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Focused Mathematics Booster Pack—Level 4

This sample includes the following:

- Management Guide Cover** (1 page)
- Table of Contents** (1 page)
- How to Use This Product** (4 pages)
- About the Books and Activities** (2 pages)
- Booster Card Workspace A-C** (3 pages)
- My Mathematician Checklist** (1 page)
- Mathematician Rubric** (1 page)
- Answer Key** (1 page)
- Booster Card** (3 pages)
- Reader** (17 pages)

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Level 4

 Focused
Mathematics

Booster Pack

Management Guide

Teacher Created Materials
PUBLISHING

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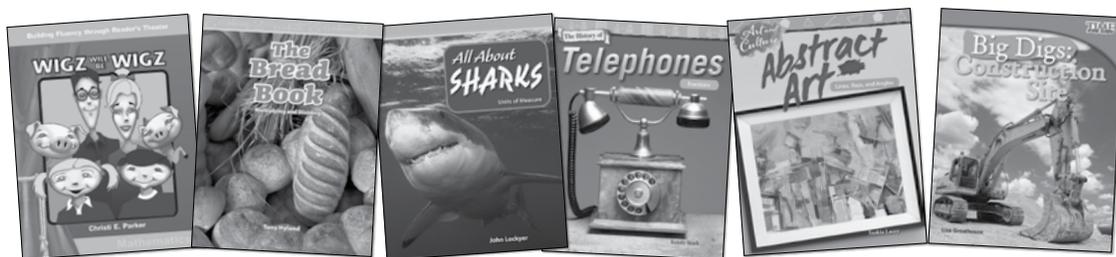
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Kit Components

High-Interest Books (six copies of six titles)

Books feature various, high-interest topics across content areas.



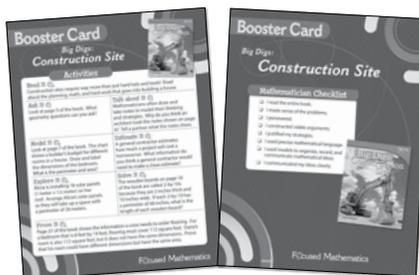
Overview Cards

Overview cards include a book summary, mathematics objective, reading levels, mathematics vocabulary, and cross-content connections.



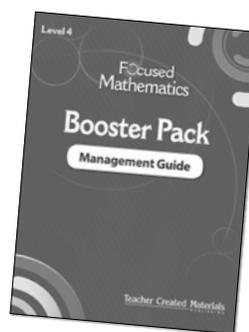
Booster Cards

Activities engage students in real-world mathematics and require students to demonstrate mathematical practices and processes.



Management Guide

The Management Guide includes a brief overview of the research, standards correlations, and instructional options and suggestions. Resources include student activity sheets, reproducible manipulatives, and rubrics.



Digital and Audio Resources

PDFs of the books, Booster Cards, Response pages, as well as professional audio recordings of the books are included. A complete list of available resources is listed on page 40.

Pacing and Instructional Setting Options

The following pacing and instructional setting options show suggestions for how to use this product. The *Focused Mathematics: Booster Pack* series is designed to be flexible and can be used in tandem with a core curriculum and a teacher’s preferred instructional framework, such as Guided Math.

Pacing

Teachers should customize pacing according to student need. Each Booster Card includes 100 minutes of activities for a total of 600 minutes. Teachers may assign specific activities to meet instructional objectives or allow students to choose activities. Students may complete one activity or several activities to match the time available and their instructional needs.

Activity	Approximate Time
Read It	30 min.
Ask It	5 min.
Talk about It	5 min.
Model It	10 min.
Estimate It	5 min.
Explore It	20 min.
Solve It	15 min.
Prove It	10 min.

Instructional Setting Options

Whole-Class Instruction

Whole-class instruction is best suited for introducing each text to students or for teaching specific strategies or content-area concepts as they apply to instructional standards and objectives. In this setting, every student engages with the same text at the same time. PDFs of the books are available in the Digital and Audio Resources and are great for displaying to the whole class for a shared-literacy experience.

Small-Group Instruction

Instructional frameworks, such as Guided Math, support teachers who want to work with a specific group of students on a targeted comprehension or content skill. During small-group instruction, the teacher works with a select group of students with similar instructional needs. Students may sit with the teacher, either at a table or on the carpet. This setting promotes a sense of teamwork and collaboration and encourages participation in mathematical discussions. Working with students in small groups is also a great opportunity for teachers to informally assess student progress and make anecdotal notes.

Workstations or Centers

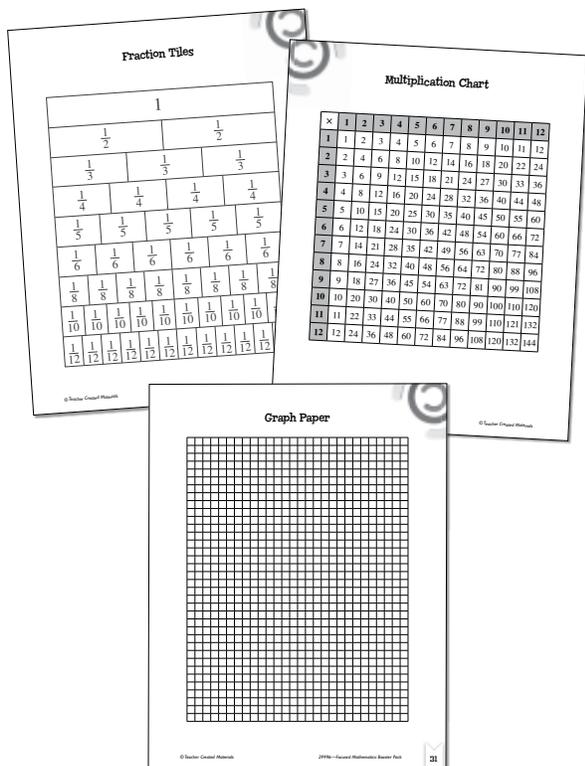
Students may engage independently or with partners at workstations or centers to build fluency, comprehension, and vocabulary, while applying math concepts and process skills. When working within this instructional setting, it is important that procedures and expectations are clear and students are able to complete the activities with little to no teacher guidance so that teachers can spend time with small groups.

