observation.

C) A simplified representation of a system, object or phenomenon.

D) Absolute truths that cannot change.

4. Select the statement that best describes what a scientific Law is.

A) A tentative scientific explanation for a specific phenomenon that needs further testing.

B) A thoroughly tested and widely accepted explanation for a scientific phenomenon or observation.

C) A simplified representation of a system, object or phenomenon.

D) Absolute truths that cannot change.

LIVEWORKSHEETS

5. Select the best formulated Hypothesis :

A) The Temperature and Pressure of a gas both increases.

B) The Temperature and Pressure of a gas affect each other.

C) If the Temperature of a Gas increases, the Pressure will also increase.

D) The Temperature of a Gas will affect its Pressure.

6. Which of the following are well-established scientific Theories ? Select all that apply :

A) "All living things are made up of cells, and cells come from pre-existing cells."

B) "Earth's Lithosphere is broken into several "Tectonic Plates" that float on top of the Mantle."

C) "F = ma" describes the relationship between force, mass and acceleration.

D) "$V_1 / T_1 = V_2 / T_2$" describes the relationship between the Temperature and Volume of a Gas at a constant Pressure.

7. Which of the following can be considered scientific Laws ? Select all that apply :

A) "All living things are made up of cells, and cells come from pre-existing cells."

B) "Earth's Lithosphere is broken into several "Tectonic Plates" that float on top of the Mantle."

C) "F = ma" describes the relationship between force, mass and acceleration.

D) "$V_1 / T_1 = V_2 / T_2$" describes the relationship between the Temperature and Volume of a Gas at a constant Pressure.

LIVEWORKSHEETS

8. Put the steps of the Scientific Method in the correct order :

STEP 1	Analyze Data
STEP 2	Ask a Scientific Question
STEP 3	Collect Data
STEP 4	Do Initial Research
STEP 5	Formulate a Hypothesis
STEP 6	Publish Data
STEP 7	Draw a Conclusion

9. Select the non-testable Question from the list.

A) How long does it take for honey to freeze ?

B) Does Honey take longer than water to freeze ?

C) Does Honey and Water have the same Freezing Point ?

D) Does Honey taste better than Water ?

LIVEWORKSHEETS

10. Identify the following statements as True or False :

Statement	TRUE	FALSE
Experiments should be 100% reproducible.		
Multiple Trials during an Experiment ensure more reliable data.		
During the Data Collection stage, data can be collected by either conducting Experiments, or by scientific Observations, or both.		
The IV in an experiment is the "Test Variable".		
There should only be 1 IV during an experiment.		
The DV changes in response to the IV.		
Constants are factors that are intentionally kept constant during the course of an experiment in order to ensure consistent conditions across all trials.		
The DV is usually plotted on the X-axis of a graph, while the IV is plotted o the Y-axis.		

11. Identify the IV and DV for the following experimental scenarios :

11.1 Does the hair color of a science teacher affect the success rate of his/her students ?

The IV is ...

A) Different school subjects

B) Test Scores

C) Teacher's Hair Color

D) Students participating in the test

The DV is ...

A) Different school subjects

B) Test Scores

C) Teacher's Hair Color

D) Students participating in the test

LIVEWORKSHEETS

A possible Constant during this experiment could be ...

A) Different school subjects

B) Test Scores

C) Teacher's Hair Color

D) Students participating in the test

11.2 A cow is given a growth hormone and then compared to another cow that was not given a growth hormone. Both cows were weighed at 2 years.

The IV is ...

A) Amount of sunlight cow received

B) Cow's weight after 2 years

C) Growth Hormone or No Growth Hormone

D) Cow's diet over the 2 years

The DV is ...

A) Amount of sunlight cow received

B) Cow's weight after 2 years

C) Growth Hormone or No Growth Hormone

D) Cow's diet over the 2 years

A possible Constant during this experiment could be ...

A) Amount of sunlight cow received

B) Cow's weight after 2 years

C) Growth Hormone or No Growth Hormone

D) Cow's diet over the 2 years

LIVEWORKSHEETS

11.3 If Juniors and Seniors would have a ball throwing competition, who would throw the ball the furthest ?

The IV is ...

A) Distance of throw

B) The color of the ball

C) Grade (Juniors or Seniors)

D) The ball that is used during the experiment

The DV is ...

A) Distance of throw

B) The color of the ball

C) Grade (Juniors or Seniors)

D) The ball that is used during the experiment

A possible Constant during this experiment could be ...

A) Distance of throw

B) The color of the ball

C) Grade (Juniors or Seniors)

D) The ball that is used during the experiment

LIVEWORKSHEETS