

Change to 90 minutes

LESSON 1

🕒 90 minutes

Understand Place-Value Relationships

What should I understand about the math?

- Place-value understanding is a fundamental skill particularly used in estimation, the algorithms for the four basic operations.
- Build on **Enlarged to match other text** the value to realize that the relationship between digits in a multi-digit number holds even as the number extends into millions.

What will students learn in this lesson?

PRIOR LEARNING FOR STUDENTS Deleted extra head

- understood that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.
- understood that the numbers 100, 200, 300, 400, 500, 600, 700, 800, and 900 refer to 1, 2, 3, 4, 5, 6, 7, 8, or 9 hundreds (and 0 tens and 0 ones).

Mathematical Standards in This Lesson Deleted extra head

TEKS

6.8.B: model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes

6.8.C: write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers

6.8.D: determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers

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FUTURE CONNECTIONS FOR STUDENTS Deleted extra head

- will recognize that in a multi-digit whole number, a digit in one place represents 10 times as much as it represents in the place to its right.
- will recognize that in a multi-digit whole number, a digit in one place represents $\frac{1}{10}$ of what it represents in the place to its left.

PS

6.1.B: use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, and evaluating the process and the reasonableness of the solution

6.1.D: communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate

Manipulatives & Materials

Per student

- Horizontal Number Lines (-20 to 20)
- Vertical Number Lines (-10 to 10)

Per group

- 12 Foam Base-Ten Flats
- 14 Foam Base-Ten Rods
- 10 Foam Base-Ten Units
- 1 Plastic Base-Ten Cube

HMH PER

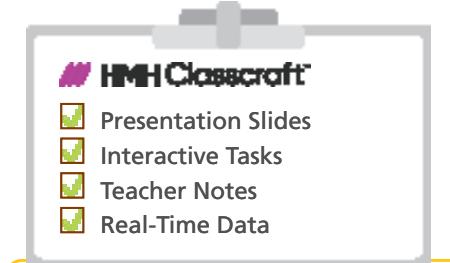
- Base 10 Blocks

Vocabulary

- place value
 - period
- Use the WTL routine within the lesson, where it makes sense to support all students.

What does this lesson look like in my classroom?

FIRST, launch the Classcraft Essential Session to teach the lesson.



TEACHERS present the session.



STUDENTS partic

Change to 90 minutes

🕒 90 minutes

Add (45 minutes)

Learning Goal: I can use a place-value chart to compare the values of different digits and justify the comparison

Add (45 minutes)

SESSION 1 (45 MINUTES)

Get Ready

⑯ Learning Goal routine

Learn

⑯ Spark Your Learning: Three Reads routine

Assess

⑯ Quick Check routine

⑯ Learning Goal routine

- ⑯ Task 1: Collect and Display routine
- ⑯ Task 2: Compare and Connect routine
- ⑯ Task 3: Compare and Connect routine
- ⑯ Review Spark Your Learning

+ Turn & Talk routines

USE the Program Activity Report to differentiate instruction.



Teacher-Led Small-Group Activities

🕒 15 minutes

1-3 rotations per lesson as time allows

Collaborative Groups

Independent Practice

🕒

15

minutes

1-3 rotations

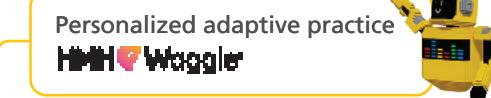
per

lesson

as

time

allows



Personalized adaptive practice

Homework

Extension

* Find all resources for differentiation and practice on page 23.

LESSON 1 PROBLEM SOLVING

🕒 90 minutes

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Mathematical Standards in This Lesson



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1F: derive meaning from a variety of auditory multimedia sources to build and reinforce concepts and language acquisition

3.C: use high-frequency words, contextual factors, and word analysis such as Greek and Latin prefixes, suffixes, and roots and cognates to comprehend content-area vocabulary in text.

3.G: demonstrate reading comprehension of content-area texts by retelling, paraphrasing, summarizing, and responding to questions

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Learning Objective: Describe the value of a digit.

Language Objective: Show how to represent the value of a digit by connecting ideas about various representations.

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Per student

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What does this lesson look like in my classroom?

FIRST, launch the Classcraft Essential Session to teach the lesson.



- Presentation Slides
- Interactive Tasks
- Teacher Notes
- Real-Time Data



TEACHERS present the session.



STUDENTS participate using books or devices.

🕒 90 minutes

Learning Goal: I can use a place-value chart to compare the values of different digits and justify the comparisons.

