

Middle School Lesson Plan: Corn Bioplastic

Overview: Students will take what they have learned about **renewable** and **nonrenewable resources** to create their own bioplastic made out of corn. Plastic made from corn is one possible alternative that is **biodegradable**.

Lesson	Time	Essential Questions	Activity	Conclusion
<p>Corn Bioplastic</p>	<p>1-2 classes</p>	<p>How can we make an alternative resource that can be biodegradable?</p> <p>What are the pros and cons of using an alternative?</p>	<p>Students will use corn products to create a plastic alternative.</p> <p>Materials:</p> <ol style="list-style-type: none"> 1. In a mixing bowl add 2 tablespoons of corn flour, 1 tablespoon of water ¼ teaspoon of vegetable oil 2. Stir with the metal spoon until thoroughly mixed Take the spoon out of the bowl and microwave the mixture on HIGH for 10 seconds. Stir with a metal spoon 3. Repeat on HIGH for 10 seconds 4. Microwave the mixture in 5-10 second bursts, without stirring in between 5. Leave to cool before spreading onto a pan. <p>Place the shapes on the cake rack to dry for 1-2 days</p> <p>After students make the corn bioplastic, discuss the pros of creating biodegradable plastic. Why do we need alternative solutions?</p>	<p>Plastic is a common household item but is not biodegradable and not good for the Earth. We can create alternate solutions that are biodegradable such as bioplastic made of corn. There are pros and cons of this alternative.</p>



Additional Resources on EARTHDAY.ORG

[Plastic Pollution Fact Sheets](#)

Glossary:

Bioplastic - a *biodegradable* material that comes from renewable resources

Corn - the typically yellow or whitish seeds of corn used especially as food for humans and livestock

Non-Renewable Resources – resources once they are used up, they cannot be replaced *example: oil, coal*

Renewable Resources - resources that can be replenished quickly *example: wind, water*

