Caesar Rodney School District-Snow Day Activity Board

Reading **30 Minutes of Rider Reading Time** All students will bring home their RIder Reading Bags with 3-5 books to support reading and power goal work. Please complete the 100 Book Challenge Reading Log.	**Math-** **Grade Level Practice Problems** All students will work on grade level practice problems based on previously taught concepts.
Science Students will work on the science extensions. **Social Studies** Grades K-2: Students will create a story map using key memorable events of their life. (See Example) Grade 3: Students will interview members of their household or community. (See Example) Grades 4-5: Students will think of problems, challenges, or issues that affect your school or community. Create a business that will solve a problem.	**Writing/Word Study** Grades K-2: Students will work on word study activities based on previously taught concepts Grades 3-5: Students will work on writing activities based on previously taught concepts.

Students can use the Clever platform to access apps including i-Ready, ARC bookshelf Reading, SORA, EPIC, etc.

Writing

Design the book jacket for your ideal fiction book. Make sure to include all the essential literature text features.

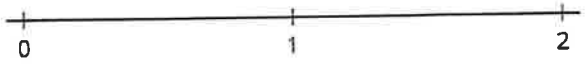
Writing

Write the plot summary that would appear on the back of the book jacket you just designed.

Section A: Practice Problems

1. **Pre-unit**

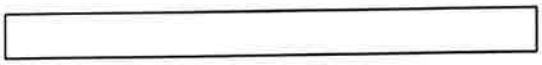
   a. Locate $\frac{6}{4}$ on the number line.



   b. Explain or show why your point represents $\frac{6}{4}$.

2. **Pre-unit**

   Shade $\frac{3}{4}$ of the rectangle. Explain or show your reasoning.



3. **Pre-unit**

   Explain or show why $\frac{4}{3} = 4 \times \frac{1}{3}$.

4. **Pre-unit**

Each workbook is $\frac{3}{8}$ inch thick. How many inches thick is a stack of 5 workbooks? Explain or show your reasoning.

5. **Pre-unit**

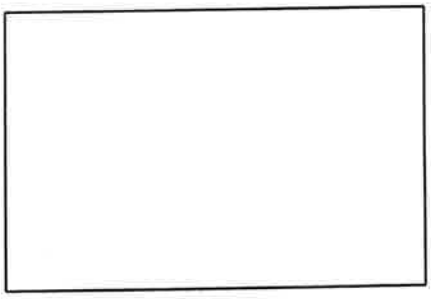
a. There are 36 fish in 4 aquariums. There are the same number of fish in each aquarium. How many fish are in each aquarium? Show or explain your reasoning.

b. There are 24 dogs at a shelter. There are 4 times as many dogs as cats at the shelter. How many cats are there at the shelter? Show or explain your reasoning.

6. **Pre-unit**

A bottle holds $\frac{7}{10}$ liter of water. How much water do 6 bottles hold? Explain or show your reasoning.

7. **Pre-unit**



What is the area of the rectangle? Explain or show your reasoning.

8. a. 3 students equally share 18 sheets of construction paper for an art project. How many sheets of paper does each student get? Explain or show your reasoning.

b. 3 students equally share 1 tube of glue for an art project. How much glue does each student get? Explain or show your reasoning.

(From Unit 2, Lesson 1.)

9. a. 4 hikers equally share 3 liters of water. How many liters of water does each hiker drink? Explain or show your reasoning.

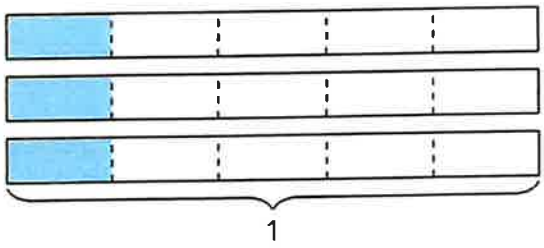
b. 4 hikers equally share 5 liters of water. How many liters of water does each hiker drink? Explain or show your reasoning.

(From Unit 2, Lesson 2.)

10. a. Jada cuts an 11 inch strip of paper into 5 equal parts. How many inches long is each part?

b. Jada cuts a strip of paper into 5 equal parts. Each part is $\frac{7}{5}$ inches long. How long was the strip of paper?

(From Unit 2, Lesson 3.)



11. a. Describe a situation that the diagram could represent.

b. Write an equation that represents the diagram and the situation.

(From Unit 2, Lesson 4.)

12. Decide whether each equation is true or false. Explain or show your reasoning.

a. $3 \div 7 = \frac{3}{7}$.

b. $18 \div 5 = \frac{5}{18}$.

c. $15 \div 6 = 2\frac{1}{2}$.

(From Unit 2, Lesson 5.)

13. **Exploration**

a. Describe a situation in the classroom or at home where you share something equally with your classmates or family that results in fractional size parts.

b. Draw a picture to represent the situation.

c. Write a division equation to represent the situation.

14. **Exploration**

Elena is traveling to visit her grandparents who live 125 miles away.

a. Elena stops for lunch $\frac{2}{3}$ of the way. How far has Elena traveled? Explain or show your reasoning.

b. Elena enters the city where her grandmother lives after 110 miles. Is she more or less than $\frac{9}{10}$ of the way there? Explain or show your reasoning.

15. **Exploration**

a. Describe a situation that represents the equation $4 \div 6 = \frac{4}{6}$.

b. Draw a diagram to represent the situation.

Section A: Practice Problems

1. **Pre-unit**

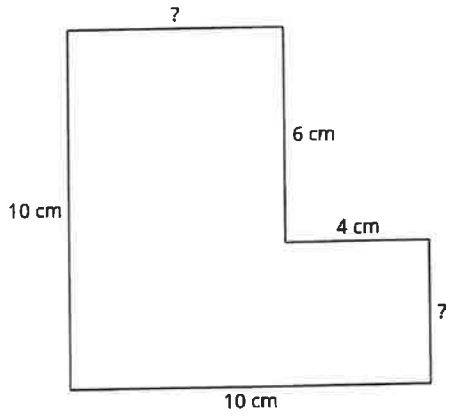
There are 63 students in the cafeteria. There are 9 students at each table.

a. At how many tables are the students seated?

b. Write a division equation to represent your answer.

2. **Pre-unit**

What is the area of this figure? Explain your reasoning.



3. **Pre-unit**

Select **all** expressions that are equivalent to $\frac{12}{5}$.

A. $6 \times \frac{2}{5}$

B. $5 \times \frac{1}{12}$

C. $12 \times \frac{1}{5}$

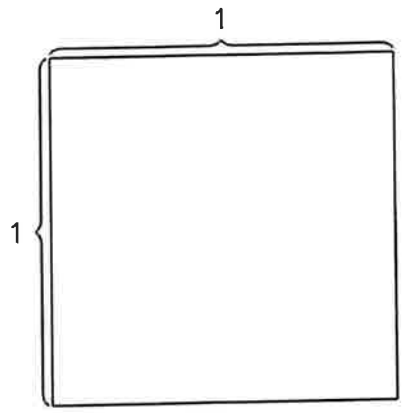
D. $8 \times \frac{4}{5}$

E. $4 \times \frac{3}{5}$

4. **Pre-unit**

Jada has 8 pennies. Each one weighs $\frac{5}{2}$ grams. How much do Jada's pennies weigh altogether? Explain your reasoning.