SESSION 1 (45 MINUTES)

Get Ready

⑯ Learning Goal routine

Learn

- ⑯ Spark Your Learning: Three Reads routine
- ⑯ Task 1: Collect and Display routine
- ⑯ Task 2: Compare and Connect routine
- ⑯ Task 3: Compare and Connect routine
- ⑯ Review Spark Your Learning

Assess

- ⑯ Quick Check routine
- ⑯ Learning Goal routine

+ Turn & Talk routines



Teacher-Led Small-Group Activities

Independent Practice

🕒 15 minutes
1-3 rotations per lesson as time allows

Collaborative Groups

Homework

Extension

Personalized adaptive practice
HMH Waggle

* Find all resources for differentiation and practice on page 23.

LESSON 1 PROBLEM SOLVING

🕒 45 minutes

The version with Problem Solving

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LESSON 1

(L) 45 minutes

Graph Linear Equations, Inequalities, and Systems in Two Variables

Smaller font size and leading for longer title so they will never go to 3 lines

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Begin Essential Session

Get Ready

Learning Goal

(🕒 15 minutes)

STUDENT CONTENT

I can use a place-value chart to compare the values of different digits and justify the comparisons.

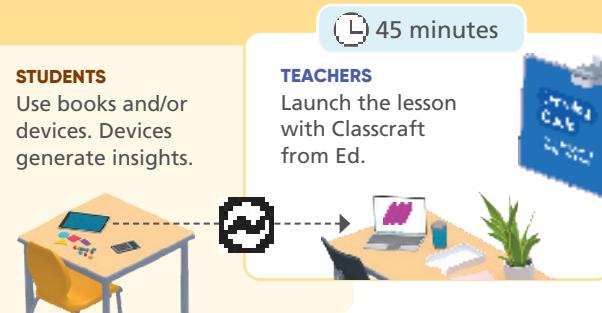
Rate yourself on this learning goal:

- I don't understand.
- I need more practice.
- I've got it.

TEACHER GUIDE

START the session by using the **Learning Goal** routine to assess students' confidence with the lesson objective.

1. Read aloud the **I Can** statement. Give students time to think about what the statement means.
2. Clarify the meaning of the words *compare* and *justify* by explaining that *compare* means to find similarities and differences, and *justify* means to explain or show mathematical reason, to support student understanding.
3. Students will individually assess their content knowledge based on the **I Can** statement.
4. Review student responses to see how they rate themselves for today's learning.
5. Tell students they will revisit the **I Can** Statement at the end of the session.



Student Edition p. 7

Learn

Spark Your Learning

(🕒 15 minutes)

Manipulatives



Student Edition p. 7

STUDENT CONTENT

Some museums keep collections of insect specimens as a historical record. Experts keep track of inventory, inspect specimen cases for damage, and check that labels are set correctly. How can you show the number of beetles in the museum insect inventory?

Museum Insect Inventory	
Insect	Number
beetles	1,240
wasps	19,725
butterflies	11,100

TEACHER GUIDE

FIRST, review the problem and the **Spark Discussions** table on the following page. This prepares you to know what students are asked to do and what they might do when solving the problem.

NOW, use the **Three Reads** routine to support students in understanding the problem.

1. **First Read:** Students read or listen to the problem with a focus on the context of the problem. Discuss the problem with students to be sure they understand the context.

ASK What is the problem about? **Possible answer:** the number of beetles in the museum insect inventory

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TEACHER GUIDE, CONTINUED

2. **Second Read:** Reread the problem with a focus on what the quantities represent.

ASK What numbers are important? Why are they important? **1,240**; **Possible answer:** because that is the number of beetles in the museum inventory

3. **Third Read:** Reread the problem for the third time with a focus on the question being asked: *How can you show the number of beetles in the museum insect inventory?*

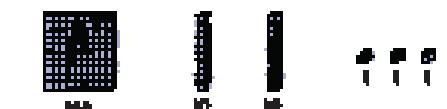
Have students brainstorm possible strategies and engage in independent think time before solving the problem.

NEXT, have students solve the problem. As students solve the problem, monitor their responses and use the **Spark Discussions** table to provide common-error support and to encourage students who used correct strategies to share their thinking.

Spark Discussions

Encourage students to be mindful of how many digits are in the number they are representing; sometimes one or more of the digits might be zero. When a number contains a zero or zeros, the zero or zeros can be between digits or at the end of the number.

Addressing Common Errors Students might incorrectly represent the number. They may not understand how to represent numbers that contain 0 as a digit. Use the scripting to provide support for this error.



ASK Which digit is in the ones place-value position in the number 1,240? **0**

ASK How many small units should you use to show the number of ones? **0**

ASK Which digit is in the tens place-value position in the number 1,240? **4**

ASK How many rods should you use to show the number of tens? **4**

ASK Which digit is in the hundreds place-value position in the number 1,240? **2**

ASK How many flats should you use to show the number of hundreds? **2**

ASK Which digit is in the thousands place-value position in the number 1,240? **1**

ASK How many large cubes should you use to show the number of thousands? **1**

Learn | Essential Sessions

Learn | Essential Session

 Spark Discussions, continued

Deepening Student Thinking If students represented 1,240 correctly, then use the scripting to help students explain their thinking.