Strategies for Differentiating Booster Card Activities

Below-Level Learners

You may choose to support below-level learners with some or all of these suggestions:

- **Manipulatives:** Provide below-level learners with concrete or representational manipulatives to help them explore the mathematics concepts. PDFs of reproducible fraction tiles, a multiplication chart, and graph paper (pages 29–31) are available in the Digital and Audio Resources.



Above-Level Learners

You may choose to support above-level learners with some or all of these suggestions:

- **New Booster Cards:** Have students create Booster Cards for books in your classroom library.
- **Multimedia Presentation:** Challenge students to create multimedia presentations to demonstrate what they learned from the *Focused Mathematics: Booster Pack*.

English Language Learners

You may choose to support English language learners with some or all of these suggestions:

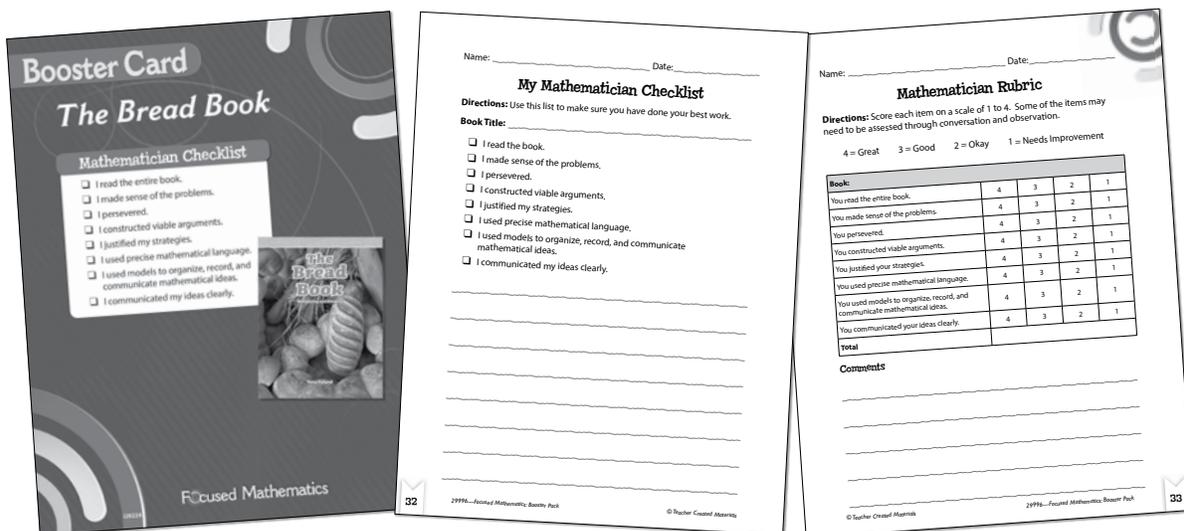
- **Professional Audio Recordings:** Model fluent reading by having English language learners listen to the professional audio recordings of the books that are available in the Digital and Audio Resources.
- **Sentence Frames:** Support language development and acquisition with sentence frames, such as the following: *I found the area of the shape by _____.* *It is _____ square _____.* *I found the perimeter by _____.* *It is _____.*

- **Total physical response:** Challenge students to create hand motions to represent new math vocabulary.

Assessing Activities

Each *Focused Mathematics: Booster Pack* offers multiple assessment opportunities. Teachers can gain insight into student learning through small-group observations and analysis of student responses to the Booster Card activities. These formal and informal assessments provide teachers with additional data to help make informed decisions about what to teach and how to teach it. An answer key is provided (pages 34–37) to help evaluate student responses.

The Mathematician Checklist on the back of the Booster Cards provides an opportunity for students to reflect on their work. Distribute copies of the *My Mathematician Checklist* activity sheet (page 32) to students to guide self-reflection. Use the *Mathematician Rubric* (page 33) to assess students' mathematical practices and processes. These rubrics may be used in conjunction with each other to guide conversation during teacher-student conferences.



▲ Use the Mathematician Checklist on each Booster Card as a quick reference while completing activities.

▲ Distribute copies of the *My Mathematician Checklist* (page 32) to students as a way to encourage self-reflection and mathematical practices and processes.

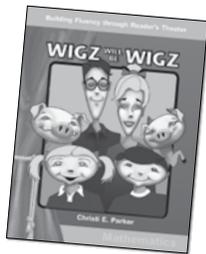
▲ Complete the *Mathematician Rubric* (page 33) to give students feedback.

Book Summaries

Below are summaries of each book for teacher reference. This way, teachers can decide which books match the content that they would like to cover with their students. Also, teachers can use these summaries as a way to begin a group discussion with students about the books.

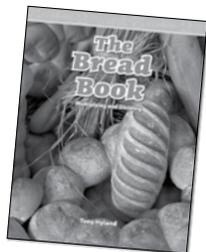
Wigz Will Be Wigz

The Wigz family wants to go to the Hog Wild Carnival to enter their pet pigs in a contest, but they need to find money to go!



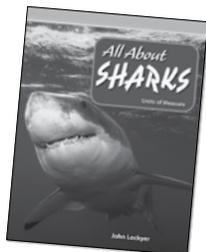
The Bread Book

People have been making bread for centuries, but how they make it changes from time to time and place to place. Learn about different kinds of bread and how they're made, while using multiplication and division to understand the recipes.



All About Sharks

Practice measurement while learning about sharks! Learn about these exciting creatures as you use measure sharks and their ocean environment.



The History of Telephones

From Alexander Graham Bell to Steve Jobs, creative thinkers have revolutionized the way we communicate. Come aboard a young innovator's time machine as he explores the history of the telephone, one fraction at a time!



Art and Culture: Abstract Art

Meet the masters of abstract art! Josef Albers, Wassily Kandinsky, and Sophie Taeuber-Arp helped form the world of modern art. They created a movement that celebrates simple shapes. Explore lines, rays, and angles—the math behind modern art—as you learn about each artist.



Big Digs: Construction Site

Imagine about a skyscraper, a bridge, or even your own house. Do you know how it was built? There are many people and steps involved. Workers draw blueprints, drive bulldozers, pour concrete, and paint walls. Check out this construction site—where an idea becomes a house and a house becomes a home!



Reading Levels and Content Areas

Teacher Created Materials takes great care to maintain the integrity of authentic informational text while leveling it to make the text accessible for all students. In this way, our content-area books provide rich informational reading experiences from which students can learn and be ready for the complexity of college-and-career level reading.