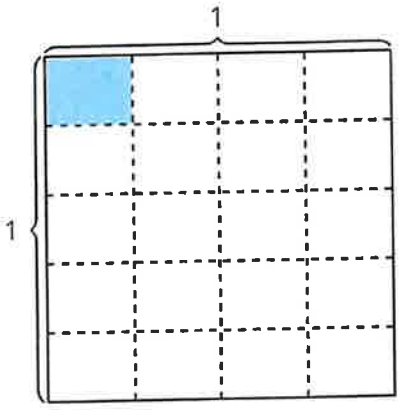
5. a. Shade $\frac{1}{2}$ of $\frac{1}{5}$ of the square.



b. Explain where you see $\frac{1}{2}$ of $\frac{1}{5}$ in your drawing.

(From Unit 3, Lesson 1.)

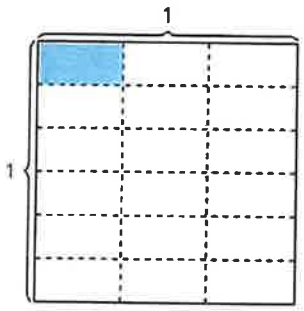
6. a. Write an expression for how much of the square is shaded.



b. Find the value of your expression.

(From Unit 3, Lesson 2.)

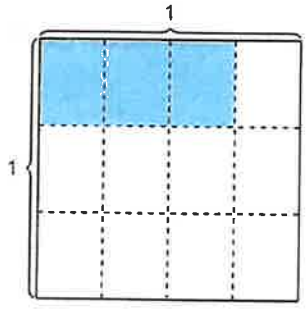
7. a. Write an equation representing the shaded part of the diagram.



b. Explain how the diagram shows each part of your equation.

(From Unit 3, Lesson 3.)

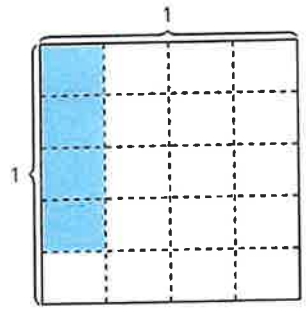
8. a. Write an expression for the shaded region of the square.



b. Explain how your expression matches the shaded region.

(From Unit 3, Lesson 4.)

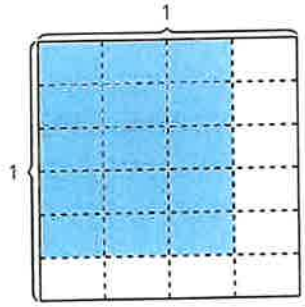
9. a. Write an expression for the area of the shaded region.



b. Explain how the diagram shows your expression.

(From Unit 3, Lesson 5.)

10. a. Write a multiplication expression for the area of the shaded region. Explain your reasoning.



b. What is the area of the shaded region in square units?

(From Unit 3, Lesson 6.)

11. Find the value that makes each equation true.

a. $\frac{7}{10} \times \frac{3}{5} = \_\_\_\_$

b. $\frac{2}{5} \times \_\_\_\_ = \frac{8}{45}$

c. $\_\_\_\_ \times \frac{4}{9} = \frac{28}{45}$

(From Unit 3, Lesson 7.)

12. This flag of Sweden is $3\frac{1}{5}$ inches wide and 2 inches tall. The rectangle in the upper right is $\frac{9}{5}$ inches wide and $\frac{4}{5}$ inch tall.

a. What is the area of the whole flag?

b. What is the area of the rectangle in the upper right?

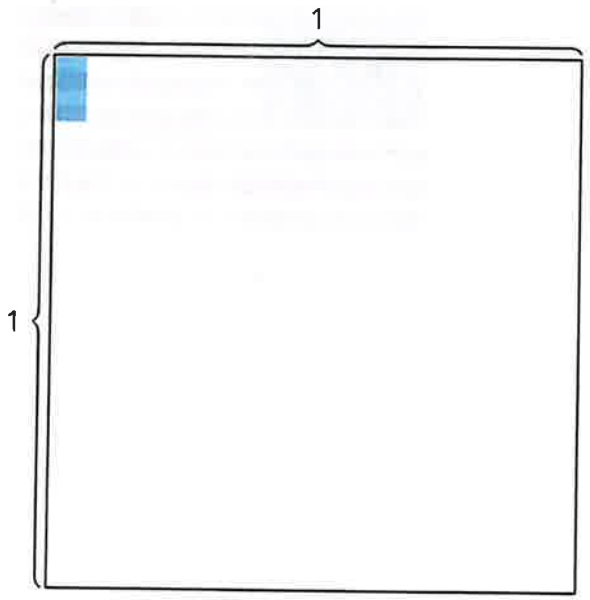
(From Unit 3, Lesson 8.)

13. **Exploration**

On this American flag the width of the blue rectangle is $\frac{2}{5}$ the width of the flag. What fraction of the area of the flag is the blue rectangle? Explain or show your reasoning.

14. **Exploration**

Jada folded a square piece of paper in half many times, sometimes horizontally and sometimes vertically. She shaded the folded piece of paper and then unfolded it. Here is a picture.



What fraction of the paper did Jada shade? Explain how you know.

Patterns of
Earth and Sky

What's big and what's small? It's all relative!

A whale might seem big, but when you compare it to planet Earth, it's tiny. Earth might seem big, but when you compare it to the sun, it's also tiny! What's big and what's far away all depends on your perspective.

THE LAWRENCE HALL OF SCIENCE

5

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Which Way Is Up?

Dog Days of Summer

Star Scientist

Handbook of Stars and Constellations

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Glossary

astronomer: a scientist who studies stars, planets, and other objects in the universe

data: observations or measurements recorded in an investigation

diagram: an illustration that shows how something works or what its parts are

diameter: the distance across a circle or sphere measured from one side, through the center, to the opposite side

Earth: the planet we live on

light-year: a unit of measurement that is equal to the distance light travels in a year

orbit: to move in a regular path around something

solar system: the sun, the planets that orbit the sun, and other objects that orbit the sun

sphere: a ball-shaped object

star: a huge object in space that gives off heat and light

sun: the only star in our solar system

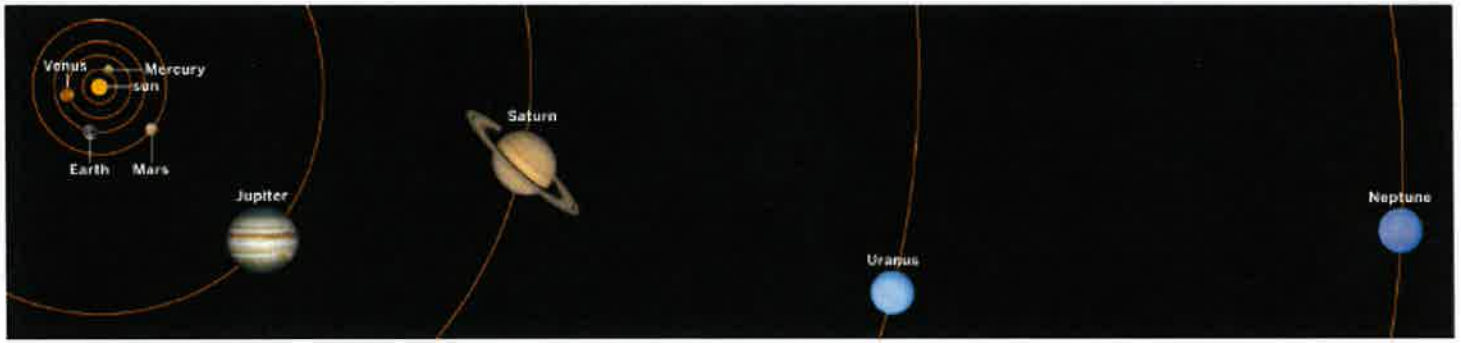
visualize: to make a picture in your mind using information from different sources