ASK How can you represent 1,240? **Possible answer:** I can draw quick representations of base-ten blocks.

ASK How can you show the value of each digit? **Possible answer:** I can draw one big square and label it *T* for 1,000, 2 smaller squares for 2 hundreds or 200, and 4 lines for 4 tens or 40.

ASK Did you draw a picture for the ones position? Explain.

Possible answer: No, because the digit is 0 in the ones place-value position.

 Spark Your Learning, continued

STUDENT CONTENT

Turn & Talk Can you show the number of beetles in a different way? How do the different ways compare?

Possible answer: Yes, I can draw 12 same-size squares for 12 hundreds and 4 lines for 4 tens. They show the same number using different base-ten blocks.

TEACHER GUIDE

FINALLY, have students complete the **Turn & Talk** routine. Have students share their responses. Select students who have used various strategies and tools to share with the class how they solved the problem. Have them discuss why they chose a specific strategy or tool so they can connect their representation with how it describes the value of the digits.

TEACHING STRATEGY
Emergent Bilinguals: Supporting All Language Learners

Project students' work so the class can discuss the different representations. Allow students to use drawings and manipulatives to represent the value of the digits in the number and support their language when comparing different methods. Students may create labels or draw arrows between different forms to show their understanding of the similarities and differences between the forms. Guide students to see similarities among the different representations and discuss the efficiency of the different representations.

Use the Supporting All Language Learners chart to let students choose the language scaffolding that they need.

Language Proficiency Level

Scaffolding Examples

↗ Pre-Production/Beginning Allow students to represent their methods with drawings or manipulatives. Students may choose to point to numbers and place values and reference their drawings or manipulatives to show similarities.

Students may represent the number 1,240 using different methods with manipulatives or by drawing their answers using base-ten blocks. A student may use 12 flats to represent 1,200 and point to the 12 in the number 1,240.

➡ Intermediate Students may reference their representations of different numbers with drawings or manipulatives. Students may choose to point to numbers and place values while speaking and use their drawings or manipulatives to represent their answers.

Students may represent the number 1,240 using different methods with manipulatives or by drawing their answers using base-ten blocks. A student might use 12 flats to represent 1,200 and point to the 12 in the number 1,240 and use words like *same* and *hundreds* to demonstrate their understanding of representing place value.

➡ High Intermediate/Advanced Students reference drawings or manipulatives while speaking about their methods and their similarities and differences.

Students may represent the number 1,240 using different methods with manipulatives or by drawing their answers using base-ten blocks. A student might use 12 flats to represent 1,200 and point to the 12 in the number 1,240 and speak in complete sentences to compare the two representations.

Learn | Essential Sessions

Task 1

15 minutes

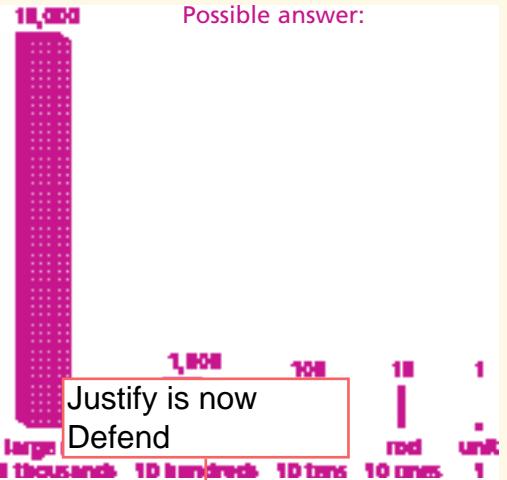
STUDENT CONTENT

PROBLEM SOLVING

 **PS Construct Arguments:** The museum has 11,100 butterfly specimens. Describe the relationship between the values of the digits in the thousands place and the hundreds place in 11,100.

Represent and describe ten thousands, thousands, hundreds, tens, and ones.

Possible answer:



Defend: *Defend*: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus et. anno text

B. What do you notice about the size of each representation?
Possible answer: Each representation is ten times the size of the previous representation.

Student Edition p. 8

TEACHER GUIDE

START the task by making sure the students understand the problem.

 **PS** Next, have students use the **Process Standard: Construct Arguments**.

Remind students how base-ten blocks can be used to show the quantities numerals represent. Have them explain the relationships between the place values so that they can conceptualize greater numbers.

ASK How does one flat compare to one large cube?
Possible answer: 10 flats make up 1 large cube.