To preserve the authenticity of these reading experiences, it is crucial to maintain important academic and content vocabulary.

To support leveled instruction, new and challenging terms are used repeatedly and defined in text to promote understanding and retention.

The measures in this chart are for reference only. Books in the *Focused Mathematics: Booster Pack* series were chosen to include a range of grade-appropriate reading levels to support grade-level mathematics standards.

Note: Reading levels vary from program to program and do not correlate exactly.

Title of the Book	Lexile® Level	Guided Reading
<i>Wigz Will Be Wigz</i> **	n/a*	K–Q
<i>The Bread Book</i>	690L	P
<i>All About Sharks</i>	760L	S
*** <i>The History of Telephones</i>	710L	T
*** <i>Arts and Culture: Abstract Art</i>	660L	W
<i>Big Digs: Construction Site</i>	690L	O

* As per Lexile® guidelines, posters, poetry, songs, and other nonprose texts do not have Lexile® measures.

** This Reader's Theater script has six characters. Each character is written at a different reading level. The chart below lists the reading levels for all the characters in the script.

*** These titles have been officially leveled using the F&P Text Level Gradient™ Leveling System.

	Mr. Wigz Mrs. Wigz	Peter Penelope	Pepperoni Pineapple
TCM Reading Levels	2.5–3.0	3.0–3.5	3.5–4.0

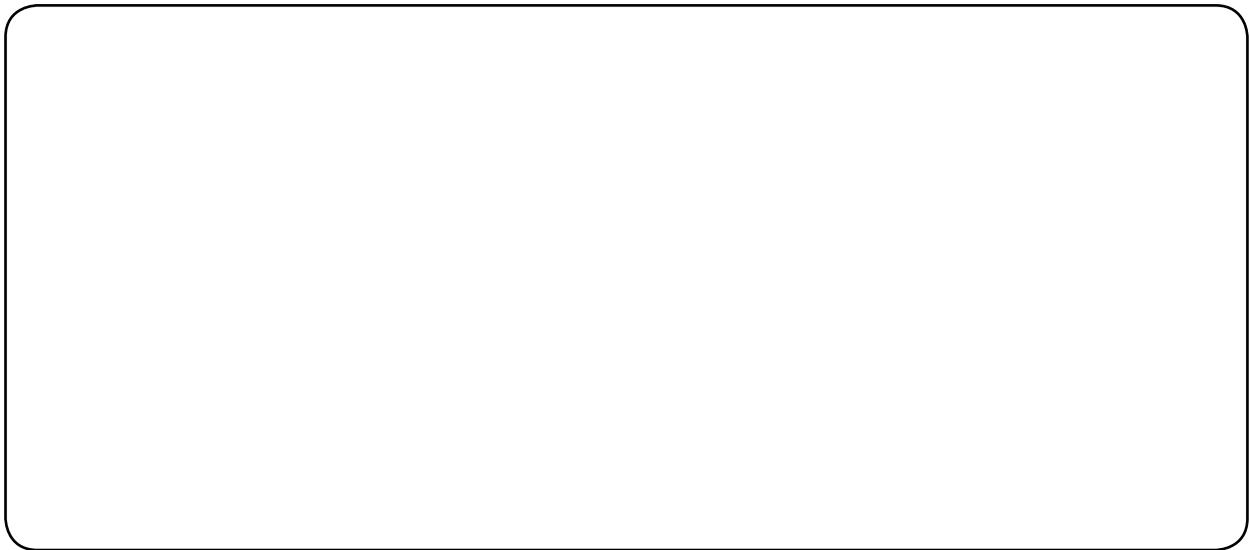
Name: _____ Date: _____

Booster Card Workspace A

Directions: Complete the Booster Card activities in the workspaces. Circle the activity title(s) to label your work.

Book Title: _____

Ask It · Talk about It · Model It · Estimate It
Explore It · Solve It · Prove It



Ask It · Talk about It · Model It · Estimate It
Explore It · Solve It · Prove It



Name: _____ Date: _____

Booster Card Workspace C

Directions: Complete the Booster Card activities in the workspace. Circle the activity title(s) to label your work.

Book Title: _____

Ask It · Talk about It · Model It · Estimate It
Explore It · Solve It · Prove It

Name: _____ Date: _____

My Mathematician Checklist

Directions: Use this list to make sure you have done your best work.

Book Title: _____

- I read the book.
- I made sense of the problems.
- I persevered.
- I constructed viable arguments.
- I justified my strategies.
- I used precise mathematical language.
- I used models to organize, record, and communicate mathematical ideas.
- I communicated my ideas clearly.

Name: _____ Date: _____

Mathematician Rubric

Directions: Score each item on a scale of 1 to 4. Some of the items may need to be assessed through conversation and observation.

4 = Great 3 = Good 2 = Okay 1 = Needs Improvement

Book:				
You read the entire book.	4	3	2	1
You made sense of the problems.	4	3	2	1
You persevered.	4	3	2	1
You constructed viable arguments.	4	3	2	1
You justified your strategies.	4	3	2	1
You used precise mathematical language.	4	3	2	1
You used models to organize, record, and communicate mathematical ideas.	4	3	2	1
You communicated your ideas clearly.	4	3	2	1
Total				

Comments

Answer Key (cont.)

Prove It

$12 \text{ rows} \times 8 \text{ columns} = 96 \text{ pieces}$

$96 \text{ pieces} \div 8 \text{ columns} = 9 \text{ rows}$

All About Sharks

Ask It

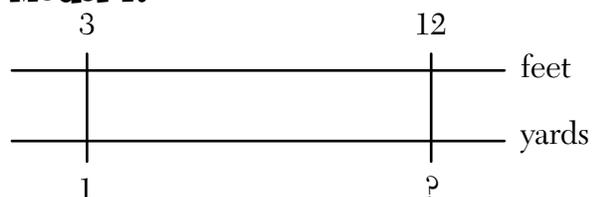
Responses will vary but may include, “How long is the bus in feet?”

Talk about It

15 centimeters = 0.15 meter

If 1 meter = 100 centimeters, then 15 centimeters is $\frac{15}{100}$ of one meter.

Model It



1 yard = 3 feet, so 4 yards = 12 feet

Estimate It

The length of the great white shark is about a third of the megalodon. A third of 15 meters is 5 meters. The length of the great white shark on page 9 of the book is about 5 meters.

