Session 3 Skill Review: More Plastic than Plankton!

Read the information and then follow the instructions on the next page to create a poster. Before getting started you will need the *Poster Template* and the *Plastic Pollution* folder. Ask your teacher for these files.

What is Plastic Pollution?

Plastic is a material that is used in the manufacturing of products. It is often created from polymers and various chemicals. Plastic is used to make everyday items such as clothing, eyeglasses, shopping bags, toothbrushes, water bottles, electronics, dishes, utensils, toys, and packaging. It is used because it is versatile.

Plastic waste can entangle or entrap animals. Often this causes them to be unable to eat or move.

Interesting Facts

- The average person uses an average of 200 pounds of plastic each year.
- Less than 10% of plastics produced are recycled.
- Plastics can be manufactured to meet almost any requirement. It can be rigid, flexible, colored, or fire-resistant.
- Mass production of plastic began in the 1940's because it was economical to make.
- Many plastics are made from petroleum, which is a fossil fuel.
- Plastic in waterways allows foreign species such as barnacles, tubeworms, and algae to travel on the debris to new locations threatening the local area's biodiversity.

Harmful Effects

- *Toxic Landfill Waste*: Plastic waste buried deep in landfills can leach harmful chemicals that can spread into groundwater.
- *Pollutes Oceans*: Plastic that was not recycled often gets washed into a stream, river, or lake, which empties into the ocean. The ocean currents carry the plastic into gyres, which are circular flows that trap the plastic in one location. The gyres become large watery garbage dumps.
- *Strangle Animals*: Animals are often found entangled in plastic debris. They often cannot move or eat, resulting in a slow painful death.
- *Toxic to Animals*: Plastic waste breaks down into nurdles, which are small plastic pieces. Fish, turtles, and birds mistake the pieces for food and when they eat it, they often die because of the toxins in the plastic. If they survive, humans eat the animals. As a result, allows toxins to enter the body.
- *Human Health Risks*: Items made from plastic have harmful chemicals added during the manufacturing process to make it easier to mold. Plastic packaging used to store food or drinks, as well as toys, have chemicals that are believed to contribute to cancer.

Solutions

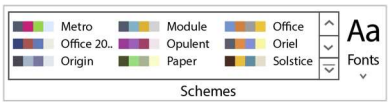
- *Reduce*: Purchase products that use less packaging or use alternative packaging such as paper or glass.
- *Recycle*: Transform plastic items into new products.
- *Recover*: Clean up plastic waste. Pick up discarded water bottles, shopping bags, and food packaging from the ground and waterways and recycle the items.
- *Bio-Based Plastics*: Develop biodegradable plastic from renewable plant sources such as vegetable oil, corn, wheat, soy, potatoes, beets, and sugar cane.
- *Green Chemistry*: Develop safer chemicals to use in the manufacturing process of plastics that are not toxic.
- *Regulations*: Establish and enforce laws that manage waste in the community and encourage companies to alter their manufacturing process.

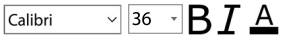
Bioplastic
An examination of a solution that creates plastic from plant sources.

Advantages	Disadvantages
Made from renewable plant sources. Use less energy to produce than plastic made from petroleum. Bioplastics can be recyclable, compostable, and/or biodegradable. Bioplastics are non-toxic and will not leach toxins into the soil and water.	Often recycle centers must sort the bioplastic from the petroleum-based plastic. Risk food shortages if crops are grown for bioplastic instead of food. Many bioplastics have a low melting point.

Create a poster that informs others about plastic pollution.

1. Open Microsoft Publisher and choose a *Blank 8.5 x 11"* layout.
2. From the Page Design tab, select a color scheme.



3. Insert a border:
   a. From the Insert tab, click *Border & Accents*. Pick a border in the *Frames* section.
   b. Set the size of the border to: *Height* **10**, *Width* **7.5**
   c. Align the border.
4. Add a WordArt title:
   a. From the Insert tab, pick *Insert WordArt* in the Text group. Select a style.
   b. Type a title such as **Plastic Pollution** or **More Plastic than Plankton**. Click *OK*.
   c. Format the title using the WordArt Tools Format tab.
5. Add a picture:
   a. Insert a picture from the *Plastic Pollution* folder.
   b. Apply your skills to move or resize the picture.
   c. Format the picture style.
6. Insert a clip art of earth:
   a. Insert an online image using the search term **earth clip art**.
   b. Apply your skills to move or resize the picture.
   c. Set a transparent color if necessary.
7. Use a Page Part to describe the problem and give a solution:
   a. Insert a *Page Part*. Choose a Page Part that has a picture and text.
   b. Change the picture(s) using the pictures in the *Plastic Pollution* folder.
   c. Read the fact sheet. Type a *title* that describes the **problem**.
   d. If there is a *subtitle*, type ***Earth Needs Your Help!***
   e. Read the fact sheet. Type a description that describes a **solution**.
   f. Format the text to make it look good. 

8. Attract attention:
   a. Insert an Attention Getter using the *Advertisements* command.
   b. Change the text to **Help Wanted**, **You Can Help**, or **Save Earth**.
9. Print and save the poster. Close Microsoft Publisher.