ASK How do you think one large cube will compare to the next representation? **Possible answer:** 10 large cubes make up 1 large rod.

ASK What is the value of the large rod block? **Possible answer:** 10,000

ASK What is the pattern unit in the shapes of the representations? **Possible answer:** cube, rod, flat

ASK What is the next place value to the left of 10 thousands? **Possible answer:** 100 thousands

ASK Based on the pattern of the shapes you have seen so far, what would the shape of the representation of 100 thousands be? **Possible answer:** a large flat

ASK How would the representation for 100 thousands compare to the representation for 10 thousands? **Possible answer:** 100 thousands make up 1 large flat.

NOW, have students solve the problem.

Defend: *Defend*: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus et.

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Blue mountain swallowtail butterfly

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Task 1, continued

STUDENT CONTENT, CONTINUED

- C.** Describe the relationship between the values of the digits in the thousands place and hundreds place in 11,100. **Possible answer:** The value of the digit in the thousands place is ten times the value of the digit in the hundreds place.

**TEACHING STRATEGY**
Common Error

Have students describe the relationship between a 1 and the 1 to its right in the number 11,100. Have them act out the problem. Display the sentence: The value of the digit in the thousands place is _____ times the value of the digit in the hundreds place. Hand the student at least 12 hundreds flats while you are holding a thousands cube. **ASK** How many flats must you give me to trade for this thousands cube? Then have the student explain why and ask what number should go on the blank line to complete the displayed sentence. Have the student extend their thinking by looking and comparing greater value digits in the number 11,100. Point to the 1 in the 10 thousands place. **ASK** How many times the value of the 1 in the thousands place is the value of the 1 in the ten thousands place?

TEACHER GUIDE, CONTINUED

THEN, have students use the **Collect and Display** routine to discuss their thinking.

During pair work, circulate and listen to student discussion. Write common or important words, phrases, sketches, or diagrams on a visual display for students to see. Refer back to the display during whole class discussion to help students communicate ideas more precisely.

TEACHING STRATEGY
Emergent Bilinguals

Have students act out the relationship between the 1 in the thousands place and the 1 in the hundreds place. Let some students represent hundreds and some students represent thousands. Ask students to determine how many would need to be in each group so that the values are equal. Make connections between the location of the students and the place values in the number.

Depth of Knowledge Leveled Questions

If time allows, use these questions to progress students through different levels of understanding.

Level 1: Recall

What is the place-value position of each digit in the number 11,100?
Possible answer: The digit 1 is in the ten thousands place, the digit 1 is in the thousands place, the digit 1 is in the hundreds place, the digit 0 is in the tens place, and the digit 0 is in the ones place.

Level 2: Basic Application of Skills & Concepts

How can you show the number 11,100 using base-ten blocks?
Possible answer: 1 large rod, 1 cube, 1 flat

Level 3: Strategic Thinking and Complex Reasoning

What is the relationship among place-value positions?
Possible answer: A digit in one place has ten times the value of the same digit in the place to its right.

Students get opportunities to work in Depth of Knowledge 4 in the Module Project.

Learn | Essential Sessions

Task 2

PROBLEM SOLVING

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15 minutes

STUDENT CONTENT

 Use a Problem-Solving Model:

Makani is making kites in the shape of a parallelogram. He wants to make 10 kites. Makani is trying to figure out how much fabric he needs to construct the kites. Each parallelogram has a height of 2.5 feet and a base of 3 feet.

 Analyze:

What information do you have? What are you trying to figure out?

I know the shape of each kite and the dimensions. I also know that Makani wants to make 10 kites. I am trying to figure out how much total fabric is needed to make the 10 kites, which would be

[NEW Photo or Art: Parallelogram shaped kite]

New Problem Solving layout

 Plan:

How can you use the information you have to solve this problem? I can use the formula for the area of a parallelogram and the dimensions of each kite to find the area of one kite. Then, I can multiply by 10 to find the total area, or the amount of fabric Makani needs.

 Solve:

Use your plan to solve this problem. Show your work.

$$A=bh$$

$$A=(3)(2.5)=7.5 \text{ "ft"}^2$$

$$\text{Total Area}=10A=10(7.5)=75 \text{ "ft"}^2$$

One kite needs 7.5 square feet of fabric. Multiply by 10 to find that Makani needs 75 square feet for all 10 kites.

 Justify:

Explain why your answer in Part C makes sense.

The area of a single kite should be between $3 \times 2 = 6 \text{ ft}^2$ and $3 \times 3 = 9 \text{ ft}^2$. So, the area of 10 kites should be between $10 \times 6 = 60 \text{ ft}^2$ and $10 \times 9 = 90 \text{ ft}^2$. Since my answer of 75 ft^2 is between these areas, it is reasonable.