Explore It

page 9 sidebar:

- $20 \text{ tons} \div 5 \text{ elephants} = 4 \text{ tons each}$
- $20 \text{ cm} \div 5 \text{ cm} = 4 \text{ times bigger}$

page 12 sidebar:

- $20 \times 16 = 320 \text{ ounces}$
- $16 \text{ ounces} \div 2 = 8 \text{ ounces}$

page 19 sidebar:

- $6 \times 1,000 = 6,000 \text{ milliliters}$
- 1 liter = 1,000 milliliters; $\frac{1}{2}$ liter = 500 milliliters
 $1,000 + 500 = 1,500 \text{ milliliters}$

Solve It

- A thresher shark is 15 feet in length.
 $15 \text{ feet} \times 3 = 45 \text{ feet}$, so 3 thresher shark pictures can fit on 1 wall.
- $45 \text{ feet} \div 5 \text{ feet} = 9 \text{ feet}$, so 9 angel shark

pictures can fit on 1 wall.

- $20 \text{ feet} + 20 \text{ feet} = 40 \text{ feet}$. Only 2 full-size Greenland shark pictures can fit on a 45-foot wall.
- A bullhead shark is 3 feet in length. $45 \text{ feet} \div 3 \text{ feet} = 15 \text{ feet}$, so 15 bullhead shark pictures can fit on 1 wall.
- Answers will vary but may include dividing by the length of the sharks because the lengths are in multiples of 5s.

Prove It

According to the chart, the great white shark's dorsal fin is 100 cm.

1 meter = 100 cm, so Markel is incorrect.

The History of Telephones

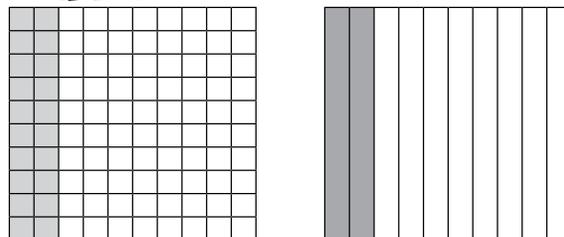
Ask It

Responses will vary but may include, “What is the fraction of one telegraph part on each rectangle?”

Talk about It

$\frac{4}{7}$ of the telephones have buttons and $\frac{2}{7}$ of the telephones do not have buttons.

Model It



Estimate It

Answers will vary but may include, “ $\frac{1}{2}$ of the fifth grade students have cell phones. There are about 40 fifth graders and half of 40 is 20.”

Overview Card

All About Sharks

Book Summary

Practice measurement while learning about sharks! Learn about these exciting creatures as you measure sharks and their ocean environment.

Objective

Understand relative size of measurement units using benchmarks and estimation, convert units within the same system, and solve word problems involving measurement units using the four operations.

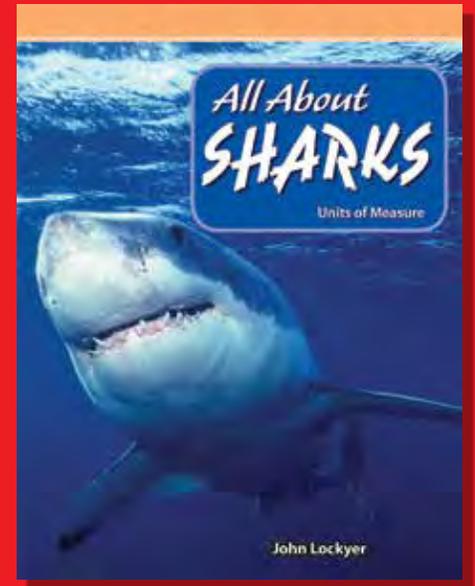
Mathematics Vocabulary

convert units of measure

Cross-Content Connections

(Social Studies) The United States uses the imperial system of measurement (e.g., pounds, feet, gallons). Most other countries use the metric system (e.g., grams, meters, liters). Many people prefer the metric system since it works on the base-ten system, just like numbers. Have students analyze how these systems of measurement are used during everyday routines. Ask students to explain how one measurement system might be more practical than the other.

(Science) Sharks are fascinating and they have interesting names. Have students research one of the sharks from page 14 of the book. Have them find information about the shark's physical appearance, habitat, diet, and behavior. Have students share the information with the class.



Reading Levels
Lexile®: 760L
Guided Reading: S



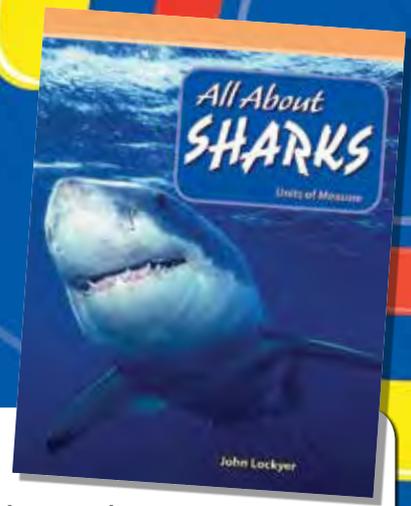
TCM 30027 (i20279)

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Booster Card

All About Sharks

Activities



Read It ⌚_{30}

Practice measurement while learning about sharks! Learn about these exciting creatures as you measure sharks and their ocean environment.

Ask It ⌚_5

Look at page 18 of the book. What measurement questions can you ask?

Talk about It ⌚_5

Look at page 7 of the book. The dwarf dogfish grows to be about 15 centimeters. About how many meters long is that? What strategy did you use to figure it out? Tell a partner about your strategy.

Model It ⌚_{10}

Look at page 10 of the book. The hammerhead shark measures about 12 feet in length. Show how many yards are equivalent to 12 feet using a double number line, tape diagram, or drawing.

Estimate It ⌚_5

The picture on pages 8–9 of the book shows a megalodon shark and a great white shark. Use the information on the page to help you estimate the length of the great white shark.

Explore It ⌚_{20}

Complete the Let's Explore Math sidebars on pages 9, 12, and 19 of the book.

Solve It ⌚_{15}

Complete the Problem Solving activity on pages 28 and 29 of the book.