year: the length of time it takes for Earth to orbit the sun once

We would have to put Proxima Centauri 2.7 kilometers away—about 1.5 miles! Proxima Centauri is about 270,000 times farther away from Earth than the sun is. There is no way to fit a diagram comparing those distances in any book that has ever existed—the diagram (and the book) would have to be much too big.

Are Earth and the sun close together? Is Earth small? Are the stars far away? Is there anything even farther than the stars?

Big or small, close together or far apart . . . whichever way you think about it, it makes sense!



In this book, you have seen a **diagram** representing distances in our solar system. You can use the diagram on pages 16–17 to compare how far Earth and other planets are from the sun.

You have also seen a diagram representing distances beyond the solar system. You can use the diagram on page 19 to visualize the distance between Earth and the nearest star besides the sun.

It might seem like a good idea to end the book with a diagram comparing distances inside the solar system and beyond the solar system at the same time, but there's a problem with trying to do that. The distance between Earth and the sun is 150 million kilometers. If we make a diagram that represents that distance as 1 centimeter, how far away on the page do we have to put a picture of Proxima Centauri?

The stars in Orion's Belt look like they are right next to each other, but they aren't.

People were right that the stars are all around Earth in every direction. You can imagine why they thought that the stars were stuck to something. After all, we always see the stars in the same arrangements in the sky. However, there is no shell around Earth, and stars are not all the same distance from Earth. Even stars that look close to each other can be different distances from Earth. For example, the three stars that people call Orion's Belt look like they are lined up side by side, but if you saw them from somewhere else in space, you would see that they are spread far apart, and each of the three stars is a different distance from Earth.

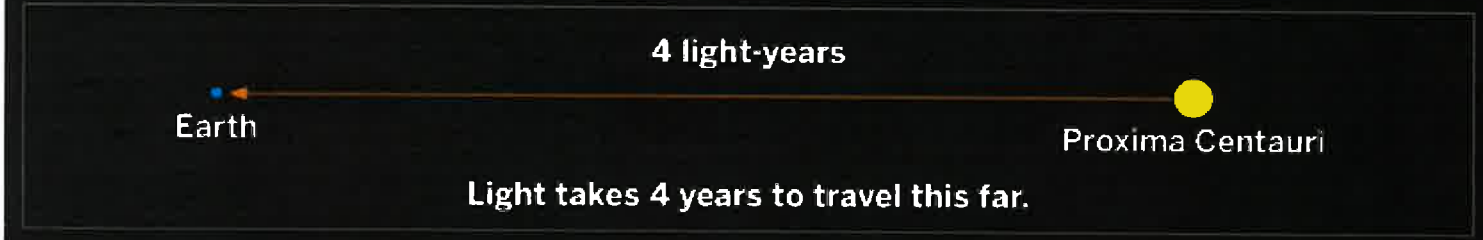
It is hard to **visualize** how far away stars are. A long time ago, people thought that all the stars were the same distance from Earth. They thought the stars were attached to an enormous **sphere** that surrounded Earth like a giant shell, and the stars on the sphere surrounded Earth in all directions. They thought the stars were stuck to the sphere and never changed their positions on the sphere.

This diagram shows the way people once visualized the stars. People used to imagine that all the stars were the same distance from Earth.

There is something that travels much faster than any spacecraft: light. In a **year**, light travels about 10 trillion kilometers (6 trillion miles). That is the distance **astronomers** call a **light-year**. A light-year is not a long time; it is a huge distance. It takes 4 years for light to travel from Proxima Centauri to Earth, so we say that Proxima Centauri is 4 light-years away. A light-year is such a long distance that the distance from Earth to the sun is only a tiny fraction of a light-year. Here's a data table showing the distance from Earth to a few different stars.

Star	Distance from Earth in Light-Years*
sun	0.000016
Proxima Centauri	4
Sirius	9
Arcturus	37
Polaris	433
Betelgeuse	643
Deneb	3,230

*All distances are approximate.



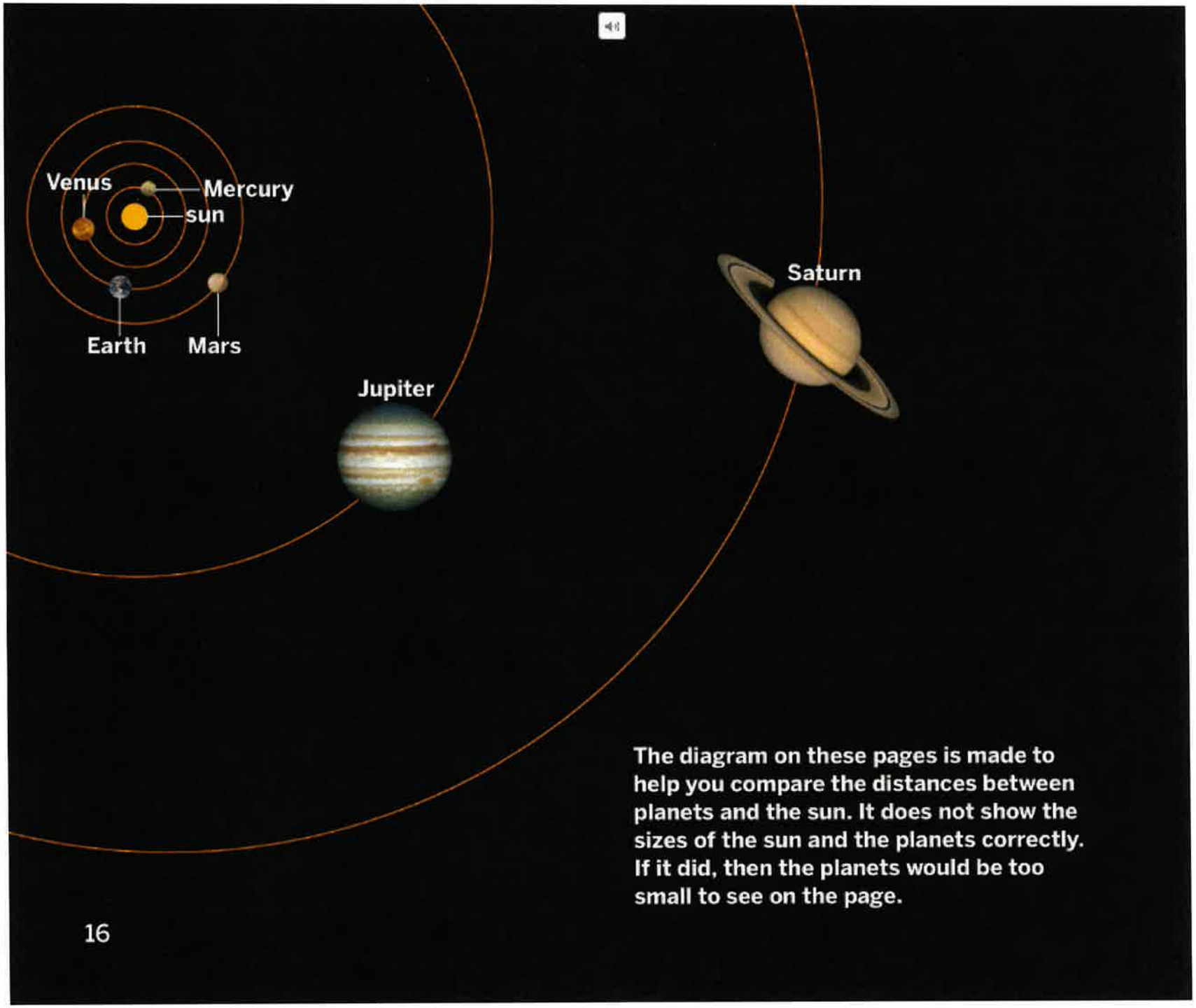
Is the sun near Earth, or far away? From our perspective the sun is far from Earth, but it is extremely close for a star. Compared to the sun, the other stars are much farther away. Besides the sun, the next closest star is called Proxima Centauri. It would be a very long ride to get to Proxima Centauri, even in the fastest spacecraft that exists. The fastest spacecraft that has ever been launched travels about 50,000 kilometers (31,000 miles) every hour. Even at that speed, it would take almost 90,000 years to get to Proxima Centauri.

