

3-5 Lesson



Field Plastic

Grade Level: 3rd-5th

Topic: Corn

Estimated Time: 50 minutes

Brief Lesson Description: Students will describe how plant-based products are used in daily life. Then, students will make observations, predictions and write a hypothesis while investigating the differences between a biodegradable packing peanut and a petroleum-based packing peanut. In groups, students will make a corn-based plastic to take home.

Next Generation Science Standards:

- **3-5ETS1-1:** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- **4-ESS3-1:** Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.
- **5-ESS3-1:** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- **5-PS1-4:** Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

National Agricultural Literacy Outcomes:

- **T1.3-5 e:** Recognize the natural resources used in agricultural practices to produce food, feed, clothing, landscaping plants, and fuel (e.g., soil, water, air, plants, animals, and minerals).
- **T2.3-5 b:** Distinguish between renewable and non-renewable resources used in the production of food, feed, fuel, fiber (fabric or clothing) and shelter.
- **T4.3-5 d:** Provide examples of science being applied in farming for food, clothing, and shelter products.
- **T5.3-5 b:** Discover that there are many jobs in agriculture.

Specific Learning Outcomes:

1. Students will identify renewable and nonrenewable resources and define biodegradable.
2. Students will compare petroleum and plant-based packing peanut by running a series of tests and comparing the results.
3. Students will identify types of physical properties.
4. Students will describe how plants can be used in everyday products such as food, fuel and fiber.