Prove It ⌚_{10}

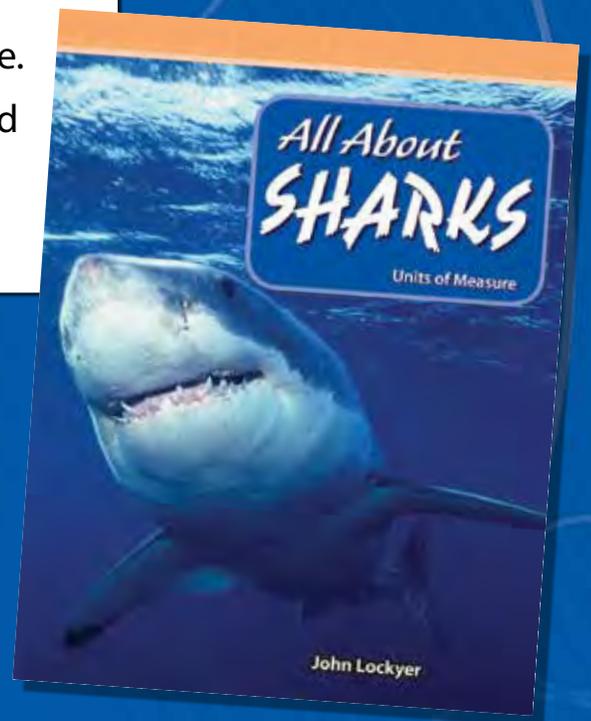
Look at the table on page 14 of the book. Markel thinks the great white shark's dorsal fin is 10 meters tall. Is he correct? Show your thinking using pictures, numbers, or words.

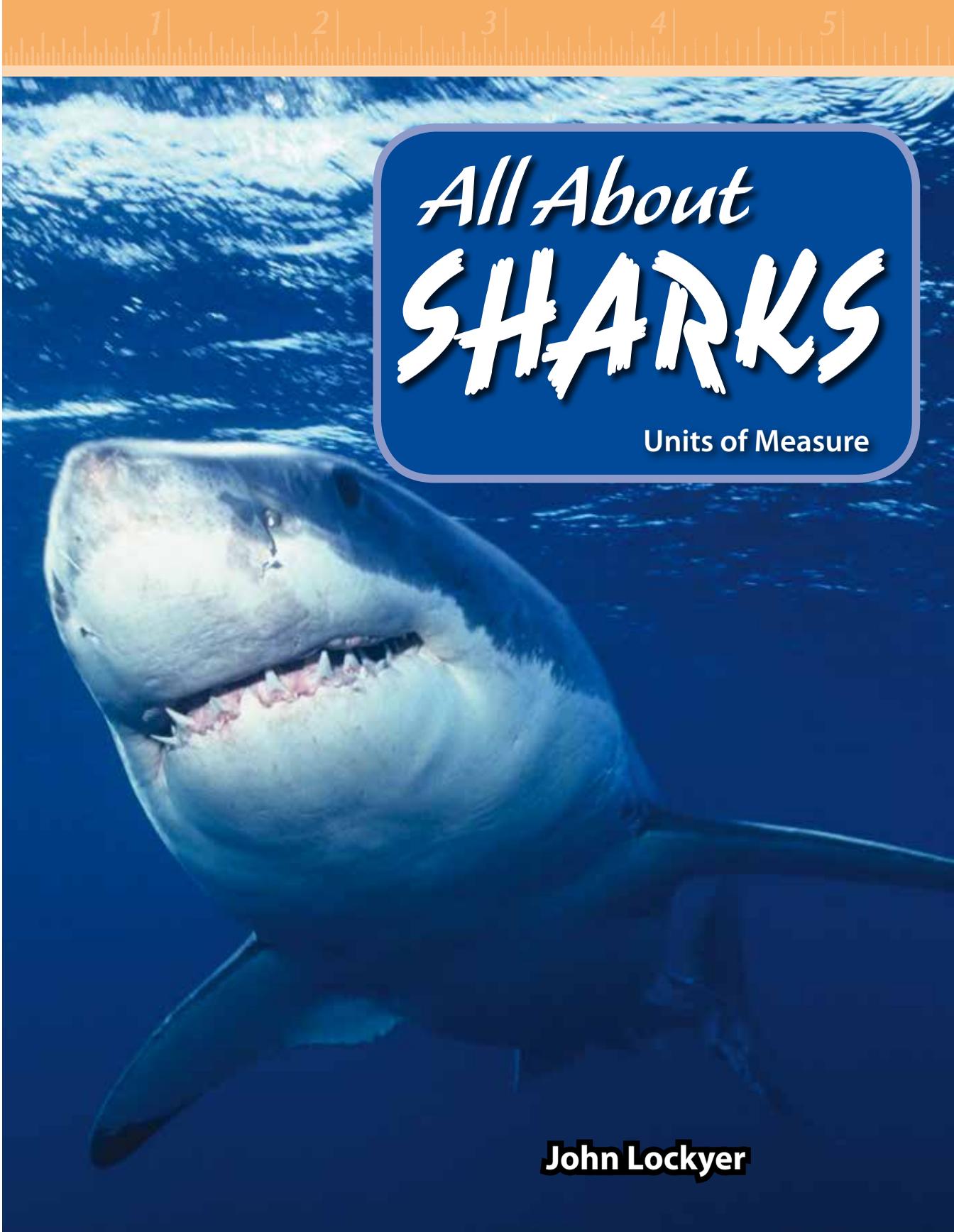
Booster Card

All About Sharks

Mathematician Checklist

- I read the entire book.
- I made sense of the problems.
- I persevered.
- I constructed viable arguments.
- I justified my strategies.
- I used precise mathematical language.
- I used models to organize, record, and communicate mathematical ideas.
- I communicated my ideas clearly.





All About
SHARKS

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Sharks

When you think about the ocean, what animals do you think of? Perhaps you think of fish. If you do, then you could be thinking about sharks. Sharks are fish.

There are about 350 different **species** (SPEE-seez) of sharks in the world.



Slow Swimmer

The wobbegong (WOB-ee-gong) shark swims slowly along the seabed. Its speed is less than 0.6 miles per hour (1 km/h).



Fast Swimmer

This mako shark swims so fast, it can jump right out of the water. It reaches speeds of 19 miles per hour (30 km/h) and can leap nearly 20 feet (6 m) in the air.

