

The joys of Biodegradable Products

Grade Level: 2nd, but can be used for any grade.

Lesson Time:30-40 min.

Objective: Students will understand the difference between biodegradable and not biodegradable products.

Materials: products that are both biodegradable and non biodegradable(either 1 per person or per group).(experiment) these are for each person: 1 Tablespoon Cornstarch, 2 drops corn oil, sandwich size Ziploc bag, 1 Tablespoon of water, food coloring, microwave. You might want to also have a parent or two in the classroom to help with the experiment.

Procedure/Steps

1-Ask the students what biodegradable and non-biodegradable means. Then share the definition of biodegradable and non-biodegradable. Give each student or every group a product and have them present the product and state if it is biodegradable or non-biodegradable.

2-Discuss why biodegradable products are good for the environment and non biodegradable products are not so good for the environment.

3-After the students understand what biodegradable and non-biodegradable means tell the students that we are going to make biodegradable plastic.

4-Show the students how to make the biodegradable plastic.

5-Now have the students make biodegradable plastic.

6-After all of the students are done ask the students what they observed:

1. What do you notice about your biodegradable plastic?
2. Is your biodegradable plastic the same as the other students?
3. What could you make with this biodegradable plastic if you let it harden? Remember it will dissolve eventually.
4. What happens to your plastic?
5. Form your plastic into a ball (while it is still warm) and describe what it does.
6. Compare your biodegradable plastic with the plastic Ziploc bag.

Assessment: Have the students put their bio-plastic in a Ziploc bag. Have them put water in the bag and shake it. The students will write a paragraph on what happened and why it happened. (the biodegradable plastic will disintegrate in water).

Reflection:

Website for the biodegradable plastic

<http://extension.usu.edu/aic/teachers/pdf/fieldguide1/plastic.pdf>

Make Your Own Bio-plastic Stuff...In Your Microwave

Materials

- _ 1 tablespoon
cornstarch
- _ 2 drops corn oil
- _ Ziploc bag
- _ Water
- _ Food coloring

Directions

1. Place a tablespoon of cornstarch in a plastic Ziploc bag.
2. Add two drops of corn oil to the cornstarch.
3. Add one tablespoon of water to the oil and cornstarch.
4. Mix the cornstarch, corn oil, and water in the plastic bag by rubbing the outside of the bag with your fingers.
5. Add two drops of your favorite food coloring and mix again.
6. Place the bag in a microwave oven on high for 20-25 seconds. DO NOT completely seal the bag. CAREFUL, it's hot!

Observations

1. What do you notice about your biodegradable plastic?
2. Is your biodegradable plastic the same as the other students?
3. What could you make with this biodegradable plastic if you let it harden? Remember it will dissolve eventually.