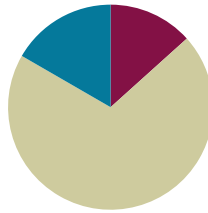


Lesson 18

Objective: Practice and solidify Grade 4 vocabulary.

Suggested Lesson Structure

■ Fluency Practice	(8 minutes)
■ Concept Development	(42 minutes)
■ Student Debrief	(10 minutes)
Total Time	(60 minutes)



Fluency Practice (8 minutes)

- Grade 4 Core Fluency Differentiated Practice Sets **4.NBT.4** (4 minutes)
- Draw and Identify Geometric Terms **4.G.1** (4 minutes)

Grade 4 Core Fluency Differentiated Practice Sets (4 minutes)

Materials: (S) Core Fluency Practice Sets (Lesson 2 Core Fluency Practice Sets)

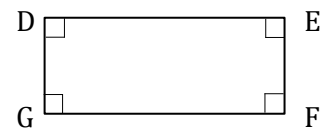
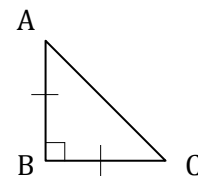
Note: During Module 7, each day’s Fluency Practice may include an opportunity for mastery of the addition and subtraction algorithm by means of the Core Fluency Practice Sets. The process is detailed and materials are provided in Lesson 2. It is recommended these sets be sent home in the summer folder.

Draw and Identify Geometric Terms (4 minutes)

Materials: (S) Personal white board, protractor, ruler

Note: This fluency activity reviews Module 4 and prepares students for using geometric terms in today’s lesson.

- T: Use your protractor and ruler to draw a right, isosceles triangle.
 S: (Draw as shown to the right, though student pictures may vary.)
 T: Label vertices to identify the right angle as $\angle ABC$.
 S: (Label as shown to the right.)
 T: \overline{AB} and \overline{BC} are what types of lines?
 S: Perpendicular lines.
 T: Use your protractor and ruler to draw a rectangle $DEFG$.
 S: (Draw as shown to the right, though student pictures may vary.)



- T: What type of lines are \overline{DE} and \overline{FG} ?
- S: Parallel lines.
- T: Identify another pair of parallel lines.
- S: \overline{EF} and \overline{DG} .

Concept Development (42 minutes)

Materials: (S) 2 small envelopes or baggies containing cardstock cutouts of game descriptions (Template 1) and vocabulary cards (Template 3), math bingo card on cardstock (Template 2), timer (1 per group), summer folder

For the rest of today’s lesson, students play vocabulary games reviewing the major work of Grade 4. Consider opening the lesson with a game of bingo with the whole class and then having them play either bingo or one of the other games in pairs or groups of four, alternating the role of caller, using the cards provided. As was done yesterday, students might periodically move around the room selecting different partners and playing one of the four games, or they might stay in the same grouping for the duration of this practice.

After the session, store the instructions for the games and all materials in the summer folders for home use.

Problem Set


Please note that the Problem Set for Lesson 18 is math bingo and other games students play in class.

Student Debrief (10 minutes)


Reflection (3 minutes)

Before the Student Debrief, instruct students to complete the Reflection pictured to the right. Reflections are replacing the Exit Tickets in Topic D in order for students to have four days to think back on their learning and growth in Grade 4.

Lesson Objective: Practice and solidify Grade 4 vocabulary.

 **NOTES ON MULTIPLE MEANS OF ENGAGEMENT:**

Like yesterday’s fluency activities, these are games that students can play with family members to maintain skills over the summer. It may be appropriate to invite parents and siblings to learn and participate, perhaps at a math or parents’ night. Students may consider their game partner and make adjustments accordingly. For example, if played with a younger or older sibling, games may include math appropriate for siblings. Discuss with students how to best adapt the games for their personal summer experiences.

 **NOTES ON MULTIPLE MEANS OF REPRESENTATION:**

To accommodate English language learners during games such as Bingo and Concentration, rather than using all 24 words during the games, consider omitting some words to reduce the amount of reading.

Name _____	Date _____
1. Why do you think vocabulary was such an important part of fourth grade math? How does vocabulary help you in math?	
2. Which vocabulary terms do you know well and which would you like to improve on?	

