



DISAPPEARING GHOSTS

Grade Level

K-6

Length of Lesson

30 minutes

Objective

By the end of this lesson, students will have a better understanding of what biodegradable products are.

Materials Needed

- Black markers
- Warm water
- Cups (2 per student)
- Biodegradable corn packing peanuts (from [Uline](#))

Standards

NGSS

K-2.ETS1-1; K-2-ETS1-2;
2-PS1-1; 2-PS1-3; 5-PS1
-4; MS-PS1-2

Lesson Summary

This lesson is a fun, hands-on activity designed to help students understand that some products are made with natural resources and are biodegradable!

Suggested Sequence of Events:

1. Read "[The Legend of Spookly the Square Pumpkin](#)" by Joe Troiano to snag student interest.
2. Read through the AITC Corn Ag Mag to learn more about corn and its many uses! Interactive online versions can be found on our website.
3. Complete the activity following the procedures:
 - Give each student two cups and one corn packing peanut.
 - Have students flatten their corn packing peanut and draw a ghost face on it.
 - As they are working, fill up one of each student's cups with warm water.
 - Have your students put their ghost, face-side up, in the empty cup.
 - Then, have them carefully pour the warm water on top of the ghost and observe!
 - To decrease chances of spilling with younger students, you can give them one cup of warm water for them to dunk their ghosts into.
4. Whole class discussion and reflection of activity. Why did the corn packing peanuts disappear?

TEACHER RESOURCES

Background Information:

Unlike Styrofoam packing peanuts, cornstarch packing peanuts are biodegradable and decompose in water, leaving no toxic waste. Corn, being a plant, is a renewable resource that we could use to reduce the amount of non-renewable and non-biodegradable products!

Extension Ideas:

- Compare how quickly the ghosts dissolve in warm water vs. cold water.
- Use timers to time how quickly their ghosts dissolve.
- Use our “Biodegradable Packing Peanut” activity to make your own corn packing peanuts. Then use your home-made peanuts to complete this activity and compare the reactions of each type of peanut. Throw in a Styrofoam packing peanut to also compare with.
- Because the peanuts begin to break down in water, the peanuts can be used to construct sculptures and art. Simply “lick and stick.” Have student build structures out of the corn packing peanuts. A little spit goes a long way!
- Learn more about other common corn-based products.
- Invite a corn farmer into the classroom to talk about types of corn, their uses, and what it takes to be a corn farmer.
- Have students write a short story or create a comic strip from the packing peanut ghost’s perspective.
- Learn about what other agricultural products are popular for use during the Halloween season. Think about food and decorative products.
- Read about the history and traditions of Halloween.
- Read “[Pumpkins](#)” by Gail Gibbons to learn more about other popular Halloween agricultural products.
- Use the packing peanuts as manipulatives to teach about math concepts.
- Define and discuss the words “biodegradable,” “decompose,” and “toxic waste.” Dig deeper and look at the by-products and wastes from making various materials.
- Brainstorm as a class and make a T-Chart on the board and list renewable and non-renewable resources.
- For older students, have them research what products can be made renewable, but are still primarily made with non-renewable resources. (Ethanol, corn packing peanuts, plastics, etc.)
- Go to agintheclassroom.org to contact your County Literacy Coordinator for free classroom sets of our Ag Mags!