JCPS NTI Grade 2 Mathematics Packet #3

i-Ready®

Grade 2 Mathematics

Student At-Home Activity Packet

This At-Home Activity Packet is intended for a two-week period, and it includes lessons that your student may complete across more than one day. The practice problems align to important math concepts your student has worked with so far this year.

Specific instructions to guide your student are found at the top of each page.

Encourage your student to do the best they can with this content—the most important thing is that they continue developing their mathematical fluency and skills.

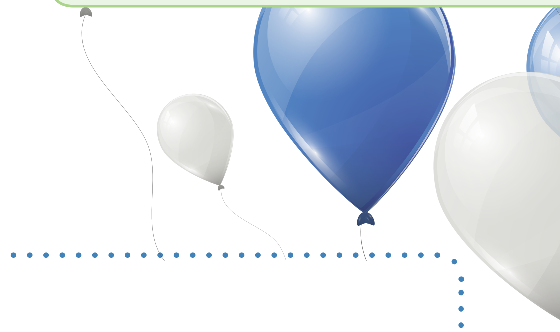
Explore Three-Digit Numbers

Learning Target

- Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

SMP 1, 2, 3, 4, 5, 6, 7, 8

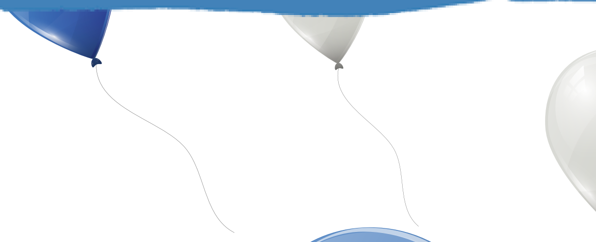
You know how to read and write two-digit numbers. Use what you know to try to solve the problem below.



Jan buys 200 blue balloons, 70 white balloons, and 5 green balloons. How many balloons does Jan buy?

TRY IT

Solution



CONNECT IT

1 LOOK BACK

How many balloons does Jan buy? ....

2 LOOK AHEAD

a. The digits 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 make up all numbers. The digit's place in a number tells its value.
The same digit can have different values. Write the value of each 4 in this number.

Hundreds	Tens	Ones
4	4	4
↓	↓	↓
....	....	....

b. The number can be written using only digits as ....

c. The number can be written in **expanded form**. Complete the expanded form.

444 = ... + 40 + ...

d. The number can be written as words. Complete.

four hundred ....

3 REFLECT

Gabe says the number in the place-value chart is 400404. Explain what Gabe's mistake is.

....

....

1 Solve the problem. Show your work.

Pavel buys 300 green party hats, 90 purple party hats, and 7 red party hats. How many party hats does Pavel buy?

Solution ....

2 Solve the problem. Show your work.

Amir plays a board game that uses play money. He wins 1 tens bill, 2 hundreds bills and 3 ones bills. What is the total value of the bills Amir wins?

Solution ....

APPLY IT

Use what you just learned to solve these problems.

3. What is another way to show each number? Draw lines to connect each number to its expanded form.

392	329	239
300 + 20 + 9	200 + 30 + 9	300 + 90 + 2

4. Tia is playing a ring toss game to win tokens. She wins 3 hundreds tokens, 4 tens tokens, and 7 ones tokens. What is another way to write the total value of the tokens Tia wins? Show your work.

Solution ....

5. When does the digit 8 mean eighty? When does the digit 8 mean eight hundred? When does the digit 8 mean just eight?

Name: ____________________

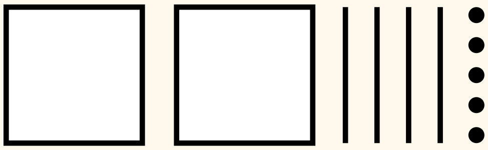
Practice Finding the Value of Three-Digit Numbers

Study the Example showing three-digit numbers in different ways. Then solve problems 1–6.

EXAMPLE

In a game, Jan pays money to the bank. She pays 2 hundreds bills, 4 tens bills, and 5 ones bills. What is the total value of the bills Jan pays?

Make a quick drawing.



Use a chart.

Hundreds	Tens	Ones
2	4	5

Write an equation.

$200 + 40 + 5 = 245$ dollars

Bob plays a board game that uses play money. He wins 3 hundreds bills, 7 tens bills, and 7 ones bills.

1. How many hundreds, tens, and ones are there?

   .... hundreds .... tens .... ones

2. Write the total value of the bills using expanded form.

   .... + ... + ... = ...

3. What is the total value of the bills Bob wins?

   .... dollars

Vocabulary

expanded form a way a number is written to show the place value of each digit.

4 Ali plays a board game that uses play money. He wins 8 hundreds bills and 6 ones bills. What is the total value of the bills Ali wins? Fill in the chart and then write the answer. Show your work.

Hundreds	Tens	Ones

Solution ....

5 Audra has 533 comic books. Write or draw to show this number in a different way.

6 What is another way to show each number? Draw lines to connect each number to its expanded form.

784	874	748
800 + 70 + 4	700 + 80 + 4	700 + 40 + 8

Develop Writing Three-Digit Numbers

Read and try to solve the problem below.

Ryan has a collection of 284 shells. What is another way to write 284 using numbers? What is another way to write 284 using words?

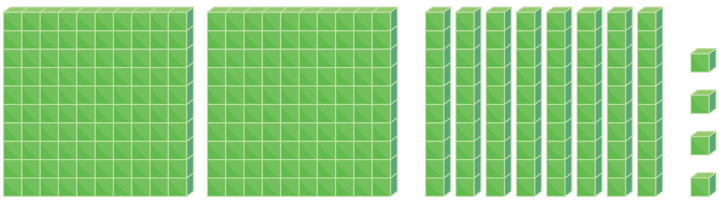
TRY IT

Explore different ways to understand writing three-digit numbers.

Ryan has a collection of 284 shells. What is another way to write 284 using numbers? What is another way to write 284 using words?

PICTURE IT

You can use base-ten blocks to show hundreds, tens, and ones. Then write the number in expanded form and in words.