The fastest spacecraft ever launched is called *New Horizons*. It does not carry people.

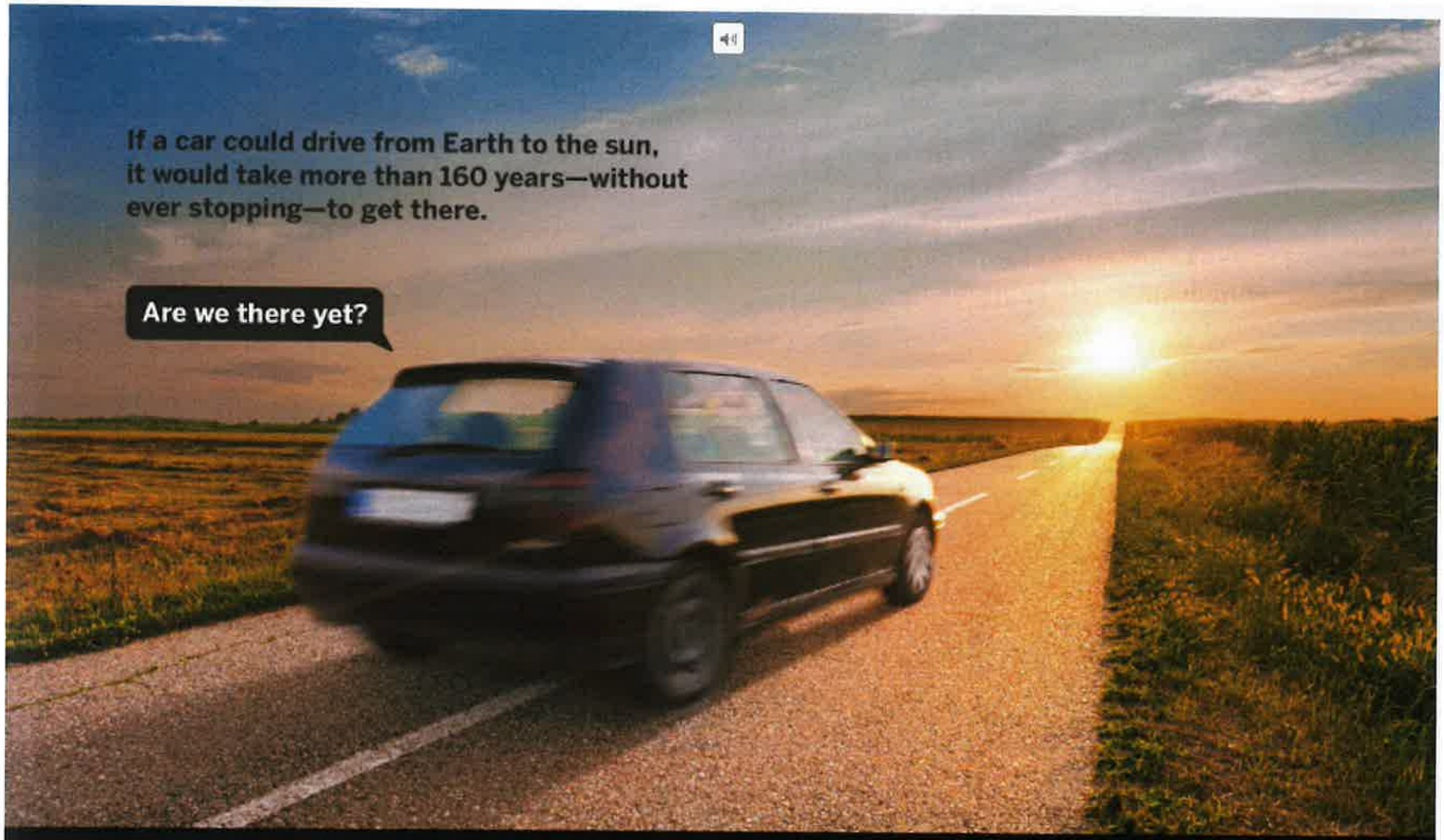
As you may have guessed, you can say Earth is close to the sun, and you can say Earth is far from the sun. Either way, you're right. Compared to some of the other planets, Earth is very close to the sun. The farthest planet is more than 4 billion kilometers away from the sun. That's one distance we can definitely say is far, can't we?

Planet	Distance from the Sun in Kilometers*
Mercury	58,000,000
Venus	108,000,000
Earth	150,000,000
Mars	228,000,000
Jupiter	778,000,000
Saturn	1,427,000,000
Uranus	2,871,000,000
Neptune	4,498,000,000

*All distances are approximate.



The diagram on these pages is made to help you compare the distances between planets and the sun. It does not show the sizes of the sun and the planets correctly. If it did, then the planets would be too small to see on the page.



Distance in space depends on what you're comparing. Earth is about 150 million kilometers (93 million miles) away from the sun. That's far! It makes sense to say Earth is far away from the sun. Or does it?

We've discovered that things in space are very big. Things in space are also very far apart . . . but how far is far?

Who lives close to your school, and who lives far away?

In places where people's homes are close together, many students live close to school—sometimes just a block or two away. In these places, people might say students live far from school if they have to walk more than half an hour to get there.

In places where people's homes are farther apart, some students may have a long ride in a car or a bus to get to school, and a half-hour walk to school would not seem far at all.

