How Plants Grow

A plant is a living system. It needs sunlight, water, air, nutrients, and space to function and grow. In this activity, children design an experiment to test these requirements.

While exploring a park, farm, or other green space, challenge children to find signs of new plant growth. While examining samples, ask what factors are necessary for plants to grow (sunlight, water, soil, space). Ask children how they might design an experiment to test the necessity of these requirements. Help them write and illustrate the steps to their experimental design.

Ask children to look at the drawings below. Of the four options (A, B, C and D), which two should be used to test how sunlight affects plant growth? Use this example to explain the importance of experimental control.

If possible, obtain two plants of the same size and species to give the experiment YOU designed a try. Allow one plant access to a single requirement, while denying the same requirement to the other. At set intervals, let children measure the seedlings. After a period of time, measure and compare the two plants. Ask whether they look different, and if so, why?

Try the following:

• Take digital photos every few days, and use presentation software to create a visual timeline of plant growth.
• Compare children’s growth to that of the experimental plants by measuring child height at the beginning and end of the experiment.
• Create a “flip-book” that shows plant growth in animation. Index cards work great!

Make Learning Fun!
Encourage your child’s school to incorporate learning outdoors.
For more activity ideas and materials:
• Attend a PLT workshop, www.plt.org/state-network/
• Visit shop.plt.org