200 + 80 + 4

two hundred eighty four

MODEL IT

You can show hundreds, tens, and ones in a chart. Then write the values in numbers and words.

Hundreds	Tens	Ones
2	8	4

2 hundreds + 8 tens + 4 ones

two hundred + eighty + four

CONNECT IT

Now you will use the problem from the previous page to help you understand how to write three-digit numbers in different ways.

1. Write the number of Ryan's shells using only digits.

   Ryan has .... shells.

2. Look at **Picture It** on the previous page. Write 284 using words.

3. Look at **Model It**.

   a. How many hundreds, tens, and ones are there?

   .... hundreds .... tens .... ones

   b. Write the number in expanded form to show the total number of shells as an equation.

   .... + ... + ... = 284

4. ### REFLECT

   Look back at your **Try It**, strategies by classmates, and **Picture It** and **Model It**. Which models or strategies do you like best for writing three-digit numbers? Explain.

   ....

   ....

   ....

   ....

APPLY IT

Use what you just learned to solve these problems.

5 There are 361 fish in the large tank at the aquarium. How do you write 361 in word form? Show your work.

Solution ....

6 Ella makes one hundred eighteen friendship bracelets. How would Ella write that number in expanded form? Show your work.

Solution ....

7 How do you write the number shown in the chart using words?

Hundreds	Tens	Ones
5	7	0

Ⓐ five seven zero

Ⓑ fifty-seven

Ⓒ five hundred seventeen

Ⓓ five hundred seventy

Practice Writing Three-Digit Numbers

Study the Example showing how to write a three-digit number in different ways. Then solve problems 1–6.

EXAMPLE

In a video game, Eduardo scores 753 points.

Write this number three different ways.

Using only digits: 753

Using expanded form: 700 + 50 + 3

Using words:

seven hundred + fifty + three =
seven hundred fifty-three

Use the chart below for problems 1–3.

Hundreds	Tens	Ones
3	2	2

1. Write the number using only digits. ....

2. Write the number in expanded form.

   .... + ... + ...

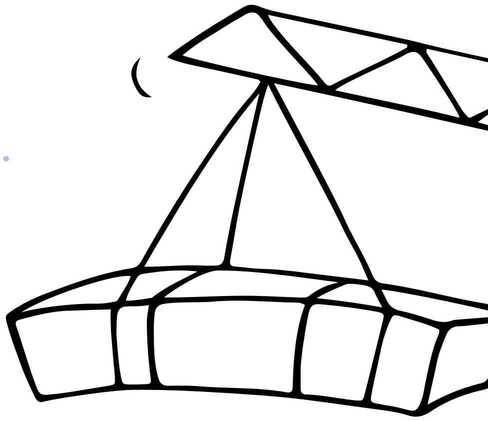
3. Write the number using words.

4 There are 225 building bricks in a box.

How would you write 225 in expanded form?

Fill in the chart and then write the answer.

Hundreds	Tens	Ones



Solution ....

5 Helen counts her crayons. She writes the number as 700 + 3.

Write the number using only digits.

Solution ....

Write the number using only words.

Solution ....

6 What are other ways to show each number?

Look at each number shown using only digits. Draw a line to the expanded form and to the words for each number.

500 + 60 + 1	**651**	six hundred fifteen
600 + 10 + 5	**615**	five hundred sixty-one
600 + 50 + 1	**561**	six hundred fifty-one

Refine Reading and Writing Three-Digit Numbers

Complete the Example below. Then solve problems 1–3.

EXAMPLE

Mrs. Cole writes this number on a check.

five hundred ninety-four

How do you write this number using only digits?

You can show the number in a chart.

Hundreds	Tens	Ones
5	9	4

five hundred ninety-four

Solution ....

APPLY IT

1 Pat writes these clues about a three-digit number.

- The hundreds digit is 1 more than 8.
- The tens digit has a value of 40.
- The number has 2 ones.

What is the number? Show your work.

How many digits are in the number?

Solution ....

2 Jim is playing a board game. This is his play money.

Write the total as the sum of hundreds, tens, and ones.

______ dollars + ______ dollars + ______ dollars

Write the total using only digits.

______ dollars

What is the value of each kind of bill in the problem?

3 Which is another way to write 700 + 6?

Ⓐ seventy-six

Ⓑ six hundred seven

Ⓒ seven hundred six

Ⓓ seven hundred sixty

Zoey chose Ⓐ as the answer. How did Zoey get her answer?

How many tens does the number have?

Practice Reading and Writing Three-Digit Numbers

1 Which number is the same as 800 + 30?

Ⓐ 803

Ⓑ 83

Ⓒ 830

Ⓓ 308

Can you use a chart to help you?

2 Bev writes clues about a three-digit number.

- The number has 5 hundreds.
- The tens digit is 1 less than 9.
- The ones digit is greater than the tens digit.

What is the number?

Ⓐ 589

Ⓑ 598

Ⓒ 959

Ⓓ 590

In a three-digit number, where is the tens digit?

3 Which are true about the number 720?

Ⓐ It equals 72 tens.

Ⓑ It is 700 + 2.

Ⓒ It has 7 hundreds and 2 tens.

Ⓓ It is 700 + 20.

Ⓔ It is seventy-two.

Ⓕ It is seven hundred twenty.

How many hundreds, tens, and ones are in 720?

4 Here are clues about a three-digit number.

- The hundreds digit has a value of 300.
- The tens digit is 1 less than 2.
- The ones digit is the same as the hundreds digit.

Write the number in words. Show your work.

Can you write an equation to help you?

Solution

5 What is another way to show 4 hundreds and 3 tens? Circle the correct answer.

Ⓐ 43

Ⓑ $400 + 3$

Ⓒ 403

Ⓓ $400 + 30$

Zack chose Ⓓ. How did Zack get his answer?

How can you show 3 tens?

Refine Reading and Writing Three-Digit Numbers

APPLY IT

Solve the problems.