Student

Run in is now purple to match SE

TEACHER GUIDE

 Have students use the **Process Standard: Use a Problem-Solving Model** to solve a problem in this task.

START the task by making sure students understand the problem. The **Analyze** step is an important first step in solving a problem. The **Three Reads** routine can help support students in analyze and make sense of the problem.

ASK What is the problem about?

Makani is making kites and needs to know how much fabric is needed to construct 10 kites.

ASK What numbers are important? Why are they important? 2.5, 3, and 10; The first two numbers, 2.5 and 3, are the dimensions of the parallelogram-shaped kites. Ten is the total number of kites Makani wants to make.

ASK Reread the problem for the third time. What question being asked?

How much fabric does Makani need to make 10 kites.

NEXT, have students make a **Plan**. Student plans should explain how they will use the information they have to determine the solution.

NOW, have students **Solve** the problem.

THEN, have students **Justify** their solution. Student justifications should include evidence and reasoning to support their solution.

 TEACHING STRATEGY
Common Error

If students use the place-value name of the digit with the greater value when comparing the values of the two digits, have them represent the value of the digit 5s with base-ten blocks above the columns of the place-value chart. Have students explain how many models for one place value are needed to create the model to its left. Students should recognize that each place value is 10 times the value of the place to its right as long as the digits they are comparing are the same.

Task 2, continued



Evaluate Process: How effective was your strategy to solve this problem? What might you do differently.

My strategy makes sense because you need to find the area of one kite first and then multiply by the number of kites to find the total area. One thing I might do differently is add some extra area so there is some extra fabric to allow for better construction or to account for mistakes or scraps of fabric that can't be used after cutting. I would want to figure out how much extra fabric might be needed for these things.

TEACHER GUIDE, CONTINUED

FINALLY, have students **Evaluate Process**. Have students use the **Compare and Connect** routine to discuss their thinking.

Encourage students to compare their strategy with another student and identify improvements or changes they might make to their process.

 TEACHING STRATEGY
ELPS

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TEACHER GUIDE

Connect to Prior Learning **FINALLY**, have students use the **Turn & Talk** routine. Encourage students to share ideas about how they can use a place-value chart to identify the pattern in the periods. For students who need support, suggest they represent a number using base-ten blocks and then write the number in a place-value chart.

 TEACHING STRATEGY
UDL Support: Engagement

Have students work with a partner to explore the values of the digits placed in a place-value chart. They can use place-value charts already filled in or create their own. Instruct Partner 1 to point to two digits on the place-value chart. Next, Partner 2 points to the digit that has a greater value. Then, have the partners switch roles and repeat.

Learn | Essential Sessions

Begin Session 2

Task 3

(15 minutes)

Run in is now purple to match SE

STUDENT CONTENT

PS Use Structure: Yellow jacket wasps live in colonies that can contain up to 15,000 wasps, while bee colonies can have as many as 50,000 bees. How does the value of the digit 5 in 50,000 compare with the value of the digit 5 in 15,000?



Use the place-value chart to compare.

A. Show 15,000.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
1	5	0	0	0	0

The value of the digit 5 is 5,000.**B.** Show 50,000.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
5	0	0	0	0	0

The value of the digit 5 is 50,000.**C.** Which digit 5 has the greater value?The digit 5 in 50,000.**D.** The value of the digit 5 in 50,000 is 10 times the value of the digit 5 in 15,000.

TEACHER GUIDE

START the task by making sure the students understand the problem.

PS Next, have students use the **Process Standard: Use Structure**.

Remind students that a place-value chart is a way to display the digits of a number in their correct position and determine the value of the digit. It is important that they use the structure of the number to model its digits.

ASK How can you determine the value of the 5 in each number? **Possible answer:** I can determine the value by recording each number in each place-value chart and then looking at the value of each digit's place.

NOW, have students solve the problem.

ASK How does knowing that each place has a value that is 10 times the value of the place to its right help you compare the value of the digits 5? **Possible answer:** The digit 5 in 50,000 is one place to the left of the digit 5 in 5,000, so it is 10 times the value of the digit 5 in 5,000.

THEN, have students use the **Compare and Connect** routine to discuss their thinking.

After students have completed the task, have them discuss how they compared the value of the two digits when the digits were in different numbers. Point out to students that they had to use the structure of a number to make the comparison.

TEACHING STRATEGY
Common Error

If students use the place-value name of the digit with the greater value when comparing the values of the two digits, have them represent the value of the digit 5s with base-ten blocks above the columns of the place-value chart. Have students explain how many models for one place value are needed to create the model to its left. Students should recognize that each place value is 10 times the value of the place to its right as long as the digits they are comparing are the same.

