

# Perimeter and Area Unit

4<sup>th</sup> Grade

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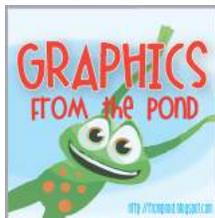
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**Credits:**



# Table of Contents

To The Teacher	4
Standards	5
All About This Unit	6
Content Vocabulary & Definitions	9
Pre-Assessment	16
Student Pre-Assessment Checklist	18
Daily Warm-Ups	19
Student Tracking Sheet	29
Exit Tickets	30
Exit Ticket Checklist	38
Daily Lessons	39
Assessment	85

# TO The Teacher

Thank you for purchasing this resource! Within it you will find a complete unit for teaching the fourth grade standards for perimeter and area including pre-assessment, content vocabulary, daily warm-ups and exit tickets, daily lessons with student activities, and a post assessment.

While this unit is laid out over a six day time span do not feel that you must rigidly stick to the timeline. As a teacher you know what is best for your students, and should follow your gut, as some classes may require more time to reach understanding of a concept.

To save on ink and decrease prep time, every page of this unit is created in black and white. To create a more colorful unit print or copy on color paper.

# Standards

## TEKS

**4.5D** solve problems related to perimeter and area of rectangles where dimensions are whole numbers

## CCSS

**4.MD.A.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*

# ALL ABOUT This Unit

This unit is made up of unique elements that can be used independently or together to provide a complete unit of math instruction.

## **Content Vocabulary**

Vocabulary for this perimeter and area unit is included in a few forms.

- Word wall cards make it easy to add your content vocabulary to your word wall
- The word and definition list make a great reference for student math notebooks and teachers alike
  - This list is included completed as well as with blank areas for definitions and examples
- Double-sided word and definition cards are great for review and small group remediation

## **Pre-Assessment and Student Standard Checklist**

To be used as an informal assessment to check students' prior knowledge as well as determine any misconceptions. The data that you gather from this pre-assessment can be recorded on the Student Standards Checklists and used to set student learning goals, form small groups, or partner students based on ability. Checklists fit 11 students per page.

# ALL ABOUT This Unit

## DAILY WARM-UPS

Six days of half-page daily warm-ups are provided along with answer keys. Each day has two standards-based question for students to think through their learning. A student tracking sheet is also included for students to record their own grow and glow areas. To save paper you may choose to project the warm up each day and have students complete their work in math notebooks.

## EXIT TICKETS

Six days worth of exit tickets and answer keys, with two questions each, are included two to a page for easy copying. Each of the questions is based on how that standard is tested, providing a test bridge and exposing students to test style language. This serves to build familiarity with standardized testing without overwhelming students.

Exit tickets can be checked as a class, or by the teacher. A checklist of questions is included to track how students are doing on their exit tickets.

## ASSESSMENT

An end of unit assessment is included to check for student mastery on the perimeter and area standards included. This assessment is meant to be used informally. While students should do their best work, it is best to not place too much importance on the test.

# DAILY LESSONS

Six daily lessons are included in this unit. Each lesson includes:

- Guiding question(s)
- Objectives
- List of necessary materials
- Overview of the lesson
- Student activity sheets when applicable
- Suggestions for small group activity

**DAY 1** Pre-assessment and Making Measurements

**DAY 2** Finding the Perimeter of Rectangles

**DAY 3** Finding Missing Sides

**DAY 4** Finding the Area of a Rectangle

**DAY 5** Finding Missing Sides

**DAY 6** Assessment

# Content Vocabulary

Vocabulary for this Perimeter and Area unit is included in a few forms.

- Word wall cards make it easy to add your content vocabulary to your word wall
- The word and definition list make a great reference for student math notebooks and teachers alike
  - This list is included completed as well as with blank areas for definitions and examples
  - TIP: print/copy definition list at 80% to fit perfectly in math notebooks
- Double-sided word and definition cards are great for review and small group remediation
  - To complete these cards print, fold along the dotted line with the word and definition on the outside, then tape or glue to secure the card.

# area

the surface or space found within a set of lines

area of a rectangle can be found by multiplying length times width

---

# perimeter

the distance around the outside of a shape

perimeter of a rectangle can be found by adding all the sides

---

# length

the measurement of the longer side from one end to another

---

# width

the measurement of the shorter side from one end to another

---

# Perimeter and Area Vocabulary

<b>area</b>	the surface or space found within a set of lines area of a rectangle can be found by multiplying length times width
<b>perimeter</b>	the distance around the outside of a shape perimeter of a rectangle can be found by adding all the sides
<b>length</b>	the measurement of the longer side from one end to another
<b>width</b>	the measurement of the shorter side from one end to another
<b>dimensions</b>	the measureable distances of the length and width

# Length

the measurement of the longer side from one end to another

# Width

the measurement of the shorter side from one end to another

# dimensions

the measureable distances of the length and width

# Answer Key

**1** Cole is measuring to find out how many feet of fencing he will need to fence his backyard. Is he looking for the perimeter or area of the yard?