Do you live close to your school or far away? That depends on what you're comparing the distance to.

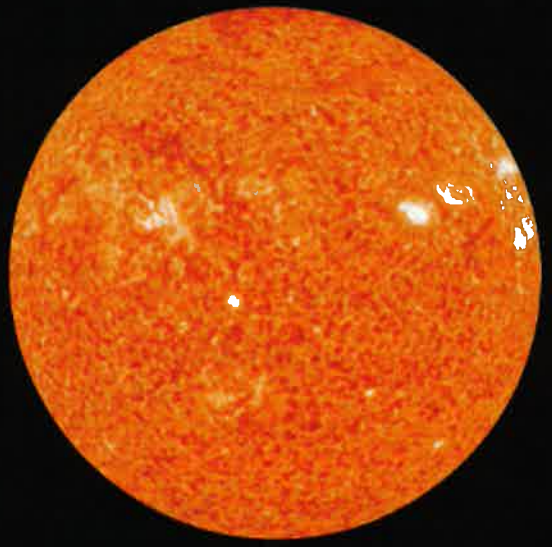
It's the same in space. . . .

An artist created this image showing what the huge star Betelgeuse might look like if you got close to it. If the sun were next to Betelgeuse, it would look like a tiny speck.

Arcturus is one of the brightest stars you can see in the sky on a summer night. If you lined up 25 stars the size of the sun, they would be about as wide as Arcturus, which means Arcturus is definitely big.

By now, you probably know that there's always something bigger out there. On winter nights, you can see a bright star called Betelgeuse. You would have to line up 40 stars the size of Arcturus (or 1,000 stars the size of the sun) to be as wide as Betelgeuse.

Is the sun big? As the only star in our solar system, it seems big, but when you find out how big some other stars are, the sun doesn't seem so big anymore. Let's look at some data on different star diameters.



Arcturus

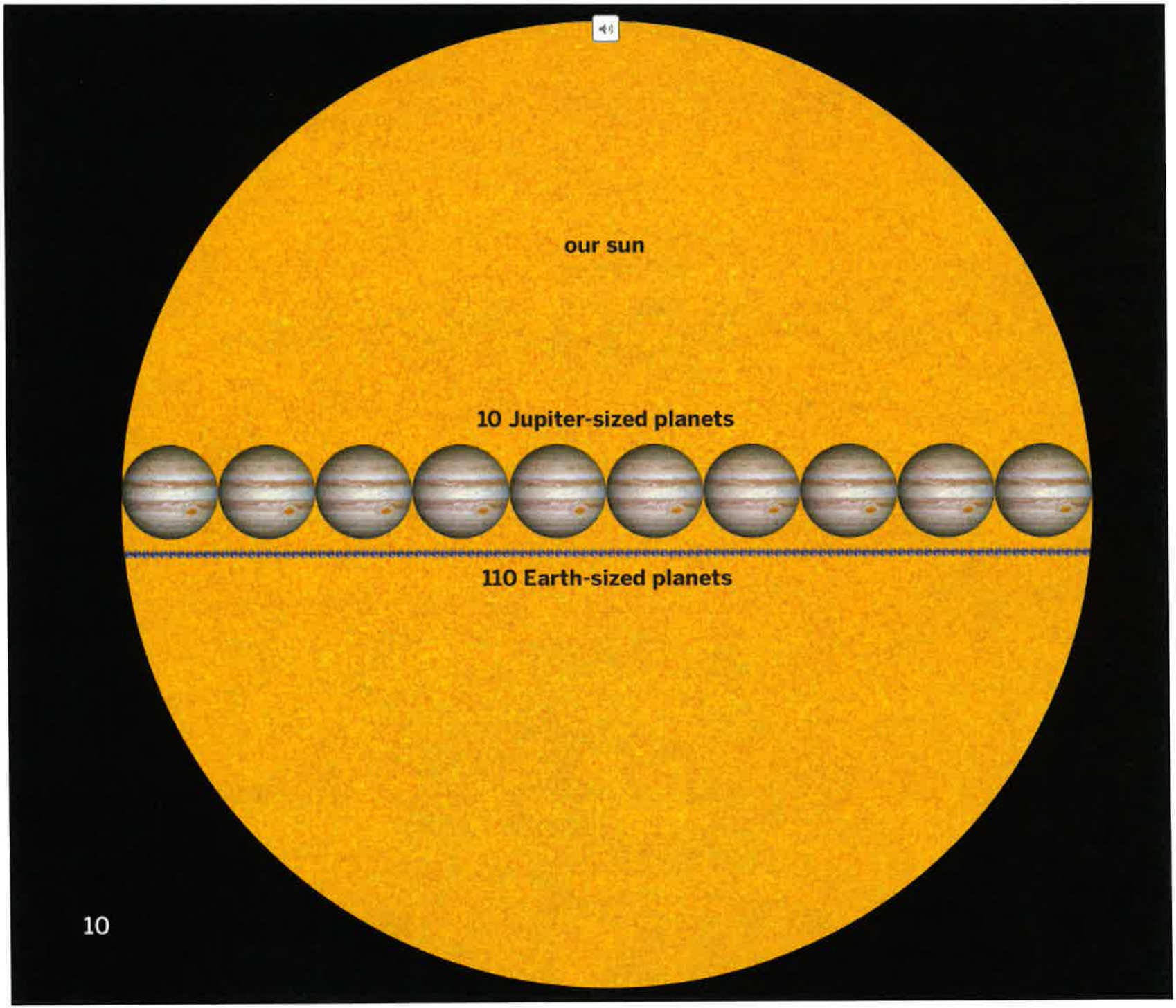
our sun

Star	Diameter in Kilometers*
Proxima Centauri	200,000
sun	1,400,000
Sirius	2,400,000
Arcturus	36,000,000
Polaris	50,000,000
Deneb	280,000,000
Betelgeuse	1,400,000,000

