

## 4<sup>th</sup> Grade Inclement Weather Packet

Complete these steps.

\_\_\_\_\_ Read the Newsela article, "Scientists Study Huge Patch of Trash in the Ocean"

\_\_\_\_\_ Complete the questions and the writing prompt that go with the article.

\_\_\_\_\_ Complete the Math Learning Review Questions 1-10.

\_\_\_\_\_ Complete the Math "Rake 'em In page for addition and subtraction.

\_\_\_\_\_ Read independently for 20 minutes with a book of your choice. Then answer the questions below.

Who is your favorite character? Why? If you would like, draw a picture of the character.

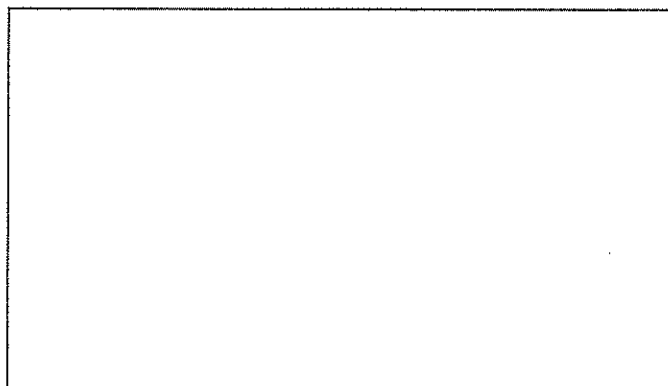
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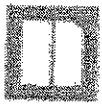
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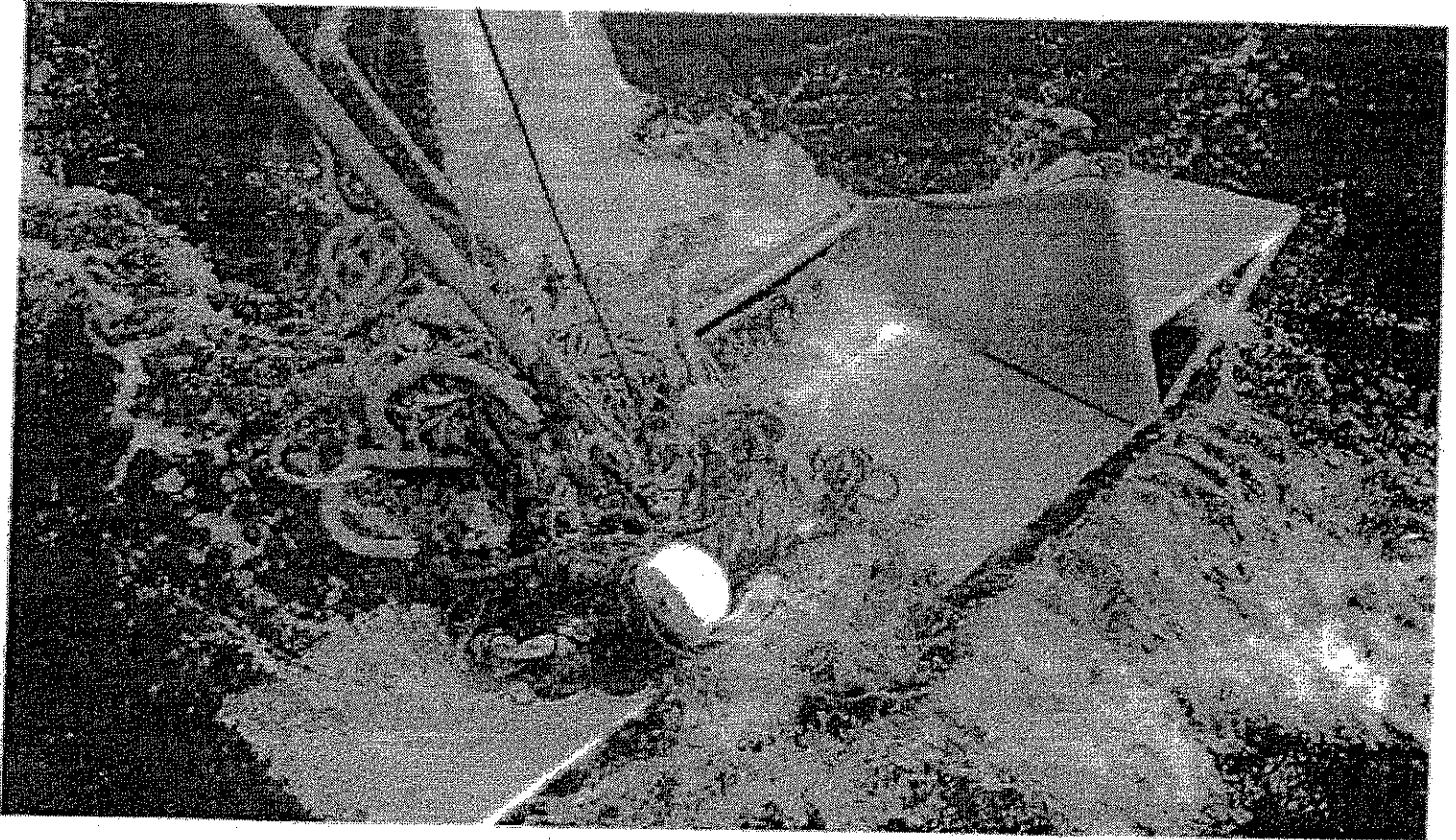