1 Which are other ways to show 2 hundreds and 5 ones?

Ⓐ 200 + 5

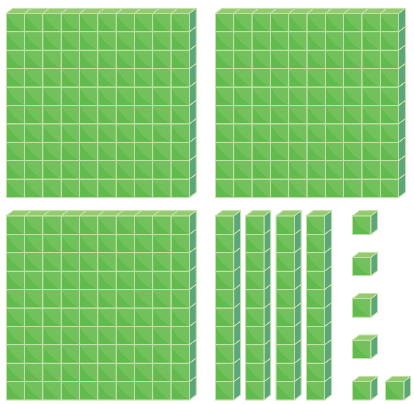
Ⓑ 25

Ⓒ 200 + 50

Ⓓ 205

Ⓔ 20 + 5

2 What does the model show? Fill in the chart and the blanks.



Hundreds	Tens	Ones

expanded form: .... + ... + ...

digits only: ....

3 A bear at the zoo weighs 360 pounds. Which are true about this number?

Ⓐ It is 300 + 6.

Ⓑ It is three hundred sixty.

Ⓒ It is 300 + 60.

Ⓓ It has 3 hundreds and 6 tens.

Ⓔ It is three hundred sixteen.

4 Write each number in expanded form.

275: ....

527: ....

5 Look at problem 4. Why do the 2, 5, and 7 have a different value in each number? Explain.

6 MATH JOURNAL

Here are clues about a three-digit number.

- The number has seven hundreds.
- The tens digit has a value of 30.
- The ones digit is less than any other digit in the number.

What could the number be? Explain.

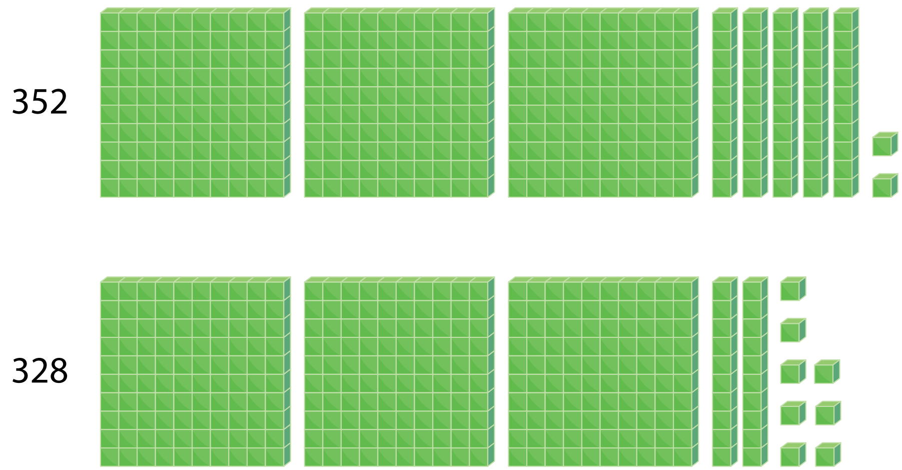
SELF CHECK Go back to the Unit 3 Opener and see what you can check off.

Explore different ways to understand comparing three-digit numbers.

There is a contest at the school fair. Students guess how many jelly beans are in a jar. Bart guesses 352 and Diego guesses 328. Which number is less?

PICTURE IT

You can model the numbers with base-ten blocks.



MODEL IT

You can write the numbers as hundreds, tens, and ones.

$352 = 3$ hundreds $+ 5$ tens $+ 2$ ones

$328 = 3$ hundreds $+ 2$ tens $+ 8$ ones

Reviewing Shapes

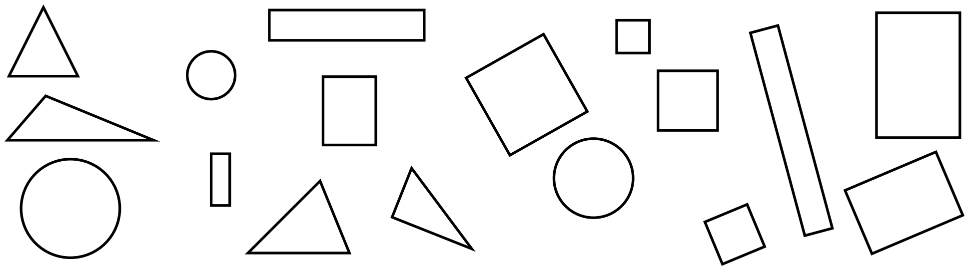
You have worked with flat and solid shapes in different ways. Use what you know to try to solve the problem below.

Learning Target

- Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

SMP 1, 2, 3, 4, 5, 6, 7

Macy makes this collage. Use the key to color each shape.



Key

circles - red
triangles - blue
squares - yellow
rectangles - orange

How many of each shape does she use?

TRY IT Make a graph to show how many of each shape she uses.

Math Toolkit
- graph
- pencil or crayons

6				
5				
4				
3				
2				
1				
	circles	triangles	squares	rectangles

CONNECT IT

1 LOOK BACK

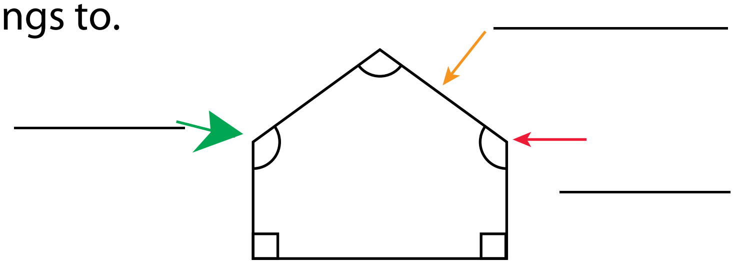
How many of each shape (circles, **triangles, squares, rectangles**) are in Macy's collage?

Circles ________
Triangles ________
Squares ________
Rectangles ________

2 LOOK AHEAD

The number of **sides, vertices** (corners), and **angles** tells what group a shape belongs to.

a. Label the shape:



b. The shape formed by two sides at an angle is a vertex. How many vertices does this shape have? ____________

c. A **quadrilateral** is a shape with 4 sides, 4 vertices, and 4 angles. Name a quadrilateral shape:

Practice Recognizing and Drawing Shapes

Study the Example showing how to name shapes and describe shapes. Then solve problems 1–5.