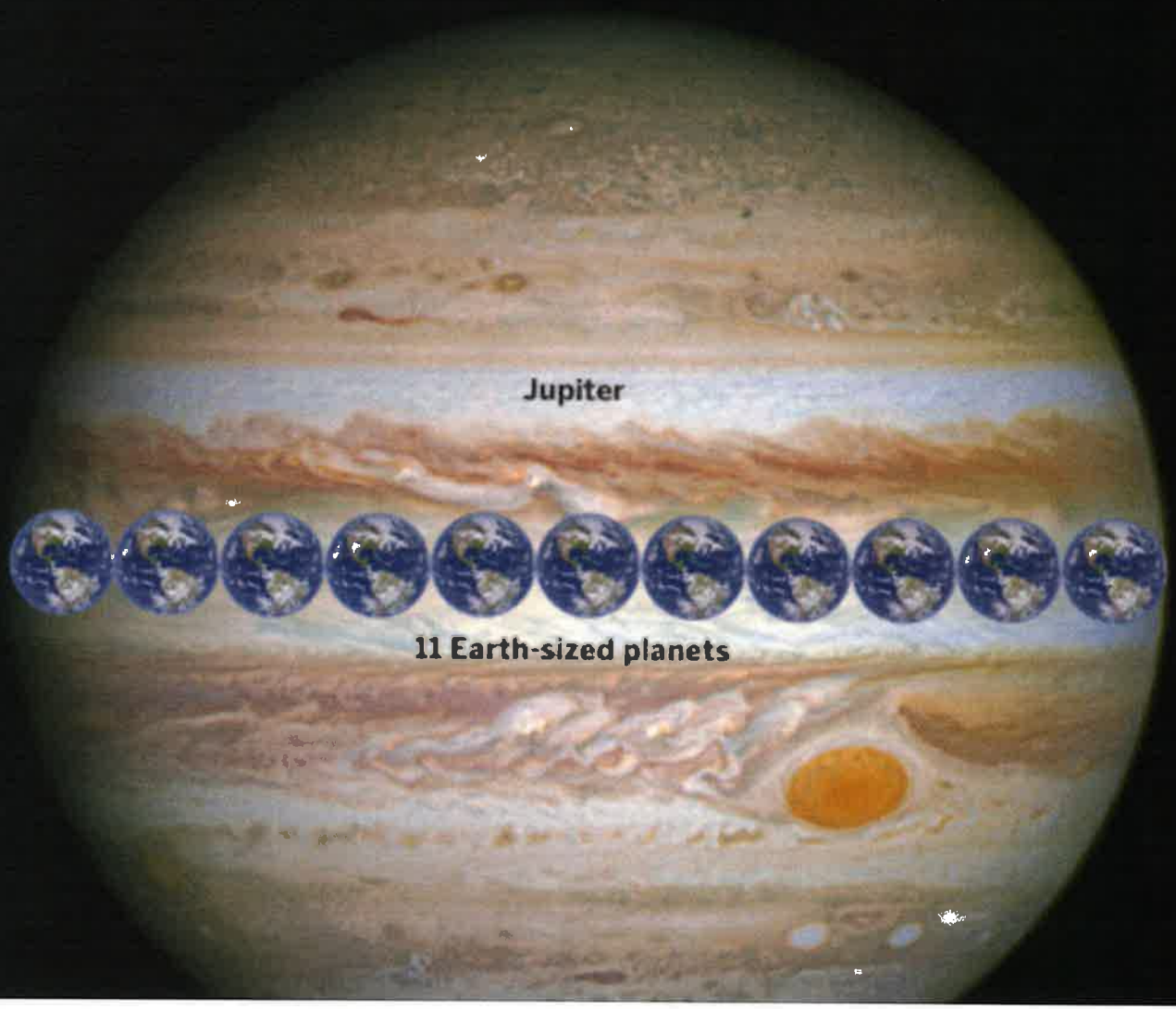
*All diameters are approximate.

That's right, it's the **sun**! The sun is so big that it makes Jupiter look small, and it makes Earth look tiny. In fact, the sun's diameter is almost 10 times the diameter of Jupiter and about 110 times the diameter of Earth. The sun is the biggest object in our solar system . . . but our solar system is only a small part of the universe. Is there anything out there that would make the sun look small?

When you look out into the night sky, you may see many **stars**. They look like tiny specks of light . . . but are they really tiny?


our sun
10 Jupiter-sized planets
110 Earth-sized planets

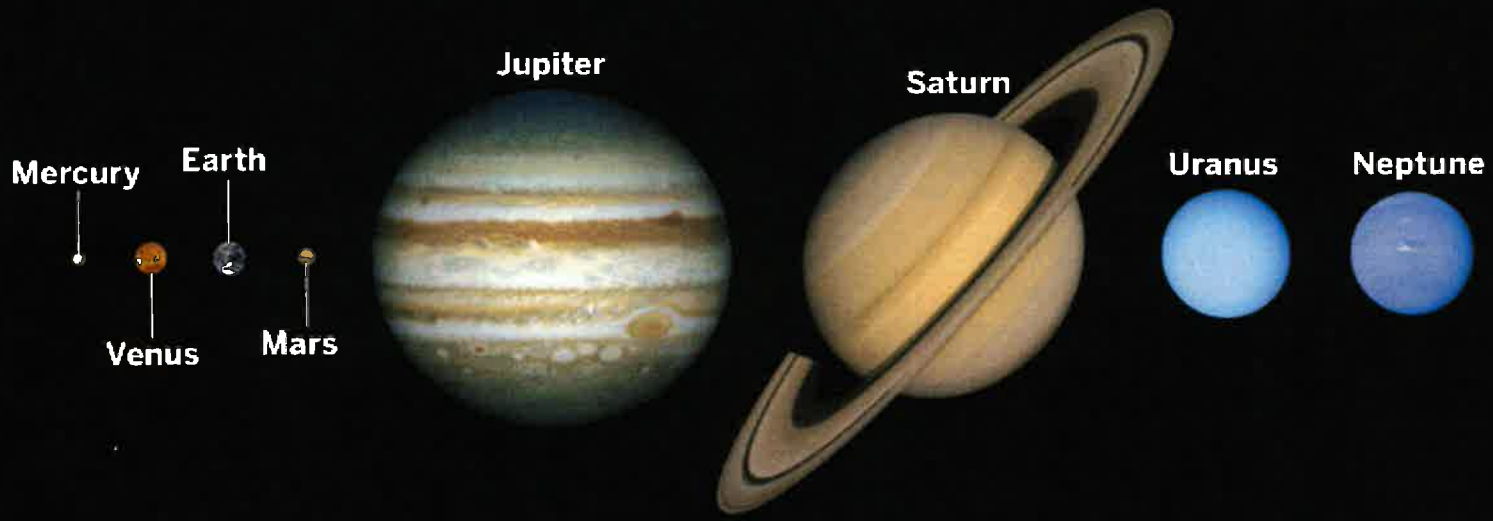
Jupiter is the biggest planet in our solar system, and its **diameter** is about 11 times bigger than Earth's. That means if you lined up 11 Earth-sized planets side by side, they would be about as wide as Jupiter. Jupiter really is big, right? It might seem that way, but there's something in our solar system that makes even Jupiter look small . . .



Look at the **data** table on this page to see the sizes of the planets in our **solar system**. If you compare Earth to other planets in our solar system, it doesn't seem so big anymore. Is Earth a small planet or a big one? Which planets make Earth look big, and which ones make it look small?

Planet	Diameter in Kilometers*
Mercury	4,880
Mars	6,790
Venus	12,100
Earth	12,760
Neptune	49,530
Uranus	51,120
Saturn	120,540
Jupiter	142,980

*All diameters are approximate.

