Plant Adaptations to Human Inventions

Students will spend time outside observing plants. This outdoor time may be spent in a yard, around a neighborhood, or at a park.

1. As students walk and make observations and draw special characteristics of "adult" or "parent" plants. Their drawings should include different parts of the plants and how those parts help them plant survive,grow, and reproduce.

Examples: -Tree trunks help a tree grow tall and stable
-Branches grow out to help the leaves get sunlight
-Seeds are babies that will become new plants
-Thorns protect the plants from getting eaten by animals







2. As students make observations of plant characteristics, they should also search for seeds of different types of plants. Discuss that seeds are the offspring of the parent plant. They will grow into baby plants. The seeds may be found on the ground near the plant, a little ways away from the plant, or they may still be growing on the plant.





Students will make observations, draw pictures, and write explanations to compare and contrast the similarities and differences between the offspring and parent or the seeds and the adult plants. As a scientist, students can also make predictions of how parent plants spread their offspring to new places.

3. Discuss with students that plants have many special characteristics that help them survive and grow in the wild. Their observations allowed them to see some of these characteristics. Scientists and engineers also make these observations and think that they are pretty amazing. They will use plant characteristics for ideas on creating inventions that help humans.





Students have probably had velcro on their shoes instead of laces. This sticky stuff was actually invented from a sticky, burdock seed. Students may have come out of the woods with seeds stuck to them and seen how this plant acts. Inventors copied this special plant characteristic to make something useful for humans.

Now it is the students' turn to be inventors. Using their observations from the plants and seeds, students will draw a design for an invention that can help humans. After showing their design, they can develop and make it! Their invention will be a model, so they can use all sorts of different craft materials such as popsicle sticks, construction paper, or pipe cleaners. They can also use objects that they find outside such as rock and sticks. Students should be able to present how their invention helps humans by modeling an example of a plant characteristic.

Examples of human problems that can be solved by mimicking plant solutions could include designing clothing or equipment to protect bicyclists by mimicking acorn shells, stabilizing structures by mimicking roots on plants, and keeping out intruders by mimicking thorns on branches.