



# DIY Air Force Activities:

## Making Observations



### Materials:

- pencil and paper
- basket, egg carton, or bags
- several objects
- optional materials: tray, magnifying glass, flashlight



There are many different branches of science you can explore, but one common element in them all is the ability to make observations and share that information with others. These observations need to be detailed, and go beyond a superficial description. For example, consider the balls to the left. How would you describe them? Since there are three of them, saying “the ball” is not enough information. What color are they? Are they shiny or dull, smooth or rough? Are they opaque (no light passes through it), translucent (some light passes through), or transparent (you can see through it). What are their most distinguishing features? When scientists do experiments it is very important they make detailed observations so that they can recognize patterns and share their findings with others. The following activity will help you hone your skills of observation!

### Directions:

1. Gather a variety of objects. You could select things from inside your house or go outside! If the object is large or delicate, you could make your observations where it is rather than gather it and bring it back to your lab.
2. Use the table on the back to help you organize your observations. In addition, you could draw a picture of the object. In what ways are the objects similar? How are they different? With an adults permission try to get them wet. Do any of the properties change?

Could someone tell which object you mean by just reading your observations? Work with a friend and find out! How are your descriptions of the same materials different? How are they the same? Make a game out of it!

### Air Force Associations:

Scientists at the Air Force Research Labs at Wright Patterson Air Force Base in Dayton, Ohio are working hard each day on a variety of projects. Part of developing cutting edge technology is making observations. Good data has to be organized and the results must be repeatable. Clear, concise descriptions are essential! Information has to be shared in a way that others could repeat the experiment and compare their findings. Even if the experiment fails observations are important so the mistake is not repeated!

Object or Substance Name	Solid, Liquid, or Gas	Transparent, Translucent, or Opaque	Color	Shape	Size	Texture

You can use this table to help you organize your observations! What kind of objects will you sort? Will you select natural objects like leaves, flowers, or rocks? What about food? Try describing the properties of different crackers or candies (and then reward your work with a treat). Not all the materials you observe need to be solid! Feel free to compare and contrast the properties of different liquids too!