

The Scientific Method

What skill is a scientist using when she listens to the sounds that whales makes.

- A) making observations
- B) drawing conclusions
- C) interpreting data
- D) making a hypothesis

What is the correct order of the steps in the scientific method.

- A) Make a hypothesis, test the hypothesis, analyze the results, ask a question, draw conclusions, communicate results.
- B) Ask a question, analyze results, make a hypothesis, test the hypothesis, draw conclusions, communicate results.
- C) Ask questions, make a hypothesis, test the hypothesis, analyze results, draw conclusions, communicate results.
- D) Ask a question, make a hypothesis, test hypothesis, draw conclusions, analyze results, communicate results.

Which question would be the best high level scientific question?

- A) How many giraffes live in Africa?
- B) Who made the first microscope?
- C) Does the amount of salt in water affect the temperature at which it boils?
- D) How long ago did dinosaurs live on the Earth?

The process of obtaining information by using the senses is called a/an

- A) scientific method
- B) conclusion
- C) observation
- D) inquiry

A series of steps designed to help you solve problems and answer questions

- A) hypothesis
- B) scientific method
- C) experiment
- D) observation

In an experiment, the one variable that is changed is called the

- A) controlled variable
- B) independent variable
- C) dependent variable
- D) experimental variable

A scientist hypothesizes the the temperature at which an alligator's egg is incubated will determine whether the alligator will be male or female. The independent variable is

- A) the gender of the alligator
- B) the temperature
- C) the incubator
- D) the male alligators

A scientist conducted an experiment to determine how the amount of salt in a body of water affects the number of plants that can live in the water. In this experiment the independent variable is

- A) the water
- B) the temperature of the water
- C) the amount of salt in the water
- D) the number of plants in the water

. All the things in an experiment that must be the same to make it fair are called

- A) controlled variables or constants
- B) controlled experiments
- C) dependent variables
- D) independent variables

. In science, an educated guess is called a/an

- A) hypothesis
- B) question
- C) observation
- D) conclusion

. When you decide whether or not the data supports the original hypothesis, you are

- A) asking questions
- B) forming a hypothesis
- C) making observations
- D) drawing conclusions

. When a scientist shares her findings with other scientists, she is

- A) making a hypothesis
- B) analyzing data
- C) experimenting
- D) communicating results

. If you were measuring the mass of a fly, you should use

- A) meters
- B) grams
- C) kilograms
- D) liters

. If you wanted to know volume of water in a bottle of soda, you would use

- A) grams
- B) kiloliters
- C) liters
- D) milliliters

. If you wanted to measure the distance from here to Salt Lake City, you would use

- A) kilometers
- B) centimeters
- C) millimeters
- D) meters

. Which unit of measure is NOT used in the International System of Units

- A) milliliters
- B) grams
- C) centimeters
- D) inches

. In which step of the scientific method do we want to use graphs

- A) asking questions
- B) analyze data
- C) communicate results
- D) make a hypothesis

. The final part; a summary of reasonable inferences is a/an

- A) question
- B) hypothesis
- C) controlled experiment
- D) conclusion

. Which of the following is important when creating a graph in science.

- A) titles
- B) neatness
- C) all of these
- D) labels

. A series of steps followed to solve problems is

- A) the scientific method
- B) standard procedures
- C) investigations
- D) experimental guidelines

. The best graph to use if I want to compare the price of six different cars would be a

- A) line graph
- B) pie graph
- C) bar graph
- D) data table

. Why is it important to conduct scientific tests more than one time?