LET'S EXPLORE MATH

Inches and feet are **units** of measurement. They measure length. The mako shark can leap up to 20 feet in the air.

a. About how many inches is this?

Hint: 12 inches = 1 foot

The mako shark can swim at a speed of 19 miles per hour.

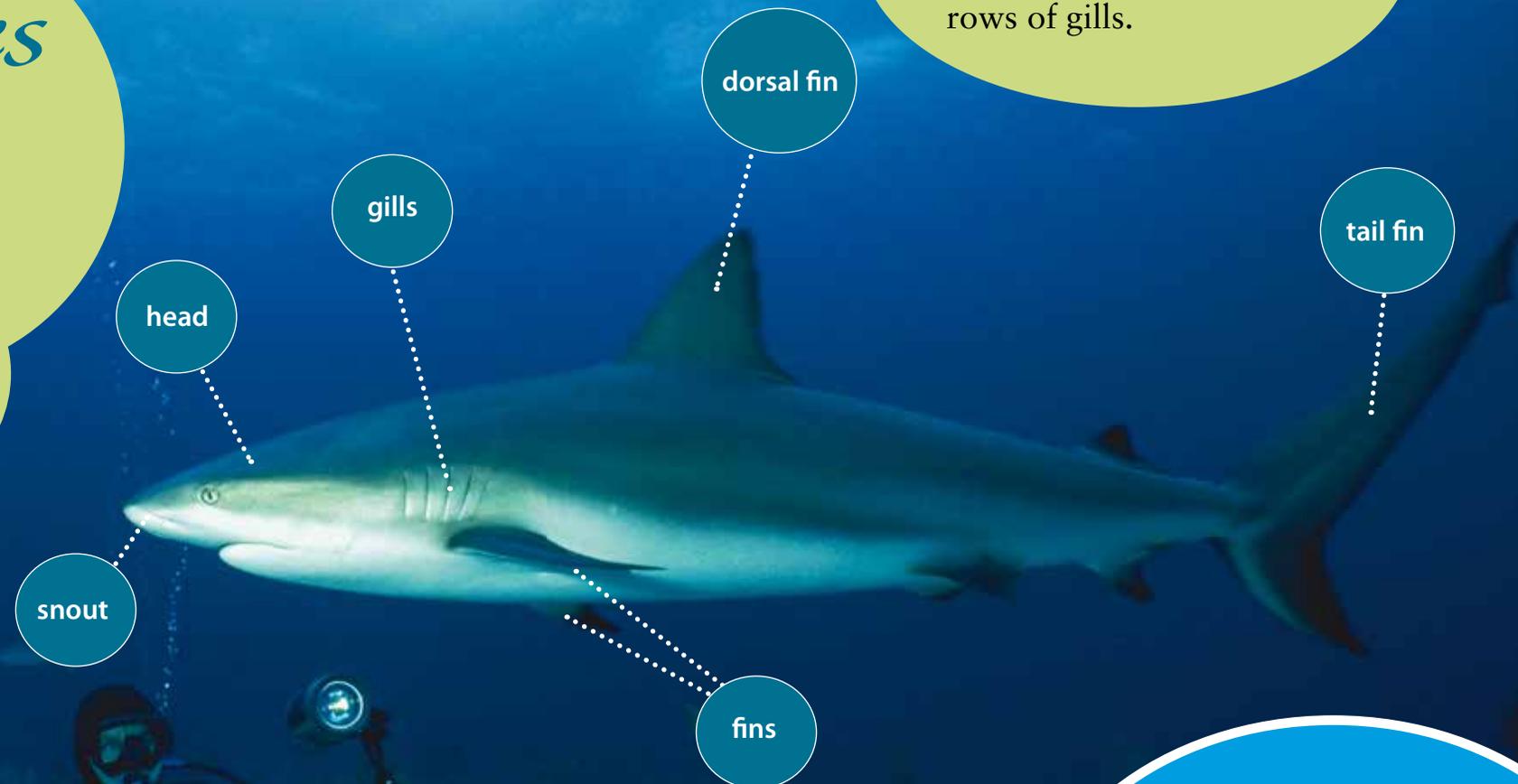
b. If the shark swam a distance of 76 miles, how many hours was it swimming?

Bodies Without Bones

Unlike many other fish, sharks do not have bones. They have **skeletons** (SKEL-uh-tuhns) made of **cartilage** (CAR-tuh-lij). You have cartilage in your ears and your nose.

A shark's body shape helps it swim well through water. Its strong fins move it forward.

Sharks have **gills**, which they use to breathe under water. Sharks have 5 to 7 rows of gills.



Smallest Shark

The smallest shark is the dwarf dogfish. It grows to about 6 inches (15 cm) and weighs just 1.5 ounces (42 g). It is small enough to fit into an adult's hand.

Ancient Sharks

Different sharks have lived in the ocean for almost 400 million years. The megalodon (MEG-uh-luh-don) shark lived 1.6 to 16 million years ago.

The megalodon measured up to 50 feet (15 m) in length. Its jaws were 6.5 feet (2 m) wide. Its teeth were up to 8 inches (20 cm) long. It weighed around 20 tons (18,144 kg), which is as much as 5 elephants.



megalodon shark

great white shark

A megalodon shark was around 3 times the length of a great white shark.

A megalodon shark tooth



LET'S EXPLORE MATH

A ton is used to measure large amounts of weight. A megalodon could weigh as much as 5 elephants, or a total of 20 tons.

a. About how much does each elephant weigh?

Megalodon teeth were up to 20 centimeters in length. Great white shark teeth are around 5 centimeters in length.

b. How many times bigger is the megalodon tooth?

Heads and Tails

Today, more than half of all shark species are less than 3 feet (1 m) long. But some species grow much larger and have unusual features.

The hammerhead shark has eyes on the ends of its head. It swings its head from side to side to see. Its head can grow up to half as long as its body.



The hammerhead shark measures around 12 feet (up to 4 m) in length. Yet it can be found swimming in water less than 3 feet (1 m) deep.

Thresher sharks use their tails to slap and slash other fish. This makes their **prey** easier to catch and eat. Their tails can grow as long as their bodies.



A thresher shark can grow up to 15 feet (5 m) long.

Teeth

Sharks often lose their teeth when they are catching their prey. So they are always growing new teeth. Sharks can have up to 3,000 teeth at a time. Shark teeth often grow in rows of 5. A shark can go through 30,000 teeth in a lifetime!

