

**Learning Objectives**

- 1) Understand that all objects everywhere, those you can see and even those you cannot see, are made up of matter.
- 2) Realize that not all matter is the same. Some objects are alike, and some are different.
- 3) Know the five senses that aid us in learning more about matter: seeing, hearing, smelling, tasting, and feeling.
- 4) Know that how something looks, sounds, smells, tastes, or feels is called its properties.
- 5) Realize that we can use tools (like a telescope, tape measure, or balance scale) to learn more about the properties of matter.
- 6) Know that “mass” refers to the amount of matter in an object. Mass is one of the most important properties of matter.
- 7) Understand that all matter takes up space.
- 8) Know that matter can have different forms: solid, liquid, or gas.
  - a) A solid is matter that has its own size and shape; its shape does not change

unless someone or something changes it.

- b) A liquid is matter that has its own size but can change its shape; it takes on the shape of the container it is poured into.
- c) A gas is matter that does not have its own size or shape; it changes to fill the space of whatever container it is put into.

**Suggested Activities**

- 1) *Before viewing the video:*
  - a) Bring several objects (solids, liquids, and, if possible, gases) into the classroom (or use objects already in the classroom). Ask the students to describe objects. See if the students can think of any ways to group the objects into categories (all of the solids, all of the objects that are round, all of the objects of the same color, etc.).
- 2) *After viewing the video*
  - a) Have the students choose two objects and list properties for those objects that are alike and different.

- b) Use a scale balance to measure how much mass is in an object. Demonstrate how sometimes a smaller object can actually have more mass than an object that is larger.
- c) Have a liquid and several differently shaped measuring cups on hand. Demonstrate how the size (volume) of the liquid does not change even when its shape changes in the different measuring cups.

### Vocabulary

**Matter** — What everything is made of; anything that has mass and takes up space

**Property** — How matter looks, smells, tastes, or feels; the quality of matter

**Mass** — The amount of matter in an object

**Solid** — Matter that has its own size and shape

**Liquid** — Matter that has its own size but can change its shape

**Gas** — Matter that does not have its own size or shape