# Scientists study huge patch of trash in the ocean

By Los Angeles Times, adapted by Newsela staff on 04.02.18

Word Count 614

Level 630L



The Great Pacific Garbage Patch is also called GPGP for short. It is a floating glob of plastic trash. It sits in the eastern Pacific Ocean between California and Hawaii. It's also a lot bigger than previously thought. It's now twice the size of Texas. And it's only getting bigger.

A team of scientists recently studied the garbage patch from above. They were in for a surprise. The patch was made of about 79,000 metric tons of plastic. That's up to 16 times larger than previously thought. Worse, they found that the garbage patch is still growing, and quickly. The new numbers were published in *Scientific Reports*, a science journal.

Laurent Lebreton led the study. The garbage patches are a reminder of what humans can do to nature. "It's quite frightening," he said.

## Plastics Of All Sizes Harm Ocean Life

Plastics are meant to last. That's great for making grocery bags. It's not so great when those plastics end up in the ocean. They can cause all kinds of problems. Animals can eat them or be

injured by them. Plastics that float around for a long time are biofouled. Biofouling happens when a layer of slime, shellfish and other ocean life is stuck to the trash. Biofouled plastic can attract fish and seabirds. Through these animals, the plastic ends up in the food chain. The full effects of these plastics on the environment aren't yet known. Scientists are worried, though. Large or small, plastics of all sizes can harm ocean life.

Scientists have tried to get a closer look at the garbage patch. They drag nets through parts of the patch and take samples of the plastic they find. But this only gives them a snapshot. Most of the samples come from smaller pieces of plastic. The scientists aren't usually able to look at larger chunks.

### **Birds-Eye View**

Lebreton and his team decided to take a bird's-eye view. They did an aerial study of the GPGP from above. They also sent boats to take samples of the trash. Then they brought the samples back to shore to inspect them.

The researchers split the plastic they collected into groups based on size. The pieces ranged from super tiny (microplastic) to large (megaplastic). There were about 1.8 trillion pieces of trash in all. Microplastics made up almost all of that number. But they only accounted for 8 percent weight. More than three-quarters of the rest of it came from larger plastic pieces.

### **Fishing Nets A Major Source Of Trash**

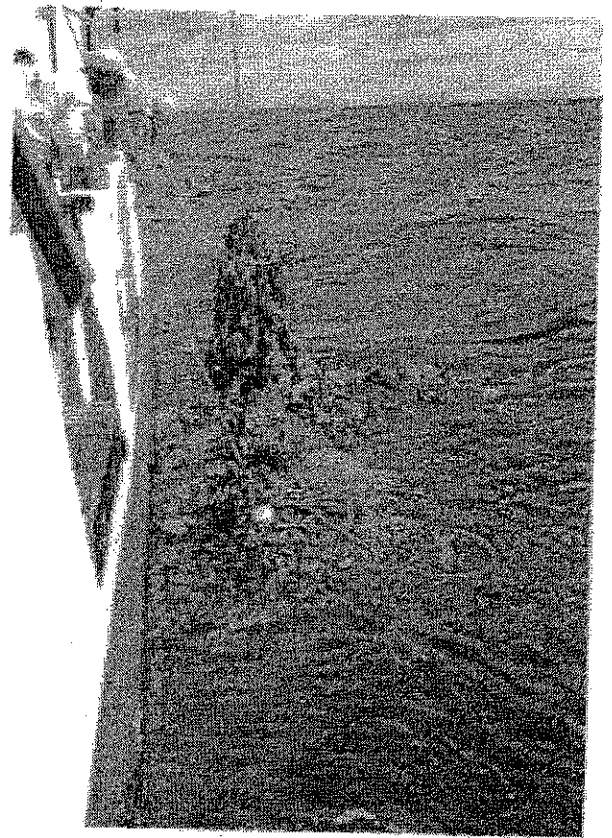
Fishing nets were one major source of trash. They accounted for just under half of the garbage patch's mass. Nets are cheap and easy to replace. Fishing boats often leave them behind. But they can float through the ocean, trapping and hurting animals.

