

General

I can explain and describe science safety rules, procedures, and equipment use.
I can apply the scientific method when solving problems and answering questions.

Characteristics of Matter

I can create a timeline about the development of atomic theory.
I can recognize that atoms are too small to see and describe the limitations of atomic models.
I can model the 3 parts of an atom using the periodic table.
I can compare and contrast atoms, molecules, and elements.
I can describe and model the characteristics of matter in different states.

Measuring Matter

I can measure the mass and volume of liquids and solids.
I can accurately predict, measure, and explain density.
I can design a procedure to measure the mass and volume of gases.
I can formulate and test a hypothesis on the relationship between motion and temperature of particles.
I can explain diffusion as it relates to the motion and temperature of particles.

Cells

I can describe the development of the microscope and relate it to the discovery of cells.
I can put the following in order from most simple to most complex and provide examples for each: cell, tissue, organ, organ system, and organism
I can identify and explain the function of the cell wall, cell membrane, nucleus, chloroplast, cytoplasm, and mitochondria.
I can compare and contrast plant and animal cells.
I can model osmosis and design an experiment to see the effects of hypotonic and hypertonic solutions.
I can explain how the basic life functions of an organism are carried out within cells.

Reproduction

I can recognize that parents pass traits to their offspring.
I can provide examples of inherited and acquired traits.
I can identify DNA as the molecule for inheritance.
I can compare how sexual and asexual reproduction passes genetic information to the next generation, identify organisms that use each method.
I can compare and contrast the advantages and disadvantages of sexual and asexual reproduction.
I can explain how inherited traits can make organisms have more of an advantage in one environment, but not in another.
I can explain that genetic traits may be influenced by changes in nature or humans.
I can relate the specific structures of organisms to that organism's ability to survive.

Classification

I can compare and contrast between living, once living, and non-living things.
I can classify the six kingdoms of living organisms based upon observable properties.
I can use a simple classification system, such as a dichotomous key.
I can develop a simple classification system in an orderly pattern based upon structures.