

# ACTIVITY #5: CLASSIFY LEAVES



**NGSS: 3-LS3-2**

## TEACHER BACKGROUND:

When scientists classify, they place things that share traits or characteristics into groups. In order to classify, scientists need to compare and contrast. To compare you look for how things are alike or similar. In order to contrast, you must look for how they are different. When looking at leaves we may notice many similarities and differences.

## OBJECTIVE:

Students will learn the defining characteristics of leaves either in the ECO-Cycle or in the schoolyard.

## CLASS DISCUSSION:

Classifying is a useful tool for organizing and analyzing things. When you classify, you can learn the characteristics of millions of things without actually having to learn about each one. For example, you may not know all the different kinds of bicycles there are in the world, but you know something about all bicycles: Bicycles have two wheels.

It is a good idea to keep notes of the criteria or rules you use to classify things. An example of a criterion is the number of wheels something has. If you decide to classify things by the number of wheels they have, cars, pickup trucks, and carts would be in the same group because they all have four wheels. Motorcycles and bicycles would be in the same group because they have two wheels.

One way to classify things is by their shape. You can classify leaves by the shape of their edges. Here are some examples of the different types of leaf edges:



**CRENATE**



**INCISED**



**SINULATE**



**UNDULATE**



**LOBED**



**ENTIRE**



**SERRATE**



**SERRULATE**



**DOUBLY  
SERRATE**



**DENTATE**

## ACTION:

Find ten leaves of different kinds, shapes, and sizes. Examine each of your ten leaves one at a time. Draw your leaves on a chart similar to the one shown. Write a description of each leaf next to the picture.

Classify your leaves according to the type of edge each has. Use the leaves from above as a guideline. Record the type of edge on your chart.

Identify any of the similar leaves from above with anything you may be growing in your ECO-Cycle at this time.

| Leaf Classification |  |                          |                |
|---------------------|--|--------------------------|----------------|
| Leaf                | What It Looks Like   | Description              | Classification |
| 1.                  |  | veins<br>smooth<br>edges | smooth         |
| 2.                  |  |                          |                |
|                     |  |                          |                |

### SWIMMING DEEPER:

Ask students to collect leaves from all over campus and home. They should note where they found the leaf and what kind of plant it came from. Have students do a rubbing of each of their leaves on a separate paper and identify parts. Suggestions for items to identify: venation, shape, margin, arrangement, monocot, dicot, modified, stem attachment or base shape. Leaf rubbing should be saved in a binder for the academic year.

## LEAF RUB ACTIVITY



**STEP 1:** Be sure your leaf is fairly dry. If you have a moist leaf, like lettuce, set it out for a day or two and let it dry out just a little.

**STEP 2:** Place your leaf under a piece of white paper.

**STEP 3:** Hold the paper flat and tight over the leaf. Using the side of the tip of the colored pencil, rub the pencil back and forth using wide strokes over the paper. The an image of the leaf will begin to show up on the paper. Be sure to rub firmly and on the edges and stem of the leaf as well.

**STEP 4:** Once your rubbing is complete, label all the parts of the leaf and identify the type of venation, shape, margin, arrangement, monocot, dicot, modified, stem attachment or base shape.