### **Tsunami Shook Japan**

Fifty plastic items had dates printed on them. Most were from the 1990s and 2000s. One was from all the way back in 1977! A total of 386 items had words from nine different languages. A third were in Japanese.

The researchers think they might know why. In 2011, the Tohoku tsunami and earthquake shook Japan. The disaster reportedly washed 4.5 million metric tons of trash into the sea. A third of that could have floated across the ocean surface. Then it could have made its way to the garbage patch.

None of this accounts for plastic that sinks. There might be much more plastic on the ocean floor. Scientists aren't yet sure just how much more there is.



4GR

1. Read the introduction [paragraphs 1-3].

Select the sentence that BEST explains why the scientists who studied the Great Pacific Garbage Patch were surprised.

- A It is a floating glob of plastic trash.
- B The patch was made of about 79,000 metric tons of plastic.
- C That's up to 16 times larger than previously thought.
- D The garbage patches are a reminder of what humans can do to nature.

2. Which sentence from the section "Plastics Of All Sizes Harm Ocean Life" helps the reader understand why the Great Pacific Garbage Patch is dangerous?

- A Plastics are meant to last.
- B Animals can eat them or be injured by them.
- C The full effects of these plastics on the environment aren't yet known.
- D Most of the samples come from smaller pieces of plastic.

3. Complete the sentence. Because of the 2011 Tohoku tsunami\_\_\_\_\_.

- A A large amount of trash in the GPGP is from Japan.
- B The GPGP has floated closer to the coast of Japan.
- C Plastics in the GPGP are becoming biofouled.
- D Scientists are able to study the smaller pieces of plastic.

4. Why does Laurent Lebreton think that the Great Pacific Garbage Patch is "quite frightening"?

- A because there are so many fishing nets that make up the GPGP
- B because the GPGP is floating closer and closer to California
- C because scientists do not yet know how dangerous plastic can be to the environment
- D because scientists did not realize how much of the trash had come from the 1990s and 2000s

5. Write a short paragraph that explains the central/main idea of the article. Use at least two details from the article to support your response.

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# 4th Math Virtual Learning Review 1

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1. Which equation is represented by the phrase "18 is 3 times as many as 6"?

A.  $3 + 6 = 18$

B.  $6 - 3 = 18$

C.  $3 \times 6 = 18$

D.  $6 \div 3 = 18$

2. Andy and Joseph collect model cars.

- Joseph has 4 times as many model cars as Andy.
- Joseph has 24 model cars.

Which equations could be used to find how many model cars ( $m$ ) Andy has?

Select *two(2)* that apply.

A.  $m \div 4 = 24$

B.  $4 \times 24 = m$

C.  $4 \div 24 = m$

D.  $24 = 4 \div m$

E.  $24 \div 4 = m$

F.  $4 \times m = 24$

3. Movie tickets are \$12 for adults and \$6 for children. If one adult and one child go to the movies and pay with a \$20 bill, how much change will they receive?
- A. \$2
  - B. \$8
  - C. \$18
  - D. \$38
4. Which is a prime number?
- A. 18
  - B. 23
  - C. 25
  - D. 27
5. To find the next number in this pattern, what must be done?
- 223, 216, 209, 202, \_\_\_\_\_
- A. subtract 7 from 223
  - B. add 7 to 223
  - C. subtract 7 from 202
  - D. add 7 to 202
6. Consider the numbers 8,270 and 827.
- How much larger is the 7 in 8,270 than the 7 in 827?
- A. 7 times larger
  - B. 10 times larger
  - C. 70 times larger
  - D. 100 times larger

7. Which choice is equal to 4,655?

- A. four thousands, sixty-five hundreds, and five ones
- B. forty-six hundreds, five tens, and five ones
- C. four thousands, sixty hundreds, and fifty-five ones
- D. forty-six hundreds, fifty tens, and five ones

8. What is 587,139 rounded to the *nearest* ten thousand?

- A. 580,000
- B. 587,000
- C. 588,000
- D. 590,000

9. In 2007, there were 28,863 people living in Mapleville. There are now 1,939 fewer people living in Mapleville.

How many people are living in Mapleville now?

- A. 26,924 people
- B. 27,924 people
- C. 29,802 people
- D. 30,802 people

10. The grocery store averages 124 customers each day.

How many customers does the grocery store average in a 7-day week?

- A. 668 customers
- B. 848 customers
- C. 768 customers
- D. 748 customers