Just Leaf It

Subject: Natural Sciences- Plants, Art, and Math

Grade Level: 6th-8th Grade

Objectives:
Students will be able to…

1) Compare and contrast leaves by color, shape, texture, and size
2) Compare and contrast leaf margins, bases, and tips
3) Measure length and width of leaves in centimeters
4) Match the venation patterns to the venation types in the table provided
5) Identify the molecules involved in Photosynthesis
6) Create a leaf rubbing artwork

Materials:

- ☐ Different leaves from around your neighborhood, yard, a park, or from planters in your house
- ☐ Bag
- ☐ Crayons with the paper wrapper peeled off
- ☐ Paper
- ☐ Ruler
- ☐ Leaf Identification Guide (below)
- ☐ Venation Types Table (below)

Vocabulary:
Leaf Margins- the edges of a leaf
Leaf Bases- the bottom of a leaf, where it meets the stem
Leaf Tips- the part of the leaf that comes to a point
Leaf Veins- the lines on the underside of a leaf that carry food and water
Photosynthesis- the process plants and algae use to make food using sunlight
Leaf Length- from the base to the tip
Leaf Width- the longest part across the leaf
Venation- the patterns of the leaf veins

Activity

Directions:

1. Go for a walk around your yard, neighborhood, park, or home, collecting leaves in a bag. Gather one leaf from each plant that you see.
2. At home, lay your leaves out on a table and compare and contrast them by texture, shape, color, size, **leaf margins, bases, and tips**, using the Leaf Identification Guide below. Make observations about the leaves, such as…
    a. This leaf is cordate in shape

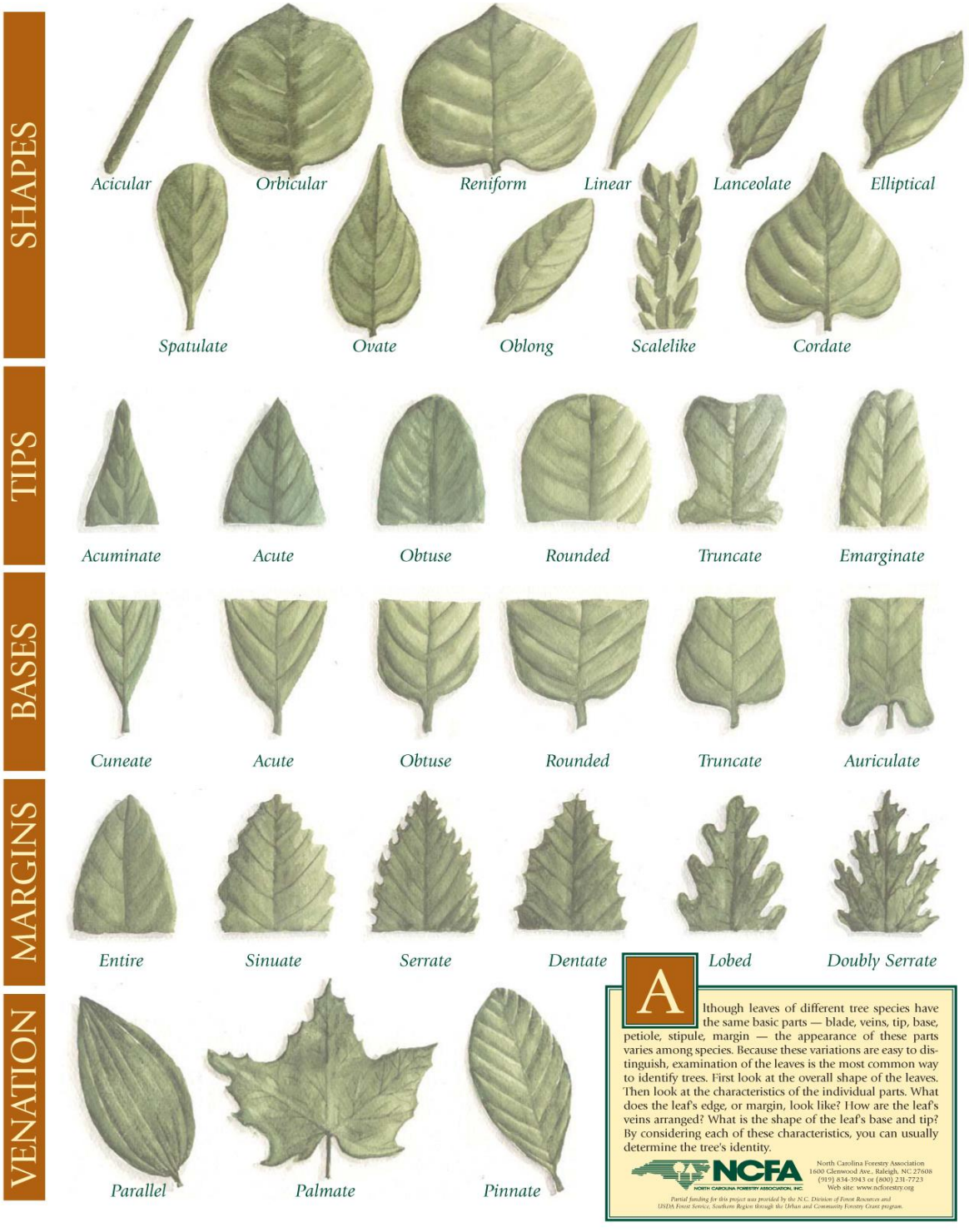
   b. The margin is spikey like serrated
   c. This leaf is oblong in shape
   d. This leaf has an acute tip
   e. This leaf has a rounded base
3. Turn the leaves over and look at the lines on them. These are the **leaf veins** that carry water and nutrients/food. The veins help with **photosynthesis**, the process of making food using sunlight. Discuss Photosynthesis.

