

Eco-Friendly Corn (At Home)

Kindergarten - 2nd Grade

Activity

Time

30-45 minute sessions

Subject Areas

Science and Math

Essential Question

- How is corn help us be eco-friendly?
- How is corn used to make eco-friendly products?

Objective

To investigate how corn products can be environmentally friendly

Materials

- Pieces of Styrofoam or packing peanuts
- Cool Corn published by Kansas Ag in the Classroom
- Ingredients to make Biodegradable Corn Plastic:
 - Bowl of water
 - Tablespoon of Cornstarch
 - 2 drops corn oil
 - 1 ½ tablespoons water
 - Gallon Ziploc bag
 - Food Coloring
- Biodegradable packing peanuts (optional)

Directions

1. Find some Styrofoam pieces or packing peanuts around the house. Have child(ren) put a handful of them in a bowl of water and leave them sitting for a while.
 - What is happening to the Styrofoam? Answer - Nothing
 - What does this show you about what happens to Styrofoam when we throw it away? Answer - Styrofoam does not decompose and stays on our Earth forever because recycling efforts are not effective at this point.

2. Watch Steve Spangler video: <https://www.youtube.com/watch?v=wdWRx05P4I0>
Discuss how the packing peanuts made from corn are so much more earth-friendly.
 - Why are the peanuts made from corn better for our earth? Answer - They decompose when the rain falls on them in a landfill.
 - What are some items that are made of Styrofoam? Answer - packing peanuts, coolers, cups, meat trays, packing sheets that are used with large products like televisions, egg cartons, to-go boxes, flotation devices, etc.
 - Why is it better if trash items decompose? Answer - Because when items break down into little pieces that become part of the soil, there is less trash that stays in our landfills.
3. Look at how these magic corn pellets are made. Watch Packaging Peanuts Biodegradable Compostable Packing (How It's Made) Video: <https://www.youtube.com/watch?v=WR9h1fzfTeY>
4. Discuss the video.
5. If you have the biodegradable packing peanuts, use them to make sculptures and projects by dipping them in water and sticking them together.



Note: Corn is not only used to make packing peanuts. It can be used to make biodegradable plastic that decomposes just like the packing peanuts. This corn plastic can be made into silverware and cups that we use.

6. Read Cool Corn handout from Kansas Agriculture in the Classroom - <https://bit.ly/3e3valn>
Read the directions on the last page of the handout to make your own biodegradable corn plastic. When completed go over the following questions:
 - What do you notice about your biodegradable plastic ball? Answer: The liquidly substance turns into a rubbery plastic that can be molded.
 - What could you make with this biodegradable plastic if you let it harden? Answer: Any shape you want
 - Why is this kind of plastic better for our environment? Answer: biodegradable
7. Closing: Corn is used for many products that we use in our world, and many of these products help us save our earth. Watch Uses of Corn - https://www.youtube.com/watch?v=DjDlfsk_3s0&t=14s

Eco-Friendly Extension

- Corn is also good for birds to eat and helps our environment. Make a bird feeder and mash up some popcorn kernels to put in the bird feeder so animals can eat the cracked corn and the cereal.
- To crack the corn, put the kernels in a Ziploc bag (freezer kind work better because they're stronger) and shut the bag and use a hammer to crack the corn into medium-sized bits.
 - Dent Corn is high in protein and fiber and used to make cracked corn, but popcorn can be used also
- Blue jays, cardinals, doves, rabbits, chipmunks, squirrels all love to eat cracked corn
- To learn more about what corn products that are in Fruit Loops cereal, go to the following link- <https://melmagazine.com/en-us/story/whats-in-this-fruit-loops>