(Student Edition p. 10)

Run in is now purple to match SE

Begin Session 2

Task 3, continued

STUDENT CONTENT

Turn & Talk What is another way you can compare the digits without using a place-value chart?

Possible answer: I know the position of the place values and that the value of each place represents a value 10 times the value of the place to its right, so I can write the name of the place.

TEACHER GUIDE

FINALLY, have students use the **Turn & Talk** routine. Encourage students to come up with a variety of ideas, including visual models and using the word form of the number.

TEACHING STRATEGY
Emergent Bilinguals

Students may demonstrate their understanding with drawings or base-ten blocks. Allow students to point or use gestures to make connections between the number, the place value chart, and their drawing or base-ten block representation. Allow students to reference their drawings and manipulatives to support their language about their method.

Review Spark Your Learning

(5 minutes)

(Student Edition p. 10)

TEACHER GUIDE

NOW, review **Spark Your Learning**.

ASK How would a place-value chart help you solve the problem?

Possible answer: I would draw a place-value chart for the periods Thousands, Hundreds, Tens, and Ones. Then in the row below the place-value positions, I would write the digit 1 in the first cell, 2 in the second cell, 4 in the third cell, and 0 in the last cell.

Use the feedback from student answers to inform your next steps in Differentiation and Practice.

Museum Insect Inventory	
Insect	Number
beetles	1,240
wasps	19,725
butterflies	11,100

How might you use a place-value chart to help you solve the problem?

TEACHING STRATEGY
Emergent Bilinguals

Group students and allow students who share the same home language to work together. Have each student show their method for representing the beetles. Have each student demonstrate a new method for representing the number of beetles. Encourage students to speak about what they changed and why. To support their language, students may demonstrate a different method with base-ten blocks or drawings rather than speaking.

Learn | Essential Sessions

Assess**Quick Check**

🕒 15 minutes

STUDENT CONTENT

1. What is the value of the digit 9 in the number 396,002?

The value of the digit 9 is 90,000.

2. How does the value of the digit 4 in 274,513 compare to the value of the digit 4 in 47,329?

The digit 4 in 47,329 has the greater value.

3. There are over 2,000 different species of jellyfish. The largest species have tentacles 200 feet long. How does the value of the digit 2 in 2,000 compare with the value of the digit 2 in 200?

The value of the digit 2 in 2,000 is 10 times the value of the digit 2 in 200.

4.  ELP\$ Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed eleifend pharetra tellus. Lorem ipsum doloramet.

▢ Student Edition p. 11

TEACHER GUIDE

NOW, use the **Quick Check** to determine students' mastery of the lesson objectives. To measure all students' mastery of the language objective, ask them to use manipulatives to represent the value of a digit.

See the Language Development Resource Guide for a sample answer.

**TEACHING STRATEGY**
Emergent Bilinguals

Use similar scaffolds to those provided in the Emergent Bilinguals Teaching Strategy for Spark Your Learning to ensure the students have appropriate representing supports.

Have students use a drawing to show the value of each digit in a number. Have students compare their drawings of each number to determine the relationships of the place values within each number.

Learning Goal

🕒 15 minutes

STUDENT CONTENT

I can use a place-value chart to compare the values of different digits and justify the comparisons.

Rate yourself on this learning goal:

- I don't understand.
- I need more practice.
- I've got it.

TEACHER GUIDE

FINALLY, use the **Learning Goal** routine to assess students' confidence with the lesson objective.

- Share the I Can statement with students again. Ask students to assess their learning individually.
- Review the class results and discuss how the data changed from the beginning of the session.
- Use these results and other data from today to plan differentiated instruction and future learning.

End Essential Sessions

UP NEXT: Differentiation and Practice

HMH Program Activity Report

Gathered Insights generate Program Activity Report

**Additional Styles****STUDENT CONTENT**

If student content includes blue annotations, as shown below, use the `paraph` style `p_student_blue_note`. Answer boxes use the `object` style `wo_box`. Size can be adjusted as needed.

$$\begin{array}{r}
 3.2 \\
 \times 8 \\
 \hline
 \end{array}$$

← 8×2 tenths
 ← 8×3 ones
 ← 8×3.2

If student content has words or numbers set in red, green, or blue, use the following character styles: `student_text_blue`, `student_text_red`, `student_text_green`

STUDENT CONTENT

See below for bullet list after `p_body`.