**perimeter**

**2** Estrella is buying a rug for her living room. She wants to know how much room the rug will take up. Is she looking for the perimeter or area?

**area**

**3** What is the perimeter of a rug that is 30 feet long and 10 feet wide?

**80 feet**

**4** Gracie is framing a picture that is 15 inches tall and 8 inches wide. What will be the perimeter of the frame?

**46 inches**

**5** A rectangular pool has a perimeter of 28 feet. If the pool is 10 feet long, how wide is it?

**24 feet**

**6** Henry is sewing a fabric border on a square quilt. If the length of the quilt is 48 inches, how much fabric will he need to complete the border?

**192 inches**

**7** A baking dish is 9 inches wide and 12 inches long. How many square inches is the baking dish?

**96 square inches**

**8** A concert poster is 3 feet tall and 2 feet wide. How much of a wall will it cover?

**6 square feet**

**9** A green mat is 30 inches long and has a surface area of 48 inches. How wide is the mat?

**6 inches wide**

**10** A square box fan has a side length of 20 inches. What is the surface area of the box fan?

**400 square inches**



# DAILY WARM-UPS

Six days of half-page daily warm-ups are provided along with answer keys.

Each day has two standards-based questions for students to think through their learning.

A student tracking sheet is also included for students to record their own grow and glow areas.

To save paper you may choose to project the warm up each day and have students complete their work in math notebooks.

Name \_\_\_\_\_

### perimeter

What is the perimeter of a rectangle that is 12 inches long and 8 inches wide?

### Area

A pig pen is 14 feet long and ten feet wide. How much room do the pigs have?

Name \_\_\_\_\_

### perimeter

What is the perimeter of a rectangle that is 12 inches long and 8 inches wide?

### Area

A pig pen is 14 feet long and ten feet wide. How much room do the pigs have?

# DAILY WARM-UP Answer Key

Name \_\_\_\_\_

Perimeter &  
Area  
DAY 2

## Perimeter

What is the perimeter of a rectangle that is 12 inches long and 8 inches wide?

**40 inches**

## Area

A pig pen is 14 feet long and ten feet wide. How much room do the pigs have?

**140 square feet**

Name \_\_\_\_\_

Perimeter &  
Area  
DAY 2

## Perimeter

Find the perimeter of the rectangle.



**44 feet**

## Area

A coffee table is 4 feet long and two feet wide. How much room is there on the top of the table to rest things?

**8 square feet**

Name \_\_\_\_\_

# PERSONAL DAILY WARM-UP TRACKING SHEET

	<b>Perimeter</b>	<b>Area</b>
<b>Day 1</b>		
<b>Day 2</b>		
<b>Day 3</b>		
<b>Day 4</b>		
<b>Day 5</b>		
<b>Day 6</b>		

# Exit Tickets

Six days worth of exit tickets and answer keys, with one question each, are included two to a page for easy copying.

Each of the questions is based on how that standard is tested, providing a test bridge and exposing students to test style language. This serves to build familiarity with standardized testing without overwhelming students.

Exit tickets can be checked as a class, or by the teacher. A checklist of questions is included to track how students are doing on their exit tickets.

**Exit Ticket**  
**Day 1****Name** \_\_\_\_\_

Mrs. Campos walks around the perimeter of her school's square playground every day during recess. Each side of the playground is 42 feet long.

What is the perimeter of the playground in feet?

- a. 84 feet
- b. 168 feet
- c. 126 feet
- d. 1,764 feet

perimeter and area

**Exit Ticket**  
**Day 1****Name** \_\_\_\_\_

Mrs. Campos walks around the perimeter of her school's square playground every day during recess. Each side of the playground is 42 feet long.

What is the perimeter of the playground in feet?

- a. 84 feet
- b. 168 feet
- c. 126 feet
- d. 1,764 feet

perimeter and area

# Exit Ticket Answer Key

<b>Day 1</b>	<b>B</b>
<b>Day 2</b>	<b>A</b>
<b>Day 3</b>	<b>C</b>
<b>Day 4</b>	<b>D</b>
<b>Day 5</b>	<b>A</b>
<b>Day 6</b>	<b>B</b>



# DAILY LESSONS

Six daily lessons are included in this unit.

