**Elementary Leave Your Leaves Lesson 6**

*Elementary Lessons designed and created by Katie Henson*

**Terrarium**

**Introduction:** Dead leaves provide moisture and nutrients to soil as they decay. This process is an essential part of the carbon cycle—leaves that once provided carbon to the tree through photosynthesis fall off, decay, and provide carbon through the soil in the winter. Being able to observe this process will allow students to visualize the carbon cycle and understand firsthand what happens to leaves once they are on the ground.

**Procedure:** Bring two of the same kind of plant into the classroom. This can be presented as simply as two potted plants or as intricately as two terrariums in glass containers—what’s important is that both presentations are initially the same. Ideally, both plants will also be young and still growing. Explain to the class that you will be comparing the growth and health of these plants over some period of time (several weeks, months, or for the rest of the year). One of these plants will be supplied with fallen leaves and the other one will not. Have students go out and collect a pile of leaves to add to one of the plants, and continue to replace the leaves as needed. Care for the plants the same way, providing the same amount of water and sunlight as needed for that type of plant. Each week, have students take a close look at both plants. Measure how tall each plant is and how dry the soil feels. At the end of the chosen time period, have students answer the following questions about the plants:

1. Which plant grew taller, and why?
2. Which plant retained moisture better?
3. How do dead leaves help plants?
4. What would happen if trees didn’t let their leaves fall to the ground?
5. Why don’t we see dead leaves still on the ground in Spring?

Example data table:

|  |  |  |
| --- | --- | --- |
| Treatment | Soil texture after 3 months | Height after 3 months |
| Leaves | Dry | 7.8 inches |
| No leaves | Damp | 4.5 inches |