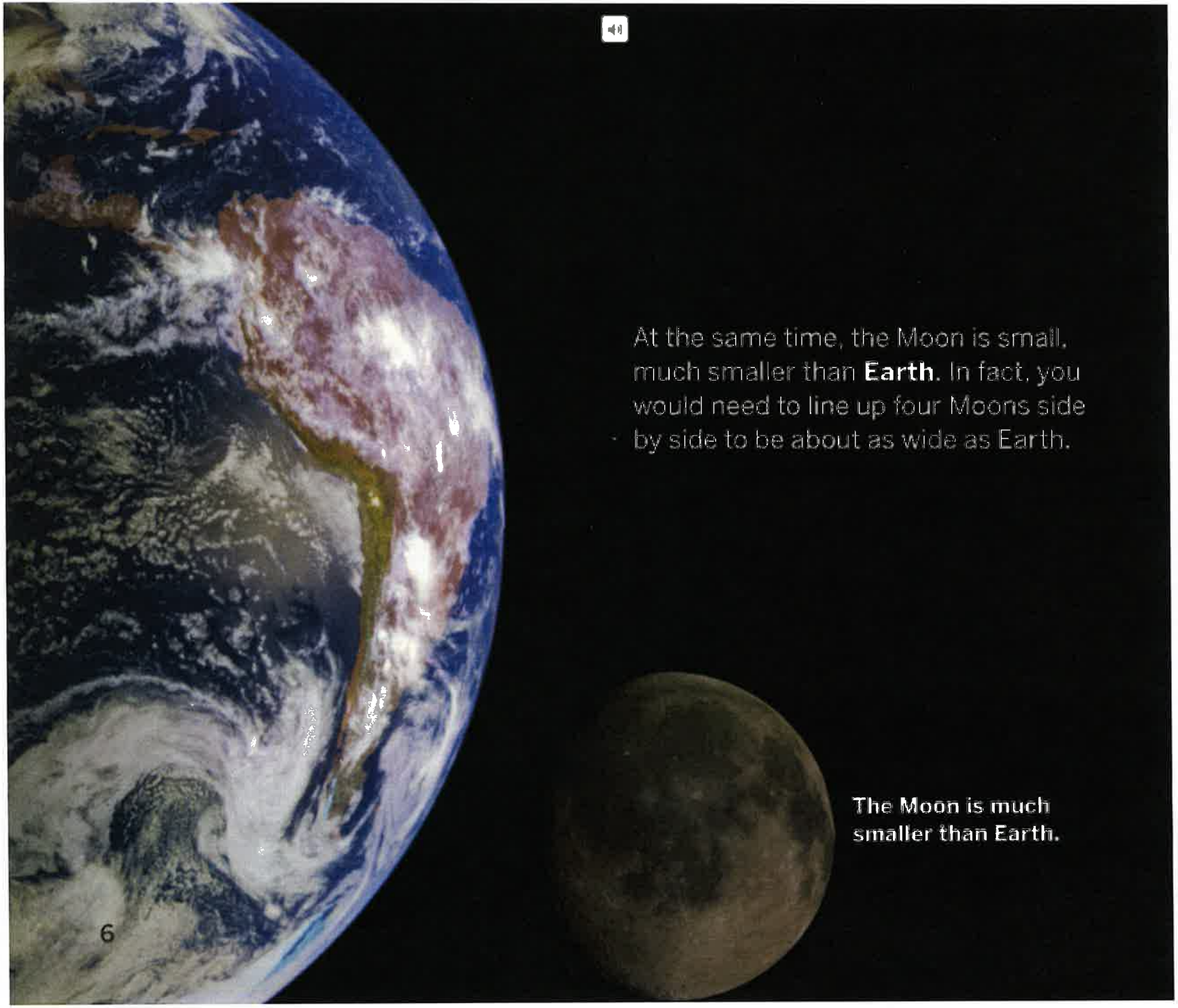


This picture shows the sizes of the planets compared to one another.

Imagine two kids are arguing about the size of Earth, and one kid says Earth is big, while the other says Earth is small. Who is right? Is Earth big or small? Actually, they are both right, because it all depends on what you're comparing Earth to.

Earth is huge compared to a blue whale, a house, a city, or even a whole country.

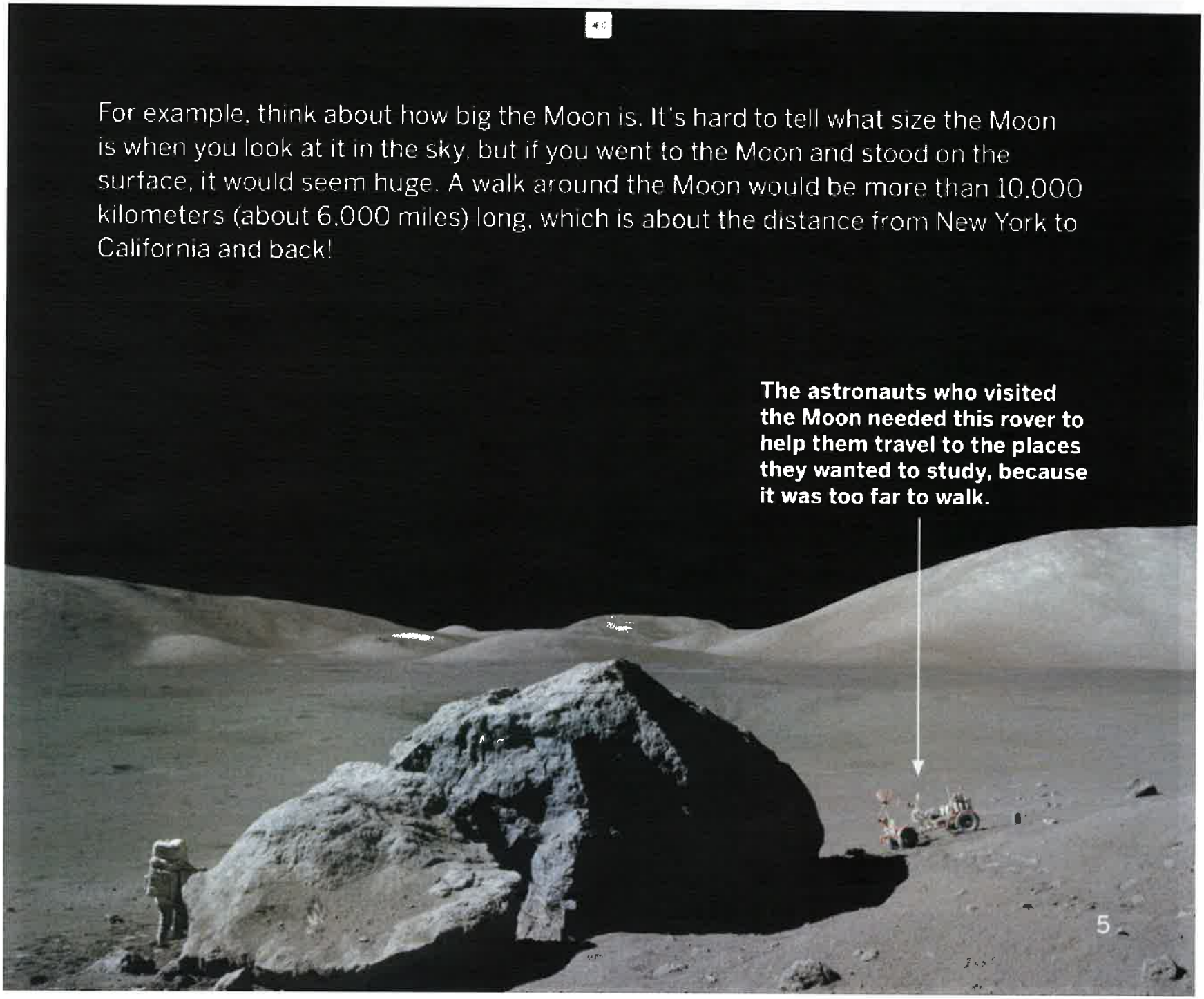
- There are about 200 different countries on Earth.
- There are thousands of cities on Earth.
- It would take more than a million blue whales lined up to stretch around Earth.