EXAMPLE

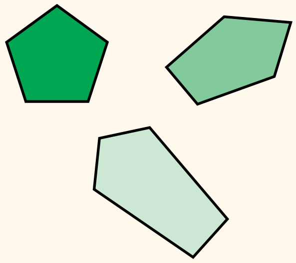
Quadrilaterals have 4 sides, 4 angles, and 4 vertices.


square

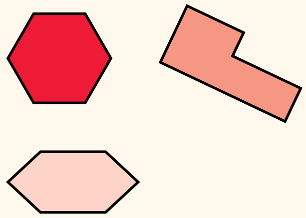

rectangle


rhombus

Pentagons have 5 sides, 5 angles, and 5 vertices.

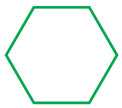


Hexagons have 6 sides, 6 angles, and 6 vertices.

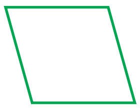


1 Look at the shapes below. Fill in the chart to name and describe each shape.

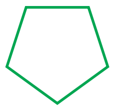
Shape A



Shape B



Shape C



Shape	Shape Name	Sides	Angles	Vertices
A				
B				
C				

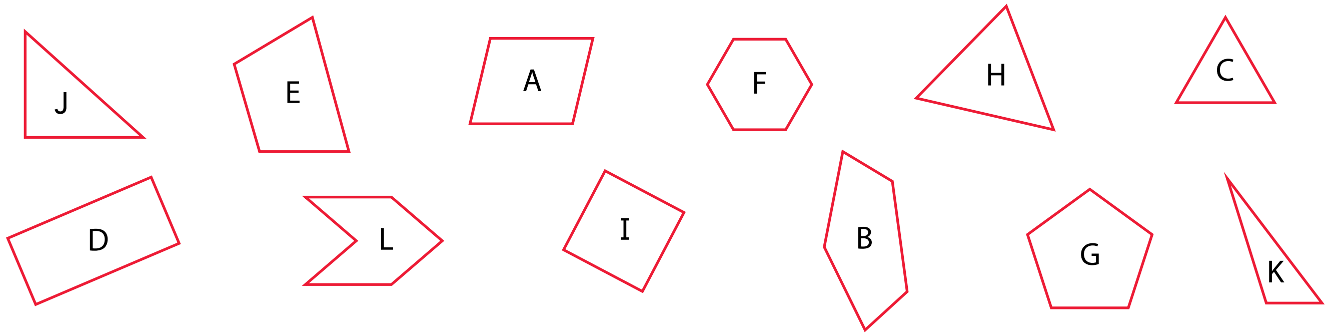
Vocabulary

angle one of the corners of a shape where two sides meet.

vertex the point where two rays, lines, or line segments meet to form an angle.

Use what you just learned to solve these problems.

4 Look at the number of sides, angles, and vertices of each shape below.



Sort the shapes. Write each shape's letter in the correct column.

Triangles	Quadrilaterals	Pentagons	Hexagons

5 Which describes all quadrilaterals?

Ⓐ all sides the same length

Ⓑ 5 sides and 5 vertices

Ⓒ 4 sides and 4 angles

Ⓓ 4 sides and 4 square corners

6 Explain two ways in which a triangle and a rectangle are different.

2 Draw two different shapes that each have 3 sides. Then write the name for shapes with 3 sides.

Shape name: ....

3 Draw two different shapes that each have 6 angles. Then write the name for shapes with 6 angles.

Shape name: ....

4 Draw two different shapes that each have 5 vertices. Then write the name for shapes with 5 vertices.

Shape name: ....

5 Fill in the blanks. Use the words in the box.

a. .... quadrilaterals have 4 vertices.

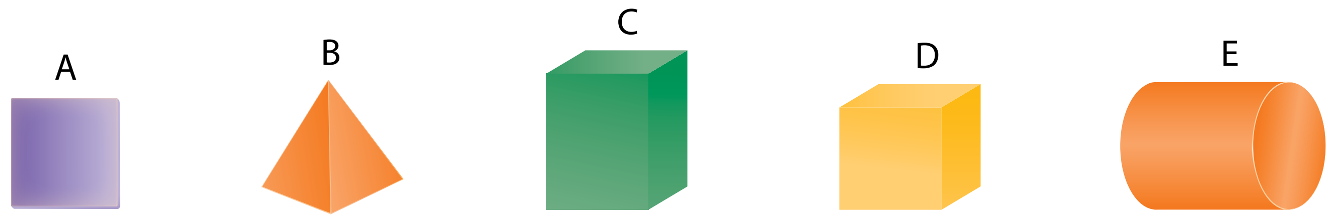
b. .... quadrilaterals have 5 angles.

c. .... quadrilaterals have sides the same length.

Some
No
All

Explore different ways of recognizing cubes.

Which shape is a cube? Tell how you know.

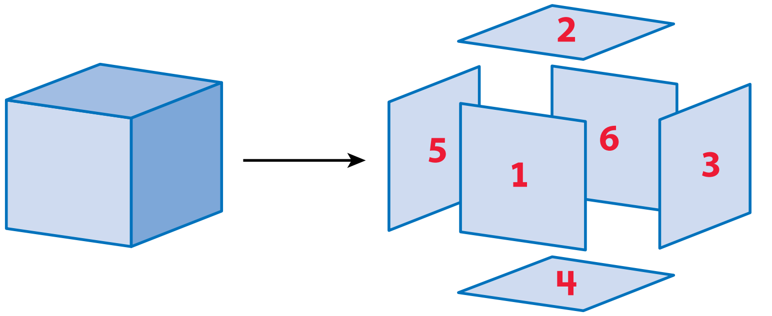


PICTURE IT

A **cube** has six faces.

Each face is a square.

You can count the number of square faces.



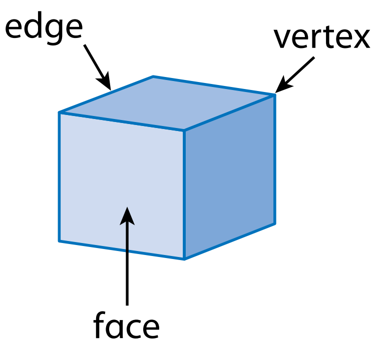
PICTURE IT

Cubes have edges, vertices, and faces.

