

Chapter 1

Section 1

1. Science- is the study of the natural world.
2. Observing- means using one or more senses to gather information.
3. Inferring- when you explain your observations
4. Predicting- means making a forecast of what will happen in the future based on past experience or evidence.
5. Chemistry- is the study of the properties of matter and how matter changes.
6. Physics- is the study of matter, energy, motion, and forces, and how they interact.

Section 2

1. Scientific inquiry- refers to the different ways scientists study the natural world.
2. Hypothesis- is a possible answer to a scientific question or explanation for a set of observations.
3. Parameter- is a factor that can be measured in an experiment.
4. Manipulated variable- in a well-designed experiment, only one variable parameter is purposely changed.
5. Responding variable- is the variable parameter that is expected to change because of the manipulated variable.
6. Controlled experiment- is an investigation in which only one parameter is manipulated at a time.
7. Data- are the facts, figures, and other evidence gathered through observations.
8. Communicating- is sharing ideas and conclusions with others through writing and speaking.
9. Model- is a picture, diagram, computer image, or other representation of an object or process.
10. Scientific theory- a well-tested explanation for a wide range of observation or experimental results.

11. Scientific law- is a statement that describes what scientists expect to happen every time under a particular set of conditions.

Section 3

1. SI- modern scientists use an expanded metric system called the International System of Units.
2. Weight- is a measure of the force of gravity on you.
3. Mass- is a measure of the amount of matter an object contains.
4. Volume- is the amount of space an object takes up.
5. Meniscus- the curved upper surface of a liquid in a column of liquid.
6. Density- is mass per unit volume.
7. Celsius Scale- water freezes at 0 degrees C and boils at 100 degrees C.
8. Kelvin Scale- the temperature scale on which zero is the temperature at which no more energy can be removed from matter.
9. Absolute zero- the temperature 0 K on the Kelvin scale.

Section 4

1. Estimate- is an approximation of a number based on reasonable assumptions.
2. Accuracy- refers to how close a measurement is to the true or actual value.
3. Reproducibility- refers to how close a group of measurements are to each other.
4. Significant figures- in a measurement include all of the digits that have been measured exactly, plus one digit whose value has been estimated.
5. Precision- is a measure of the exactness of a measurement.

Section 5

1. Graph- as a “picture” of your data.
2. Horizontal axis- or x-axis, is the graph line that runs left to right.
3. Vertical axis- or y-axis, is the graph line that runs up and down.

4. Origin- the point where the two axes cross.
5. Coordinate- a pair of numbers used to determine the position of a point on a graph.
6. Data point- the point showing the location of the intersection.
7. Line of best fit- is a smooth line that reflects the general pattern a graph.
8. Linear graph- a line graph in which the data points yield a straight line.
9. Slope- is the steepness of the graph line.
10. Nonlinear graph- a line graph in which the data points do not fall along a straight line.