- `ul_bullet_stu_nsa`
- `ul_bullet_stu`

1. See below for bullet list after `ol_number-student` or `ol_number-student_nsa`

- `ul_bullet_stu_indent_nsa`
- `ul_bullet_stud_indent`

2. See below for bullet list after `ol_number-student` or `ol_number-student_nsa`

- `ul_bullet_stu_indent_nsa`
- `ul_bullet_stud_indent`

`p_body_center``p_body anno_italic`

- A. `ol_alpha_sa`
- B. `ol_alpha_sa`
- C. `ol_alpha_sa`
- D. `ol_alpha_sa`

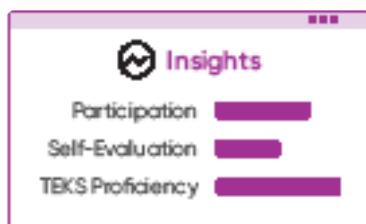
`wol_blank_inline` _____`p_handwriting` $\frac{2}{5}$
Fraction on a WOL $\frac{1}{8}$ **CHANGES PER MOD COLOR****PROBLEM SOLVING****PROBLEM SOLVING****PROBLEM SOLVING**

 Reporting

Differentiation and Practice

How can I use data to help me differentiate my instruction and practice?

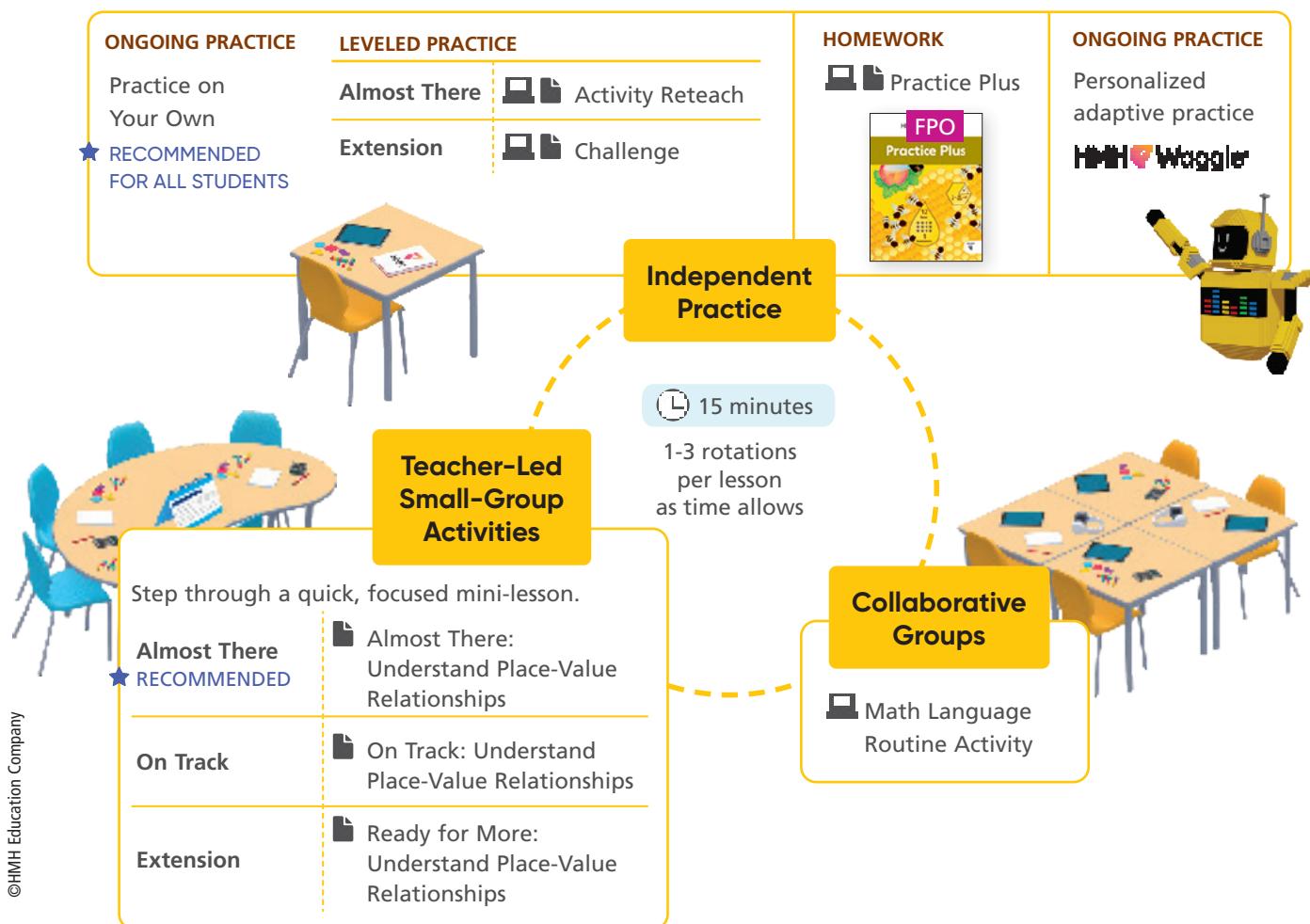
FIRST, use the Program Activity Report.