Each face is a square, and all of the squares are the same size.

An **edge** is formed where two faces come together.

A vertex is formed where three edges come together.



CONNECT IT

Now you will use the problem from the previous page to help you understand naming and describing cubes.

1. Look at the first **Picture It**. How many faces does a cube have? ....

2. Draw any face of a cube.

3. Which shape on the previous page is a cube? ....

4. Why is Shape C on the previous page not a cube?

5. Pick up a cube. How many edges does a cube have? How many vertices?

   A cube has .... edges and .... vertices.

6. **REFLECT**

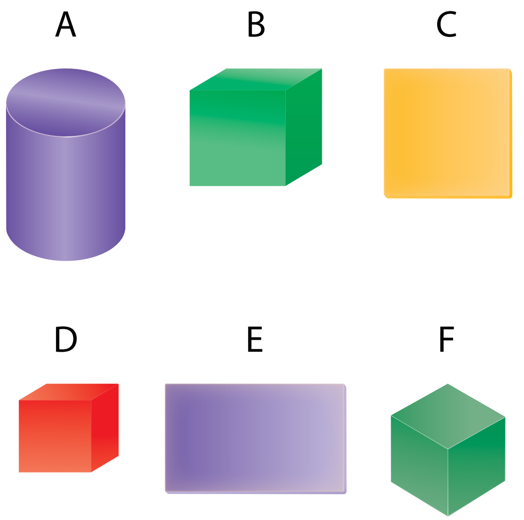
   Look back at your **Try It**, strategies by classmates, and the **Picture Its**. Which models or strategies do you like best for identifying cubes? Explain.

   ....

   ....

   ....

4 Sort the shapes. Write the letter in the correct column.

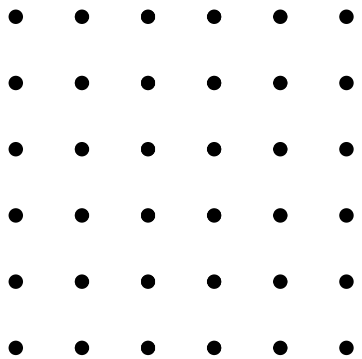


Cube	Not a Cube

5 Marisol stores blocks in a shoe box. Is a shoe box usually a cube? Explain why or why not.

6 **MATH JOURNAL**

Draw a shape that has between 3 and 6 sides. Use the dots below. What is the name of your shape? Explain how you know.



SELF CHECK Go back to the Unit 5 Opener and see what you can check off.

JCPS NTI Grade 2 Pc_bgl e Packet #3

Grade 2 Reading

Student At-Home Activity Packet

This At-Home Activity Packet is intended for a two-week period, and it includes lessons that your student may complete across more than one day.

Most lessons can be completed independently. However, there are some lessons that may benefit from the support of an adult. If there is not an adult available to help, don't worry! Just skip those lessons. A teacher will be in touch soon and your student can ask for help.

Encourage your student to do the best they can with this content. The most important thing is that they continue to work on their reading!

Flip to see the Grade 2 Reading activities included in this packet!

Word Learning Routine

Read the *Word Learning Routine* together. Keep it handy—you'll need it later!

Use the following steps to figure out unfamiliar words. If you figure out what the word means, continue reading. If not, then try the next step.

1. **Say the Word or Phrase Aloud.**

   Circle the word or phrase that you find confusing. Read the sentence aloud.

2. **Look Inside the Word or Phrase.**

   Look for familiar word parts, such as prefixes, suffixes, and root words. Try breaking the word into smaller parts. Can you figure out a meaning from the word parts you know?

3. **Look Around the Word or Phrase.**

   Look for clues in the words or sentences around the word you don't know and the context of the paragraph or selection.

4. **Look Beyond the Word or Phrase.**

   Look for the meaning of the word or phrase in a dictionary, glossary, or thesaurus.

5. **Check the Meaning.**

   Ask yourself, "Does this meaning make sense in the sentence?"

Lesson 18
Explaining How Images Support Text

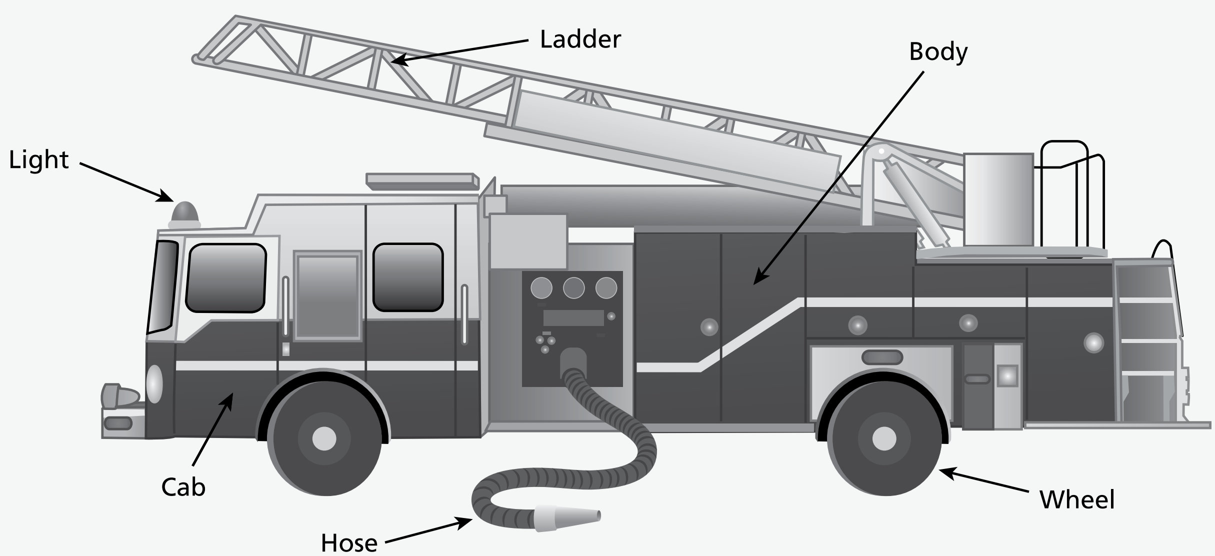
Read the page 11. Complete the graphic organizer chart on page 12.

