

Sustainability Barrel Activity

The Sustainability Barrel is a visual demonstrating the law of minimums of plant growth. Without each important element a plant needs to grow, there is a limitation for the plant to stay healthy and thrive. Whether an element is needed in a large amount or the smallest trace amount, a plant's health will not sustain with an element lacking. This classroom visual brings the necessary factors a plant needs to be healthy to live, by showing how all of the elements need to be balanced.

- Ask students to picture a wooden barrel made up of several wooden slats. Explain that we are going to call it a sustainability barrel. Each wooden slat of the barrel represents a factor influencing sustainable plant health.
- Ask students, "What are some examples of limiting factors?" (water, plant nutrients, permeability, etc.) Ask students to explain how each factor influences the plants ability to grow. Remind students that the weakest part of sustainability, whether it is education or soil health, affect the overall plant growth.

Materials you will need:

- 9 wooden sticks (large popsicle sticks work well)
- Pool noodle (one 5-6" section)
- 9 labels
- Rubber band



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Instructions:

Cut the pool noodle into 5-6" sections
Label each stick with one of the following: Water, Oxygen, Decomposers—Living Organisms, Weather/Climate, Permeability – Texture and Structure, Primary Elements NPKS, Trace Elements, Parent Material – Rock, and Organic Matter – Humus

Put the rubber band around one section of the pool noodle

Begin putting each stick under the rubber band around the pool noodle until all the sticks are placed.

