

Name \_\_\_\_\_

Date \_\_\_\_\_

## Answers

# ALL ABOUT PLASTIC

**DIRECTIONS:** Read the following passage about plastic, then answer the questions based on the nonfiction text.

Walk around your home and you are bound to find something made of plastic. Toys that make you smile and games that fill your family game night with laughter are probably made of plastic. Not to mention many of the yummy snacks you munch on are packaged in plastic. Plastic seems to be a very big part of our lives, but did you know that plastic has not always been around?



## WHAT IS PLASTIC?

Plastic is one of the most useful inventions. It can be flexible or hard, depending on how people make it, and is now used in a lot of everyday items. A useful thing about plastic is that it can be all different shapes, sizes, and strengths. Plastic toothpaste holders are easy to squeeze, while hard plastic storage containers help preserve food and keep liquids from spilling. Plastic also lasts hundreds of years, so well-loved toys can last a long time.

## HOW IS PLASTIC MADE?

Plastic is mostly made of oil. Oil comes from tiny plants and animals that have been squashed underground for a long time, and is created through a natural process.

To manufacture plastic, people need to gather the oil from deep underground using oil rigs. Then the oil is separated into different types of oils and gases at an oil refinery. When they separate the oil, refineries look for naphtha, which is a thin oil. At the petrochemical plant, people then heat naphtha to make the main ingredients of plastic. Finally, factories add color and chemicals to shape and mold the plastic into what they want to make.

OIL  
RIG



OIL  
REFINERY



PETROCHEMICAL  
PLANT



PLASTIC  
FACTORY

Plastic is cheap and relatively easy to make. If that weren't the case, then drink and snack companies would not use it to package their products.

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## WHEN DID WE START USING PLASTIC?

It took a while for scientists to discover plastic and realize its usefulness. Before we had plastic, people had fewer things. If those things broke, they would get them fixed instead of throwing them away. Most toys were made of wood or metal instead of plastic. Food was also wrapped in paper and used quickly, instead of being kept fresh for a long period of time.

Many innovators contributed to the invention of plastic, including Alexander Parkes in 1859. But the use of plastic didn't become popular until the last 80 years. During the Second World War, in the 1940s, a lot of military tools and equipment used plastic to help fight in the war. Some examples are parachutes and the plastic lining in helmets. About 50 years ago, plastic started to replace a lot of materials. Some materials that plastic replaced were steel in cars, glass in packaging, and wood in furniture.

**DID YOU KNOW** people make around **300 million tons of plastic every year**? That weighs as much as all the adults on earth!



Each year, 8 million tons of thrown-away plastic reaches the sea.



**THESE TRIANGLES** are placed on plastic products to identify the types of plastic. Numbers 3, 6, and 7 are plastics that are hardest to recycle because they give off the worst chemicals during the recycling process.

## WHY ARE PEOPLE REDUCING THEIR PLASTIC WASTE?

While plastic is convenient because it lasts a long time and people can easily mold it into different shapes, its longevity is a problem. Since we make so much plastic every year, and much of the plastic is only used once – *hello plastic water bottles!* – the plastic waste people create is a lot for our environment to handle. Much of the plastic waste enters the oceans, which interferes with sea creatures and the ocean ecosystem.

Even though plastic can be recycled again, there are still some plastics that are non-recyclable. These plastics are called single-use plastics. These plastics include those used

to wrap greeting cards, or the plastic around new toys and games. Some plastic can be recycled, though. The type of plastic determines how easy or difficult the plastic is to recycle. The impact of plastics on society and the Earth is far-reaching. Plastic makes a lot of things easier, but there is a cost to that ease. The waste people create with their use of plastic is evident as well.



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## Possible Answers

### QUESTIONS

**DIRECTIONS:** Answer the questions based on the nonfiction text.

1. List one advantage and one disadvantage of using plastic based on information from the text.

ADVANTAGE	DISADVANTAGE
Plastic is cheap to make and the product lasts many years.	There is so much plastic made, which means too much plastic enters the ocean.

2. Write one fact you learned from a sidebar.

Answers will vary but should include a detail from the sidebars (separated information in the text).

3. Describe how the sidebars contribute to the article.

The sidebars add more information about plastic that is not specifically mentioned in the text. For example, the recycling sidebar mentions information about the labelling of different types of plastic. It also tells the reader which plastics are the hardest to recycle.

4. Create a sidebar to add to this article. Conduct research online or at the library to gather more information.

Student answers will vary but should include information about plastic that is not in the text. It can also be a visual or drawing.

5. Consider this excerpt from the text:

“While plastic is great because it lasts a long time and people can mold it into different things easily, its longevity is a problem.”

What is the author’s view of plastic, based on this excerpt?

Based on this excerpt, the author feels like there are two sides to the plastic problem: it’s convenient that plastic lasts long, but it’s bad because we have so much plastic waste.

6. Circle the words from the text that show how the author feels about plastic.

Refer to the text for these answers. Allow additional circled words if learners can justify their answers.

7. Suggest an alternative title for the text. Why did you choose that title?

Student answers will vary.