Learning Target **Looking at the pictures that go with a text will help you better understand what you read.**

Read When you read, pictures and other **images** can be as important as words. They can **support,** or help explain, information in the text. For example, **diagrams** are drawings that show the different parts of something. They can also show how something works.

Read the sentences. Then look at the diagram. How do they work together to help you understand the parts of a fire truck?

The driver of a fire truck sits in the cab. A ladder and a hose are connected to the main part of the truck. The hose is long and can stretch far from the truck.



Think Look again at the page about the fire truck. Fill in the chart to tell what you learn from the sentences and the diagram.

What the Text Tells	What the Diagram Shows

Talk The sentences and the diagram of the truck help you understand the parts of the fire truck. Talk with a partner about how the diagram makes the sentences easier to understand.

Academic Talk

Use these words to talk about the text.

- **support**
- **diagrams**
- **images**

Read *Inclined Plane*. Complete the <u>graphic organizer chart</u> and the <u>short response writing</u> on pages 14 and 15.

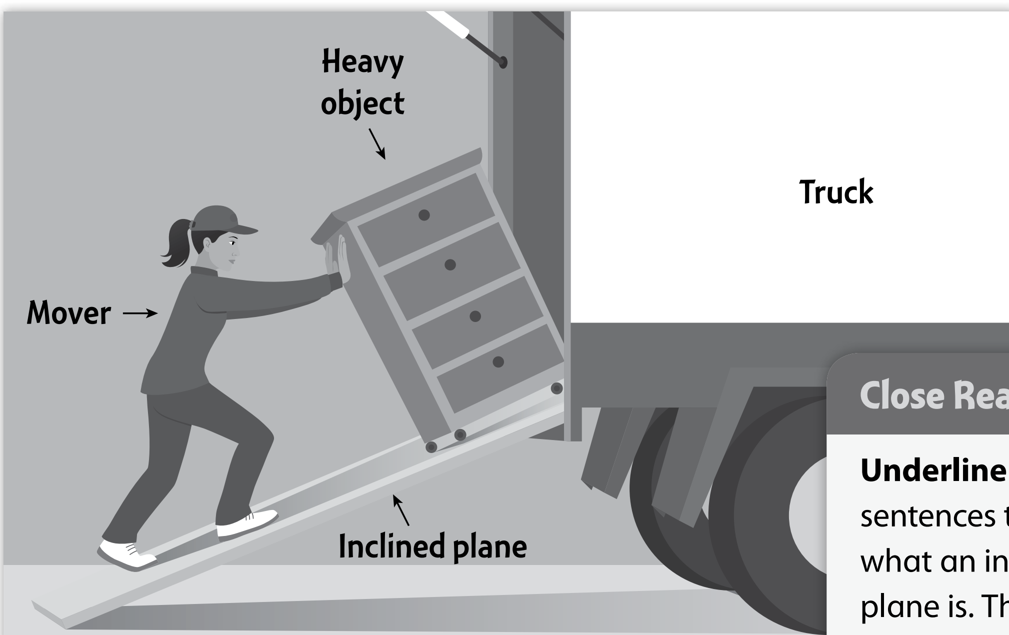
The Inclined Plane

by Sandra Brody

1 Many years ago, people had a problem. How could they easily move heavy objects without lifting them? The answer to the problem was the inclined plane.

2 An inclined plane is a flat surface that creates a ramp. This ramp makes a smooth climb from a lower place to a higher place. Inclined planes let people move heavy objects more easily. They can push the objects instead of lifting them.

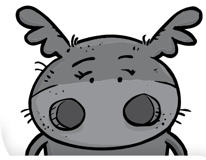
3 Today, we use inclined planes all the time. Wheelchair ramps are one example. Loading ramps for moving trucks are another. Boat ramps are another.



Close Reader Habits

Underline the two sentences that tell you what an inclined plane is. Then **circle** the inclined plane on the diagram.

Explore **How does the diagram of an inclined plane help you better understand the information in the article?**



As I reread the text, I will look at the diagram to help me understand.

Think

1 Read the article again. Fill in the chart to show how the text and the diagram work together.

What the Text Tells	What the Diagram Shows

Talk

2 Reread paragraph 3. What are inclined planes used for? What other reasons can you think of for using an inclined plane?

Write

3 **Short Response** Look again at the diagram. How does it help you understand how an inclined plane works? Write your answer in the space on page 302.

HINT How does the diagram show what you read about in paragraph 2?

Write **Use the space below to write your answer to the question on page 299.**

The Inclined Plane

3 **Short Response** Look again at the diagram. How does it help you understand how an inclined plane works?

HINT How does the diagram show what you read about in paragraph 2?

Lesson 10

Simple and Compound Sentences

Introduction

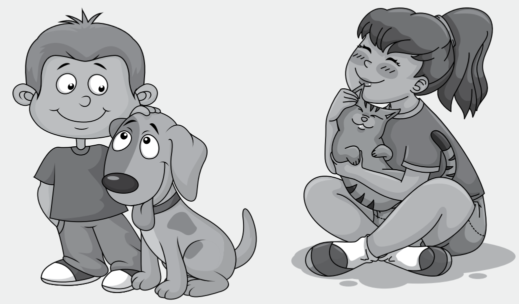
A **sentence** is a group of words that tells a complete thought.

- A **simple sentence** has one subject and one predicate.

subject predicate
Many people love pets.

- A **compound sentence** is two simple sentences joined together by a word such as *or, and,* or *but.*

simple sentence simple sentence
Luis likes dogs, **but** Helen likes cats.



Guided Practice

Write a joining word to complete each compound sentence.

and	but	or

HINT Place a comma before the joining word.

1. Helen feeds her cat Leo __________ she plays with him.
2. Leo likes chicken __________ he likes fish better.
3. Leo naps on a chair __________ he sleeps in his bed.
4. Helen's sister wants a snake __________ Dad does not like snakes.
5. He likes turtles __________ he loves frogs.
6. Leo might like a frog __________ he might scare it.