Review the data to determine a student's individual mastery of the Essential Session.

THEN, decide which students will best benefit from small-group instruction.

Work with additional groups as time allows. For students not currently working in teacher-led small-group activities, choose the best type of practice for them.



★ RECOMMENDED FOR ALL STUDENTS

Practice on Your Own

Assign these problems to your students to solve independently.

 Insights available from Assessment Report on Ed. Student Edition p. 12

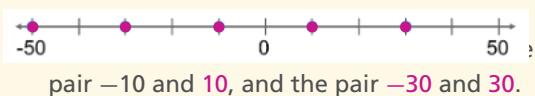
STUDENT CONTENT

1. Write the opposite of the integer.
 - A. The opposite of -6 is 6 .
 - B. The opposite of 2 is -2 .
 - C. The opposite of 17 is -17 .

2.  Use Structure: Tiana runs 3 miles and records how long it takes to complete the run and the change in time from the previous week.
 - A. Last week, Tiana's time spent running decreased by 2 minutes. What integer could represent this change? -2
 - B. This week, Tiana's time spent running increased by 1 minute. What integer could represent this change? 1
 - C. What integer represents the opposite of "increase by 1 minute"? -1

3.  Model with Mathematics: The transactions on a bank account are listed as $-\$15$, $\$10$, $-\$4$, and $\$15$.
 - A. What does a transaction of $-\$4$ represent? Choose the correct words to complete the sentence.
 - B. 4 was **spent** or **withdrawn**.
 - C. Which pairs of transactions are opposites? Explain. $-\$15$ and $\$15$; They are the same distance from 0 , but on different sides of 0 on the number line.

4. Use the integers 10 , -50 , 30 , -10 , and -30 .
 - A. Plot the five integers on the number line.



- pair -10 and 10 , and the pair -30 and 30 .
5. Two integers are opposites of each other. One integer is 3 units to the right of 1 on a number line. What are the two integers? 4 , -4

6. Rona starts at the base of a hill that has an elevation of 25 feet below sea level, and then climbs to the top of the hill which has an elevation of 25 feet above sea level.

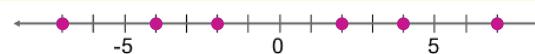
- A. Represent these elevations as integers.
Below sea level: -25 feet and above sea level: 25 feet.
- B. How are they related? Choose the correct words to complete the sentence.
These integers are **opposites** because they are **the same distance** from 0 .

7. The low temperatures on three days are shown in the chart.

Monday:	-2°F
Tuesday:	4°F
Wednesday:	-7°F

- A. What are the opposites of the three temperatures? 2°F is the opposite of -2°F , -4°F is the opposite of 4°F and, 7°F is the opposite of -7°F .

- B. Graph the temperatures and their opposites on the number line.



8.  Reason: Explain how to use a number line to find the opposites of the integers that are 4 units away from -6 .

Possible Answer: First, count [4] units away from $[-6]$ in both directions and identify the two numbers. Then, find the numbers that are the same distance from $[0]$ as the two numbers, but on opposite sides of $[0]$.

9. Atoms are made of tiny particles called protons, neutrons, and electrons. Protons and neutrons are in the center of the atom, making up the nucleus. The electrical charges on the proton and electron are the same size but opposite. If a proton has a positive charge of 1 , what is the charge of the corresponding electron? -1

Practice On Your Own, continued

Item Guide

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1A, 1B, 1C	1	4.6.A	Task 2
2A, 2B, 2C	2	4.6.A	Task 1
3A, 3B	2	4.6.A & B	Task 3
4A, 4B	1	4.6.A	Task 2
5	1	4.6.A	Task 3
6A, 6B	2	4.6.A	Task 4
7A, 7B	1	4.6.A & B	Task 2
8	3	4.6.A	Task 3
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Rubric for Item 8

Points	Description
2	Response provides a complete and correct explanation of, or answer to, the question. Possible answer: First, count 4 units away from -6 in both directions and identify the two numbers. Then, find the numbers that are the same distance from 0 as the two numbers, but on opposite sides of 0 .
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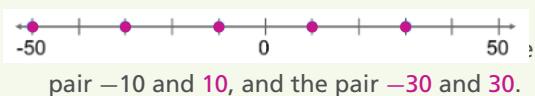
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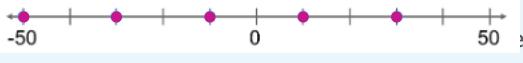
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 Student Edition p. 12

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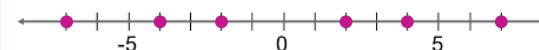
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