At the same time, the Moon is small, much smaller than **Earth**. In fact, you would need to line up four Moons side by side to be about as wide as Earth.

The Moon is much smaller than Earth.

For example, think about how big the Moon is. It's hard to tell what size the Moon is when you look at it in the sky, but if you went to the Moon and stood on the surface, it would seem huge. A walk around the Moon would be more than 10,000 kilometers (about 6,000 miles) long, which is about the distance from New York to California and back!

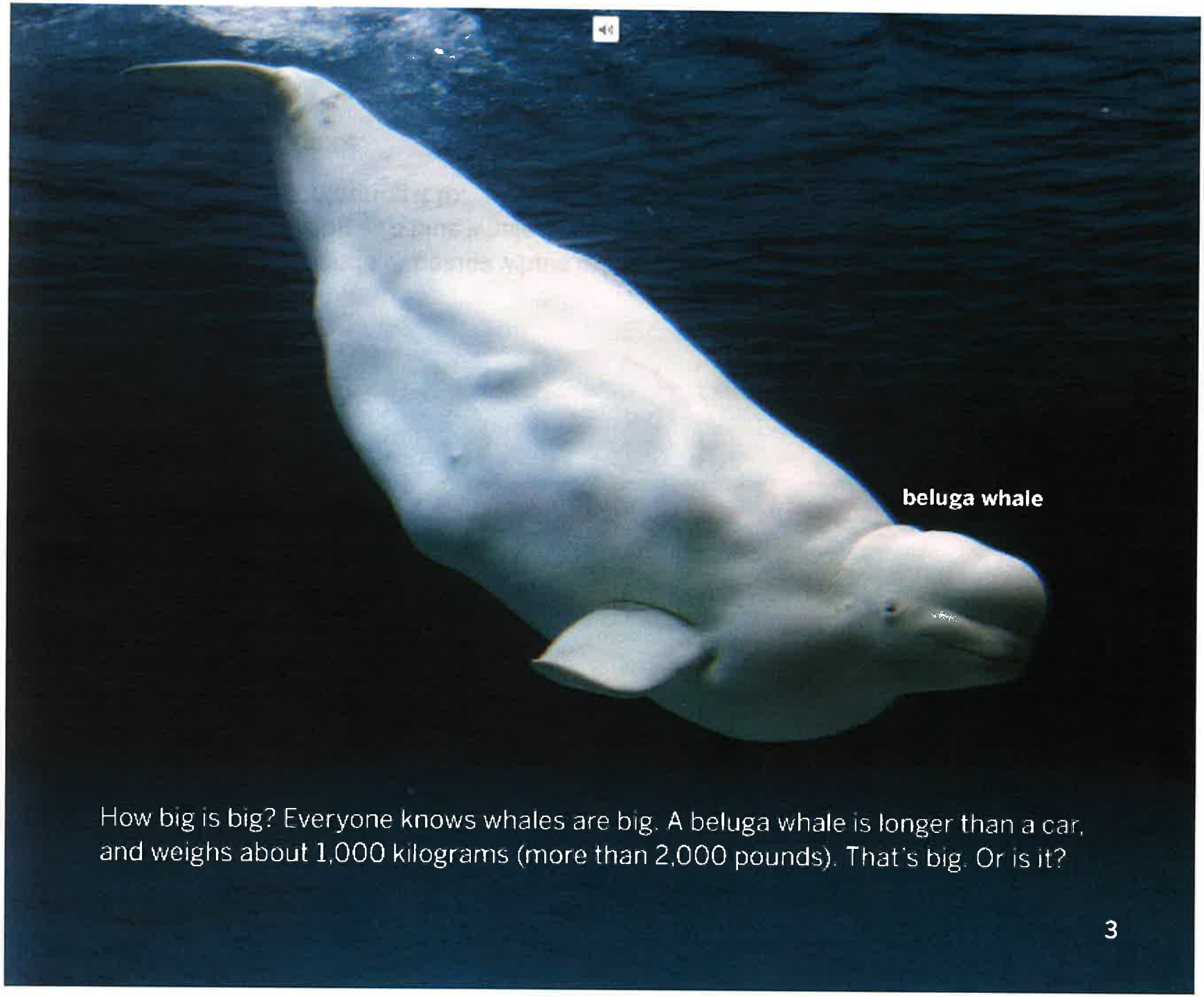


The astronauts who visited the Moon needed this rover to help them travel to the places they wanted to study, because it was too far to walk.

Look at a blue whale, which is the biggest animal that has ever lived on Earth. If you lined up six cars, they would be about as long as a blue whale. A blue whale can weigh up to 200 times more than a beluga whale!

What's big? It depends. A beluga whale is big, but it would take about five of them lined up to be as long as a blue whale. Whether you can call something "big" depends on what you're comparing it to.

It's the same in space. . . .



How big is big? Everyone knows whales are big. A beluga whale is longer than a car, and weighs about 1,000 kilograms (more than 2,000 pounds). That's big. Or is it?

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Grade 5
How Big Is Big? How Far Is Far?
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How Big Is Big? How Far Is Far?

by Carolyn Jaynes and John Erickson

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How **Big** Is Big?
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CREATE: A Business Idea

Congratulations, you are interested in starting your own business! The only problem is that you are unsure of what business idea you want to pursue. One approach to creating a successful business is to use the "Problem/Solution Lens" to identify needs in your community.

Part I: Identify Problems, Challenge, Issues

Think about some common issues that arise in your daily life that may also affect other people. Identifying common problems, challenges, and issues is a great place to start when coming up with problem-solving business ideas.

1. Think of as many problems, challenges or issues that affect you, your school, or your community. Create a list of as many of these issues that come to mind. At this phase, aim for quantity over quality and let your imagination run wild!

PART II: Brainstorm Solutions

Now that you have identified common issues that affect you, your school, and your community, let's identify the best ideas and take a closer look at some potential solutions.

1. Let's start by cutting down your list. Consider the following questions and remove items from your list of ideas as necessary:
    - **Is there already a well established solution to this problem that you cannot improve upon?** If there is already a well established solution then this might not be the best business idea.
    - **Is this a problem that you are passionate about solving?** If not, then it might be best to remove it from you list of ideas
    - **Is this a problem that you have the time and money to help solve?** If not, then you might want to remove it from your list.
2. Select the top 2 issues for each category (you, your school, your community) from the remaining list. Put the 6 issues in the middle column of the table below.
3. Complete the right column by brainstorming 3 potential solutions for each problem. *Hint*: Consider the following elements when brainstorming potential solutions:
    - Who are the people that are affected by these problems?
    - Are there currently existing solutions for these problems?
        i) If not, how do you envision a solution?
        ii) If so, how can you *improve* upon existing solutions?

	Problem	**Potential Solutions**
1. You		
2. School		
3. Community		

Part III: Select a Business Idea

Now that you have a list of potential business ideas, it's time to start thinking about which one interests you and what skills you already have that you could use to grow that idea.

1. From the list of potential business ideas you brainstormed above, select what you consider to be the best business idea and explain why.