Independent Practice

Choose the correct way to join the two simple sentences.

1 Anna got a frog. She put it in a tank.

- **A** Anna got a frog and, she put it in a tank.
- **B** Anna got a frog, and, she put it in a tank.
- **C** Anna got a frog, she put it in a tank.
- **D** Anna got a frog, and she put it in a tank.

2 The frog eats many things. It does not like vegetables.

- **A** The frog eats many things, but, it does not like vegetables.
- **B** The frog eats many things, but it does not like vegetables.
- **C** The frog eats many things, it does not like vegetables.
- **D** The frog eats many things but, it does not like vegetables.

3 Leo will watch the frog quietly. He will meow at it.

- **A** Leo will watch the frog quietly or, he will meow at it.
- **B** Leo will watch the frog, quietly or he will meow at it.
- **C** Leo will watch the frog quietly, or he will meow at it.
- **D** Leo will watch the frog quietly, he will meow at it.

Underline the two simple sentences in the compound sentence. Circle the joining word.

4 Helen picks up Leo, and she takes him away.

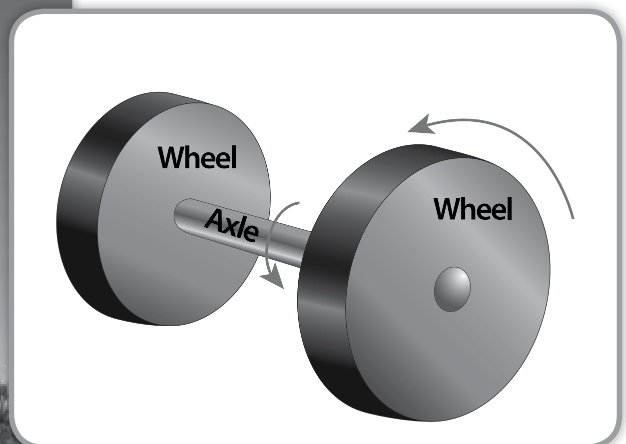
Read

Read *Wheels and Axles.*
Answer questions 1-4 on pages 19-20.

Genre: Science Article

Wheels and Axles

by Ed Green



1 A simple machine has few or no moving parts. One kind of simple machine is a wheel and axle. A wheel and axle can help move people or objects from one place to another.

2 Wheels and axles are all around you. Cars and bicycles have wheels and axles. A skateboard has them. Even a Ferris wheel is really just a big wheel and axle!

3 This simple machine has a large wheel. It also has a rod, called an axle. The axle goes through the center of the wheel. When the axle is turned, the wheel also turns.

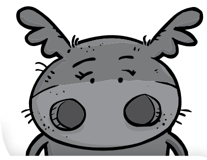
Close Reader Habits

How does a wheel and axle work? **Put a box around** the paragraph that tells how it works. **Circle** labels on the diagram that show the two parts of this machine.

Think

1 Which sentence from the passage does the diagram help to explain?

- **A** "A wheel and axle can help move people or objects from one place to another."
- **B** "Wheels and axles are all around you."
- **C** "Cars and bicycles have wheels and axles."
- **D** "The axle goes through the center of the wheel."



After I reread the text, I'll look at the diagram. It will tell me more about what I've read.

2 How does the diagram add to what the author tells us?

- **A** It shows that the machine can have two or more axles.
- **B** It shows that the axle must be long and heavy.
- **C** It shows that wheels and axles turn in the same direction.
- **D** It shows that many things around us have wheels and axles.

Write

3 The article says that wheels and axles can help move people or objects from place to place. What does this mean?

HINT Look at the article for examples of things that use wheels and axles.

Write **Use the space below to write your answer to the question on page 301.**

Wheels and Axles

4 **Short Response** How does this article help you understand how wheels and axles work? Use one detail from the diagram and one detail from the text to support your answer.

Check Your Writing

- ☐ Did you read the question carefully?
- ☐ Can you say the question in your own words?
- ☐ Did you use proof from the text in your answer?
- ☐ Are your ideas in a good, clear order?
- ☐ Did you answer in full sentences?
- ☐ Did you check your spelling, capital letters, and periods?

Read *Levers and Pulleys*. Answer questions 1-10 on pages 25-28.

Read

Genre: Science Article

Levers and Pulleys

by Julian Green

WORDS TO KNOW

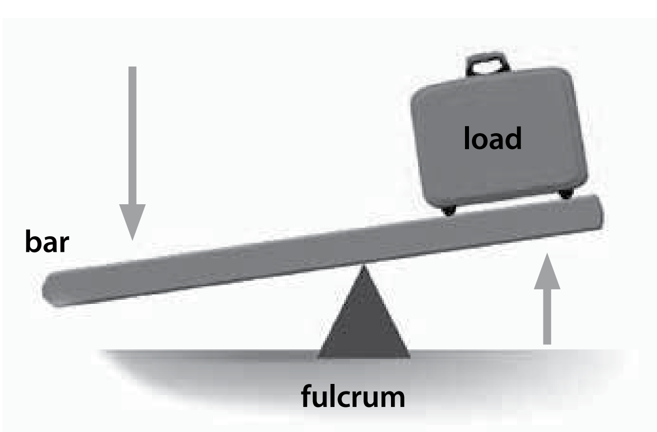
As you read, look inside, around, and beyond these words to figure out what they mean.

- **motor**
- **seesaw**

1 What is a machine? You might think it's something that has a motor. But a machine is any tool that helps us move things. Two simple machines are levers and pulleys.

2 A lever is made of a solid bar and a fulcrum. The fulcrum is the spot that the bar rests on. It is close to the object you are lifting. When one end of the bar goes down, the other end goes up, like a seesaw. If one end of the bar is longer than the other, it can be used to lift an object. The object is called the *load*. With a long, strong lever, you can lift really heavy loads.