Photosynthesis = Carbon Dioxide (CO_2) & Water (H_2O) ----------→ Glucose (sugar) & Oxygen (O_2)
Sun's energy

4. The **venation** can be recorded on a piece of paper using a crayon. This is a leaf rubbing.
5. Place a leaf in front of you with the veins facing up.
6. Place a piece of paper over the leaf.
7. Hold your paper down over the leaf, and using a crayon on its side, rub over the leaf.
8. Repeat steps 5-7 with other leaves to create a leaf art piece.
9. Match the **venation** of the leaves you rubbed to the venation types on the Venations Types Table below. Label what venation type the leaves are on your paper.
10. Measure the **length and width** of the leaves on your paper and write down/label the measurements on your paper. Compare and contrast the leaves using length and width.

YOLO BASIN FOUNDATION

TREE IDENTIFICATION: *Leaves*



Although leaves of different tree species have the same basic parts — blade, veins, tip, base, petiole, stipule, margin — the appearance of these parts varies among species. Because these variations are easy to distinguish, examination of the leaves is the most common way to identify trees. First look at the overall shape of the leaves. Then look at the characteristics of the individual parts. What does the leaf's edge, or margin, look like? How are the leaf's veins arranged? What is the shape of the leaf's base and tip? By considering each of these characteristics, you can usually determine the tree's identity.

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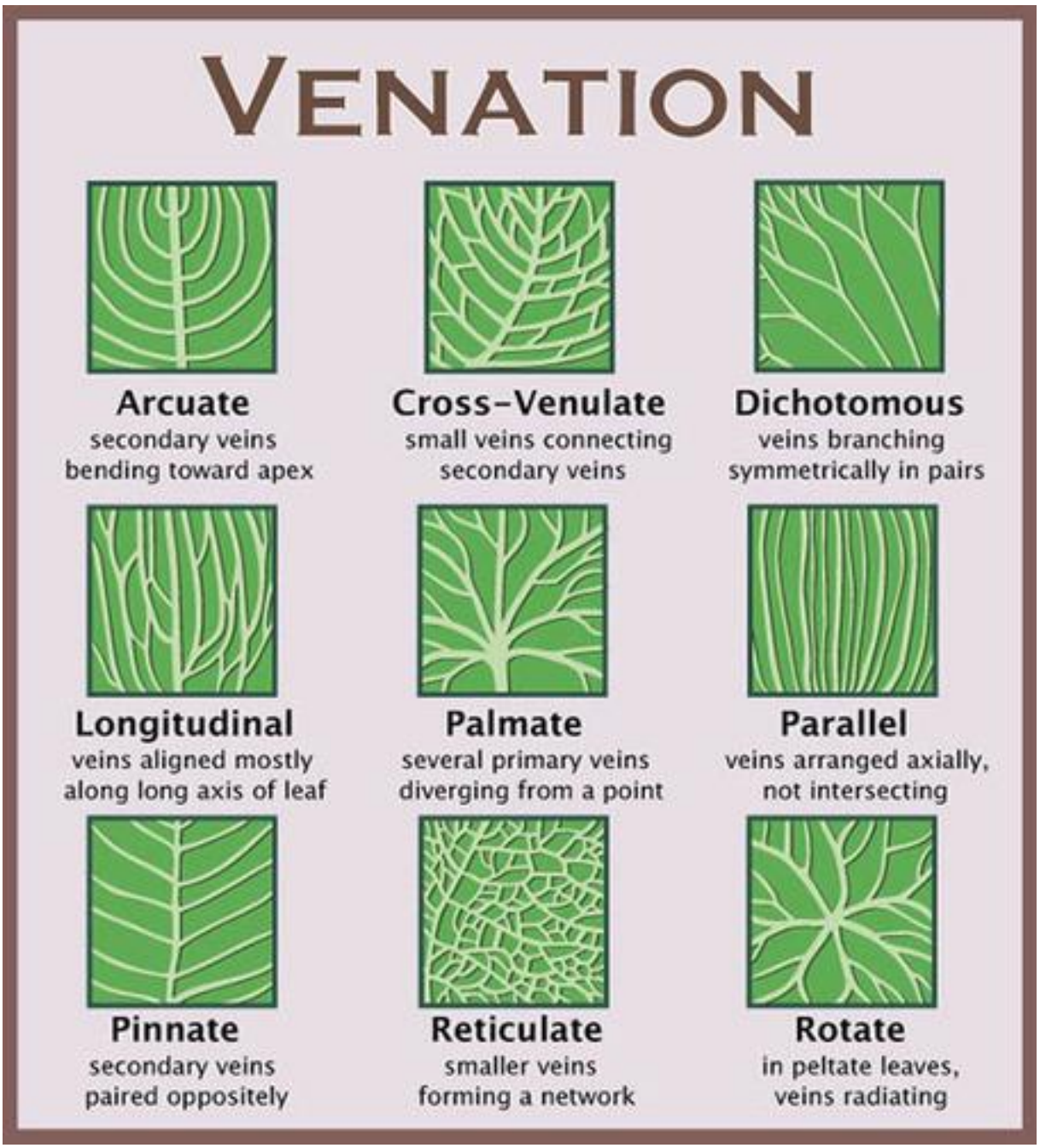
Credit to North Carolina Forestry Association



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