Each lesson includes:

- Guiding question(s)
- Objectives
- List of necessary materials
- Overview of the lesson
- Student activity sheets when applicable
- Suggestions for small group activity

**DAY 1** Pre-assessment and Making Measurements

**DAY 2** Finding the Perimeter of Rectangles

**DAY 3** Finding Missing Sides

**DAY 4** Finding the Area of a Rectangle

**DAY 5** Finding Missing Sides

**DAY 6** Assessment

# Pre-Assessment & Making Measurements

## Guiding Question

How can I show my prior knowledge of finding the perimeter and area of a rectangle?

## Materials

- Pre-assessment
- Anchor chart paper
- Items to measure
- Rulers with inches and centimeters
- Length measurement hunt

## Learning Objective

We will use our prior knowledge of finding area and perimeter.

We will use a ruler to measure to the nearest inch and centimeter.

**L** Begin by giving students the pre-assessment as a check for prior understanding.

**e** As a class, take a look at a ruler as the measurement tool\*\* and discuss what you use it for and parts of the ruler. Together, go step by step to show how you use the ruler to find the length or width of an object. Begin by showing students to line up the tick mark on the ruler with the end of the object instead of the end of the ruler and using the proper unit to measure based on directions given. Students will practice using a ruler to measure to the nearest inch or centimeter with the length measurement hunt. Due to the differences caused by printing this resource I have included a suggested answer key based on the measurements taken off of my printed version. Answers may vary slightly based on your printer.

## Small Group Ideas

Using a ruler have students practice measuring 2D rectangles on paper to the nearest inch or centimeter. If students are ready, use these measurements to find the perimeter of the rectangles.

\*\*If your standard or test provides a math chart for students I would recommend using the ruler and information from it to familiarize students.\*\*

Name \_\_\_\_\_ **Length Measurement Hunt**

Search the room for cards with rectangles to measure. Use your measurement tool to record the length of the specified side.

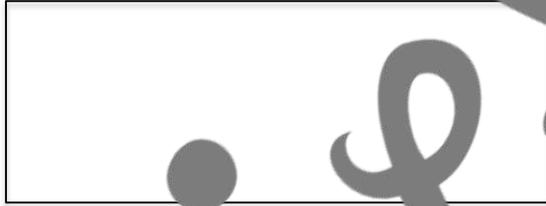
<b>Rectangle Number</b>	<b>Length (Record the unit)</b>
<b>1</b>	
<b>2</b>	
<b>3</b>	
<b>4</b>	
<b>5</b>	
<b>6</b>	
<b>7</b>	
<b>8</b>	
<b>9</b>	
<b>10</b>	

1



Length to the closest inch.

2



Length to the closest inch.

3



Length to the closest centimeter.

4



Length to the closest inch.

5



Length to the closest centimeter.

6

Length to the closest inch.

7

Length to the closest inch.

8

Length to the closest centimeter.

9

Length to the closest inch.

10

Length to the closest centimeter.

# Answer Key Length Measurement Hunt

\*\* Based on your printer these measurements may differ slightly.\*\*

Rectangle Number	Length (Record the unit)
1	5 inches
2	3 inches
3	15 centimeters
4	3 inches
5	13 centimeters
6	7 inches
7	4 inches
8	10 centimeters
9	6 inches
10	11 centimeters

# Answer Key

**1** Maggie is trying to figure out how much icing she will need to frost a cake. Does she need to find the area or perimeter of the cake?

**area**

**2** Jay is walking around the football field. If he wants to know the distance he walks will he find area or perimeter?

**perimeter**

**3** Gabby is framing a door in her room. If the door is 6 feet tall and 3 feet wide, how much molding will she need?

**18 feet**

**4** A wall is 8 feet tall and 20 feet long. How much border would you need to surround the wall?

**56 feet**

**5** A painting has a frame that is 96 inches in perimeter. If the frame is 30 inches tall, how wide is it?

**18 inches**

**6** A square rug has tassels all the way around it. The length of the rug is 8 feet, how many feet of tassels are there?

**32 feet**

**7** A backyard is 40 feet long and 30 feet wide. What is the area of the backyard?

**1,200 square feet**

**8** A book is eight inches tall and four inches wide. What is the area of the cover?

**32 square inches**

**9** It takes 120 square foot tiles to cover the floor of a bedroom. If the room is 12 feet long, how wide is it?

**10 feet wide**

**10** A square cake has sides 40 cm long. What is the area of the cake?

**1,600 cm**