Great Teeth

Great white sharks have sharp, jagged teeth for biting and tearing. They can take 20 pounds (9 kg) out of their prey in each bite!

LET'S EXPLORE MATH

Pounds (lbs.) and ounces (oz.) are used to measure amounts of weight.

Hint: 1 pound = 16 ounces

- A great white shark can eat 20 pounds in 1 mouthful. How many ounces is that?
- How many ounces are there in $\frac{1}{2}$ a pound?

Dorsal Fins

The fin on top of a shark's back is called the dorsal fin. It is this fin that can often be seen above the water. Dorsal fins are stiff. A shark's fins help it stay upright in the water. All sharks have 1 or 2 dorsal fins.

dorsal fin

Dorsal Fins

Shark	Height of Dorsal Fin
dwarf dogfish	2.5 cm
cookie-cutter shark	3.75 cm
angel shark	10 cm
bullhead shark	20 cm
thresher shark	33 cm
Greenland shark	50 cm
basking shark	100 cm
great white shark	100 cm
whale shark	228 cm

LET'S EXPLORE MATH

Centimeters can also be used to measure length. Use the table on page 14 to answer these questions.
Hint: 10 millimeters = 1 centimeter

- How many millimeters is the dorsal fin of an angel shark?
- Which shark(s) has a dorsal fin(s) measuring 1,000 millimeters in length?
- The length of a bullhead shark's dorsal fin is:
1. 2 millimeters 2. 20 millimeters 3. 200 millimeters

Which Oceans?

Sharks are found in all the world's oceans. They live in many different ocean depths. But most sharks live in warm, sunlit waters to depths of 650 feet (200 m). The water temperature here is 50°F to 68°F (10°C to 20°C).

A white-tipped reef shark hunts for food in the warm, sunlit water above a coral reef.



Seabed Swimmers

Angel sharks live on the seabed, near coastlines, where the water temperature is above 68°F (20°C).

Whale Sharks

The whale shark is the biggest fish in the world. It grows more than 40 feet (12 m) long and can weigh up to 13 tons (11,793 kg). Whale sharks are slow swimmers. They have a top speed of 3 miles per hour (5 km/h).



A whale shark is about the length of a school bus.

Big Mouth!

Whale sharks swim with their mouths open. They suck in water that is filled with plankton (PLANK-tuhn) and small fish. Whale sharks' mouths can be 5 feet (1.5 m) wide. They can suck in over 1,500 gallons (6,000 L) of water an hour.



LET'S EXPLORE MATH

Liters and milliliters are used to measure amounts of liquid. A whale shark can suck in 6,000 liters of water in an hour.

Hint: 1 liter = 1,000 milliliters

- How many milliliters are there in 6 liters?
- How many milliliters are there in 1 $\frac{1}{2}$ liters?

Great White Sharks

Great white sharks are one of the most famous species of shark. Movies have even been made about them! Most great white sharks grow to between 12 and 20 feet (about 3.5 to 6 m) long. That's about as long as a van.



Fast Movers

Great white sharks are amazing hunters. They can reach speeds of 25 miles per hour (40 km/h) and can leap out of the water to catch their prey.



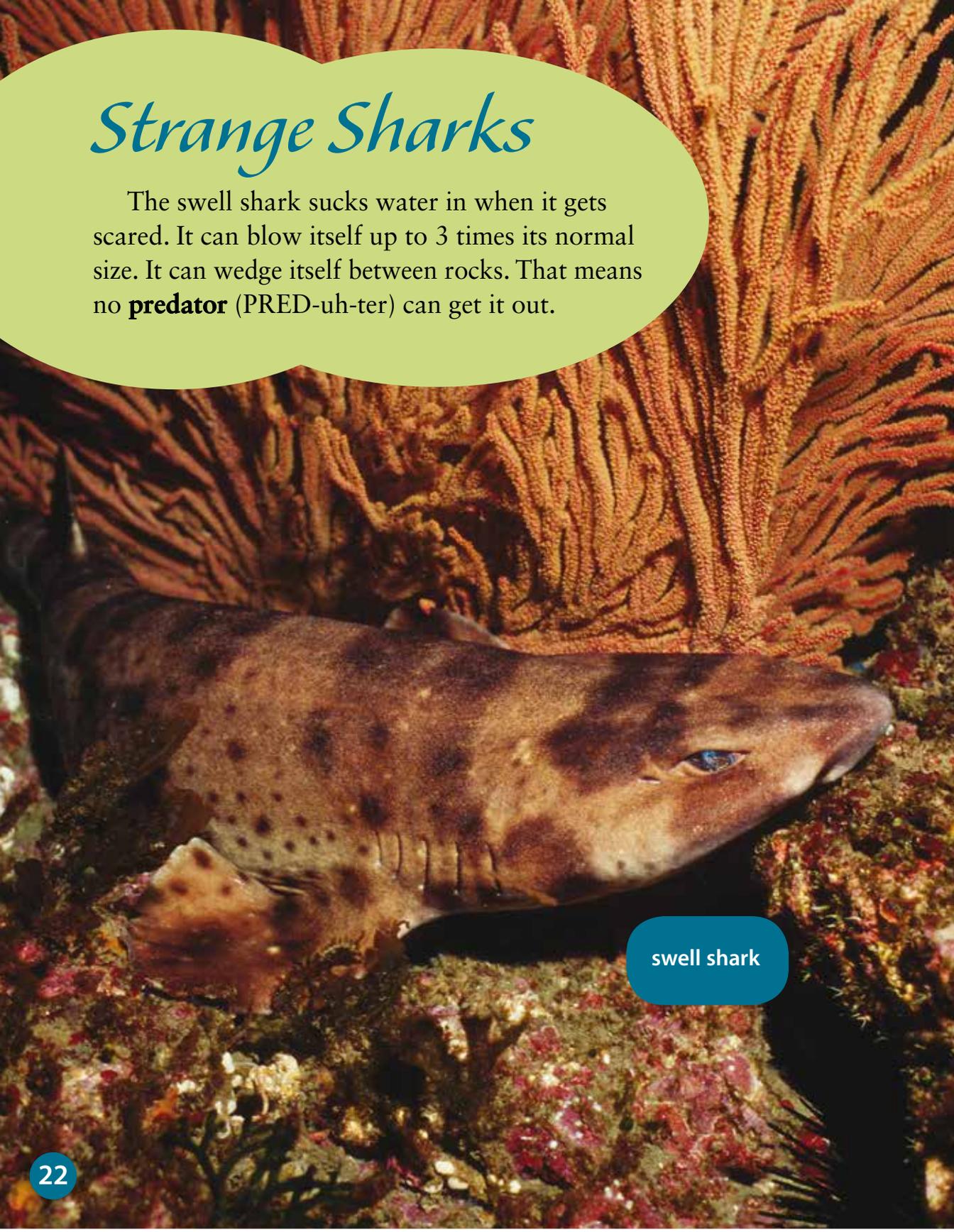
LET'S EXPLORE MATH

Which of these units of measurement do you think best describes the weight of a great white shark? Write at least 2 sentences explaining your answer.

