

Student name: _____

The first step of the scientific method is making observations.

true

false

Which step of the scientific method involves forming a tentative explanation of information?

Hypothesis

Observations

Conclusion

Experiment

Data analysis

In the metric system, 1 cm is equal to _____ mm.

100

1,000

0.1

10

0.01

The final step in the scientific method is data analysis.

true

false

The difference between an independent variable and a dependent variable is that the dependent variable

can be changed.

is derived from the experimental results.

is determined before the experiment is conducted.

is equivalent to the hypothesis.

is equivalent to the observations.

In the metric system, a liter (L) is a unit that measures
mass.

time.

length.

temperature.

volume.

In the metric system, a gram (g) is a unit of mass.

true

false

Which of the following is NOT a component of the scientific method?

Conclusions

Experiment

Theory

Hypothesis

Observations

According to the hypothesis you tested in this experiment, the ratio of a person's upper limb length to body height is approximately 50%.

true

false

Which component of the scientific method involves organizing results as tables, graphs, or drawings?

Conclusions

Observations

Data analysis

Experiment

Theory

When drawing a graph to display experimental data, the independent variable is plotted along the x-axis.

true

false

Knowing that there are 2.54 cm per inch, a person that is 5'5" in height would be _____ cm tall.

16.51

165.1

25.4

25.6

255.9

An important feature of a hypothesis is that it has to be _____.

a known fact

true

a widely accepted theory

false

testable

When conducting an experiment to test a hypothesis, only one changeable factor is studied; this is called a variable.

true

false

When plotting data on a graph, drawing the line of best fit involves placing all of the data points on the line.

true

false

After analyzing the data, a conclusion can be drawn that includes whether or not the original hypothesis is supported.

true

false

A student is planning an experiment using two identical plants in separate pots. The student researches about this species to find out requirements for growth. What part of the scientific method is this student doing?

Experiment

Analysis of data

Conclusion

Hypothesis

Observations

After testing your hypothesis and finding out that your data analysis does not support it, what should you NOT do next?

Reexamine the experimental design and data.

Change the data to support your original hypothesis.

Interpret the results of the data analysis in a conclusion.

Develop a new hypothesis.

Modify the original hypothesis.

Answer Key

Test name: CH1 Laboratory Manual E5

TRUE

A

D

FALSE

B

E

TRUE

C

FALSE

C

TRUE

B

E

TRUE

FALSE

TRUE

E

B