Using a Lever

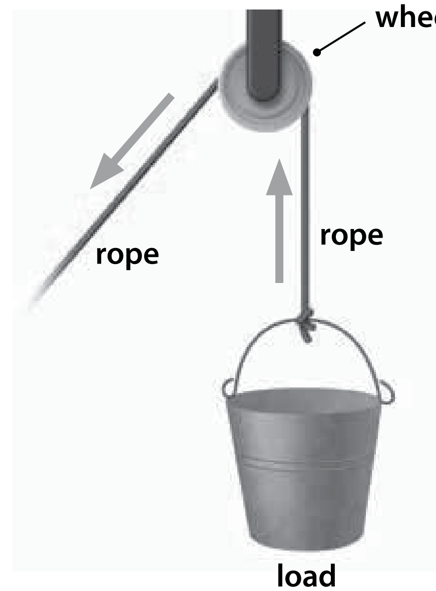


This boy uses a lever to lift a heavy rock.

3 A pulley is another kind of machine. It can also be used to lift a load. It is made of a rope and a wheel. The rope passes over the wheel. When you pull down on one end of the rope, the other end goes up. If something is tied to the rope, it goes up, too. You might have window blinds that work this way.

4 Machines like these have been used for thousands of years. Many of today's biggest machines are still based on levers and pulleys.

Using a Pulley



A crane uses a pulley to lift heavy cargo.

Think Use what you learned from reading “Levers and Pulleys” to respond to these questions.

1 This question has two parts. Answer Part A. Then answer Part B.

Part A
Which of the following **best** tells what a “machine” is?

A anything that has a motor
B a tool that helps us move things
C tools made with wheels and fulcrums
D anything used to lift heavy loads

Part B
Write the words that name two simple machines.

motor lever fulcrum pulley load pivot

____

____

2 Look at the the diagram of the seesaw on page 304.
What does the bar rest on?

A a wheel
B the load
C the fulcrum
D the ground

3 What do the diagrams of a lever and a pulley in the article show?

A how to make objects easier to move

B how to have fun with a simple machine

C how to use a rope to lift something

D how to use a bar to move something

4 Look carefully at the picture showing a person moving a rock. What does it show about using a lever to lift something?

A The center of the bar should rest on the fulcrum.

B The bar should be long and very heavy.

C The fulcrum should be closer to the person.

D The fulcrum should be closer to the load.

5 How do the text and the diagrams help you understand the meaning of “load”?

____

____

____

6 How does the diagram of the pulley help you understand how to use a pulley?

A It shows how to attach the object to the rope.

B It shows how pulling down on the rope lifts the object.

C It shows how fast the wheel has to turn.

D It shows how hard a person needs to pull.

7 Write the parts below under "pulley" or "lever." One part will be used twice.

- rope
- bar
- load
- wheel
- fulcrum

pulley	lever

Write How are levers and pulleys used to move things?

8 **Plan Your Response** Look again at the article. Think about the steps you would follow to use each tool. Make a list of the steps.

9 **Write an Extended Response** Explain how levers and pulleys are used to move things. Use your list and information from both the article and the diagrams in your answer.

10. **Learning Target**

How does looking at the pictures that go with a text help you better understand what you read?

Read the passage. Then answer the questions 1-5 that follow it on pages 31-32.

The Big Balloon Blow-Up: Making a Gas to Fill a Balloon

by Tina Frank

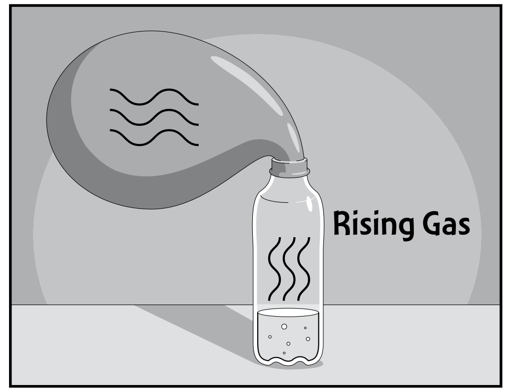
It's fun to blow up balloons. You've probably done it many times. And you used your breath to do it. But this time, you'll fill up a balloon without using your breath. You will make a gas that blows up the balloon. Let's get started.

What You Will Need

- a balloon
- about 2 ounces of water (You don't need much!)
- 1 drinking straw
- a small soft-drink bottle
- 1 teaspoon of baking soda
- the juice from 1 lemon

What to Do

1. Stretch out the balloon a few times. This will make it easier to blow up.



2. Pour the water into the bottle.

3. Add the baking soda to the water. Stir it around with the straw. Make sure the soda mixes with the water.

4. Pour the lemon juice into the bottle.

5. Pull the balloon over the mouth of the bottle. Do this as fast as you can. You won't have much time.

6. Watch what happens!

What Happened?

1 Your balloon should have filled up on its own. How did this happen? Lemon juice and baking soda are very different. Lemon juice is an acid. Baking soda is a base. Mixing them causes them to change. This is called a chemical reaction.

2 Adding the lemon juice to the baking soda makes a gas. This gas is called carbon dioxide. Your body makes the same gas when you breathe.

3 The gas in the bottle is very light. It rises up into the balloon. The gas can't escape, so it pushes on the balloon. The gas blows up the balloon!

Go On

1 What should you do after you stir the baking soda into the water?

A Fill the balloon with some of the gas.

B Put the balloon on the top of the bottle.

C Add the lemon juice to the bottle.

D Add 2 more ounces of water to the baking soda.

2 What makes the gas form in the bottle?

A the water and air from the balloon

B the lemon juice and water in the bottle

C the water mixing with the baking soda

D the lemon juice mixing with the baking soda

3 Why is it important to put the balloon on the bottle as fast as you can?

A so nothing in the bottle will spill out

B so the gas cannot get loose into the air

C so all the things in the bottle mix together

D so no one breathes the gas from the bottle

4 How does the picture help you understand what happens after you complete step 5?

A It shows how the gas rises up into the balloon.

B It shows how to mix the water and baking soda.

C It shows how quickly the balloon fills up.

D It shows how much lemon juice to add.

5 In step 3, you add baking soda to the water. Then what do you do?

Draw a picture. Show what else you must do in step 3.

Now write a sentence that tells about your picture.