- a. 20 kilograms
- b. 2 pounds
- c. 2 tons
- d. 20 pounds

Strange Sharks

The swell shark sucks water in when it gets scared. It can blow itself up to 3 times its normal size. It can wedge itself between rocks. That means no **predator** (PRED-uh-ter) can get it out.



swell shark

This cookie-cutter shark has long, sharp teeth. It bites and holds onto bigger prey. When it lets go, the bite looks like a cookie shape.



This dolphin has been bitten by a cookie-cutter shark.

Under Attack?

Some people think sharks are very dangerous animals. But only 50 to 75 shark attacks are reported each year. Yet around 100 million sharks are caught and killed each year.

Sharks are killed for their meat. Parts of sharks are also used in clothes and lotions. Many sharks are trapped in fishing nets and die. Scientists are worried that sharks are being killed before they have babies. This means there will be fewer sharks in the future.



Shark Babies

Shark babies are called pups. A great white shark pup is about 4 feet (1.2 m) long when it is born and weighs around 40 pounds (18 kg). That is about the same size you were when you were 5 years old!

A shark caught in a fishing net

shark pup

Studying Sharks

Scientists want to learn more about sharks. They do this in different ways. Some climb into cages and go in the water to film the sharks. Other scientists swim with sharks. They have to wear special diving suits to keep safe! These people help us learn more about these amazing fish.



Shark Measurements

Shark	Average length	Average weight
dwarf dogfish	6 inches (15 cm)	1.5 ounces (43 g)
cookie-cutter shark	20 inches (50 cm)	5.5 ounces (156 g)
bullhead shark	40 inches (1 m)	20 pounds (9 kg)
angel shark	5 feet (1.5 m)	66 pounds (30 kg)
thresher shark	15 feet (4.5 m)	350 pounds (159 kg)
Greenland shark	20 feet (6 m)	2,200 pounds (998 kg)
great white shark	20 feet (6 m)	7,000 pounds (3,200 kg)
basking shark	33 feet (10 m)	15,400 pounds (6,985 kg)
whale shark	40 feet (12 m)	28,700 pounds (13,018 kg)

LET'S EXPLORE MATH

Use the table above to answer these questions.

- Which shark measures exactly 5 yards in length?
Hint: 1 yard = 3 feet.
- Which shark is exactly twice the length of the cookie-cutter shark?
- How many bullhead sharks make up a total weight of 100 pounds?

PROBLEM-SOLVING ACTIVITY

Sharks in the Classroom

Students at Seaview Elementary have been learning about sharks. They want to make life-size shark pictures to display on their classroom walls. Each wall of the classroom is 45 feet (13.7 m) in length.

The students decide to display pictures of the following sharks:

Type of Shark	Length of Shark
thresher	15 feet (4.5 m)
angel	5 feet (1.5 m)
Greenland	20 feet (6 m)
bullhead	3 feet (0.9 m)



Solve It!

Use the information in the table to answer the questions below. Note that the pictures will be displayed end to end.

- a. How many thresher shark pictures can fit on 1 wall?
- b. How many angel shark pictures can fit on 1 wall?
- c. How many Greenland shark pictures can fit on 1 wall?
- d. How many bullhead shark pictures can fit on 1 wall?
- e. Explain how you solved questions a and d.

Glossary

cartilage—firm elastic tissue in the body

gills—organs in fish that take oxygen from the water

plankton—very tiny plants and animals that float in water

predator—hunter

prey—an animal that is hunted and killed by another animal for food

skeletons—the bones of an animal

species—kinds of animals

units—measurements of quantity

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ANSWER KEY

Let's Explore Math

Page 5:

- a. 1 foot = 12 inches, so $20 \text{ feet} \times 12 \text{ inches} = 240 \text{ inches}$
- b. $76 \text{ miles} \div 19 \text{ miles per hour} = 4 \text{ hours}$

Page 9:

- a. $20 \text{ tons} \div 5 \text{ elephants} = 4 \text{ tons each}$
- b. $20 \text{ cm} \div 5 \text{ cm} = 4 \text{ times bigger}$

Page 12:

- a. $20 \times 16 = 320 \text{ ounces}$
- b. $16 \text{ ounces} \div 2 = 8 \text{ ounces}$

Page 15:

- a. 100 millimeters
- b. The basking shark and the great white shark
- c. 3. 200 millimeters in length

Page 19:

- a. $6 \times 1,000 = 6,000 \text{ milliliters}$
- b. 1 liter = 1,000 milliliters; $\frac{1}{2}$ liter = 500 milliliters
 $1,000 + 500 = 1,500 \text{ milliliters}$

Page 21:

- c. 2 tons
- Explanations will vary.

Page 27:

- a. The thresher shark
- b. The bullhead shark
- c. 5 bullhead sharks

Problem-Solving Activity

- a. A thresher shark is 15 feet in length. $15 \text{ feet} \times 3 = 45 \text{ feet}$, so 3 thresher shark pictures can fit on 1 wall.
- b. $45 \text{ feet} \div 5 \text{ feet} = 9 \text{ feet}$, so 9 angel shark pictures can fit on 1 wall.
- c. $20 \text{ feet} + 20 \text{ feet} = 40 \text{ feet}$. Only 2 full-size Greenland shark pictures can fit on a 45-foot wall.
- d. A bullhead shark is 3 feet in length. $45 \text{ feet} \div 3 \text{ feet} = 15 \text{ feet}$, so 15 bullhead shark pictures can fit on 1 wall.
- e. Answers will vary.