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their Reflections before going over their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- Share your Reflection with a partner. After you have both shared, talk more about ways you might practice this summer and how to overcome difficulties with practicing.
- Which games did you most enjoy? Who might you play those games with during the summer?
- Which games were the most challenging? Did you enjoy the challenge?
- How might you modify the games to play with family and friends?
- How does vocabulary help you to communicate with the people who care about you, about your education, and about what happens in school?

Name _____ Date _____

1. Why do you think vocabulary was such an important part of fourth-grade math? How does vocabulary help you in math?

2. Which vocabulary terms do you know well, and which would you like to improve upon?

Bingo:

1. Players write a vocabulary term in each box of the math bingo game. Each term should be used only once. The box that says *Math Bingo* is a free space.
2. Players place the filled-in math bingo template in their mini-personal white boards.
3. One person is the caller and reads the definition on a vocabulary card.
4. Players cross off (or cover) the term that matches the definition.
5. *Bingo!* is called when 5 vocabulary terms in a row are crossed off diagonally, vertically, or horizontally. The free space counts as 1 box toward the needed 5 vocabulary terms.
6. The first player to have 5 in a row reads each crossed off word, states the definition, and gives a description or an example of each word. If all words are reasonably explained as determined by the caller, the player is declared the winner.

Math Jeopardy:

Structure: Teams or partnerships. Callers should prepare the game in advance.

1. The definitions are sorted into labeled columns by a caller: units, lines and angles, the four operations, and geometric shapes.
2. The first term directly below the heading has a value of \$100, the next \$200, and so on. The caller should make an effort to order the questions from easiest to hardest.
3. Player 1 chooses a column and a dollar value, for example, "I choose geometry terms for \$100." The caller reads, "The answer is..."
4. The players say the matching question, for example, "What is a quadrilateral?"
5. The first person to correctly state the question wins the dollar value for that card.
6. Play continues until all cards are used.
7. The player with the highest dollar value wins.

Concentration:

Structure: Teams or partnerships.

1. Create an array of all the cards face down.
2. Players take turns flipping over pairs of cards to find a match. A match is a vocabulary term and its definition. Cards keep their precise location in the array if not matched. Remaining cards are not reconfigured into a new array.
3. After all cards are matched, the player with the most pairs is the winner.

Math Pictionary:

Structure: Teams or partnerships.

1. A timer is set for 1 minute.
2. A vocabulary term is chosen from a bag by a player from Team 1, who draws an example as quickly as possible.
3. The player's teammate(s) tries to guess the vocabulary term. When the term is guessed, a new term is chosen by the same player. The process is repeated as many times as possible within the minute. Terms not guessed when the timer sounds go back in the bag.
4. A player from Team 2 repeats the process.
5. Teams count the number of words guessed. The team with the most words is the winner.

game descriptions

		Math BINGO!		

		Math BINGO!		

math bingo

A metric unit of measure equivalent to 1,000 grams.	A whole number greater than 1 whose only factors are 1 and itself.	An angle measuring less than 90 degrees.	Lines that intersect and form a 90° angle.
A whole number plus a fraction.	An angle that turns through $\frac{1}{360}$ of a circle.	The bottom number in a fraction that tells the number of equal parts in the whole.	A customary unit of measurement for liquid volume equivalent to 4 quarts.
A customary unit of measurement for liquid volume equivalent to 2 pints.	The answer to a multiplication problem.	A number leftover that can't be divided into equal groups.	A line through a figure such that when the figure is folded along the line, two halves are created that match up exactly.
Two lines in a plane that never intersect.	A triangle with at least two equal sides.	A whole number having three or more distinct factors.	A closed figure with 4 straight sides and 4 angles.
An angle measuring 90 degrees.	An angle with a measure greater than 90 degrees but less than 180 degrees.	Lines that contain at least 1 point in common.	A tool used to measure and draw angles.
The top number in a fraction that tells how many parts of the whole are selected.	A triangle that contains one 90-degree angle.	This special angle measures 180 degrees.	A closed figure with 3 straight sides of equal length and 3 equal angles.

vocabulary cards (page 1)

Kilogram	Prime Number	Acute Angle	Perpendicular Lines
Mixed Number	One-Degree Angle	Denominator	Gallon
Quart	Product	Remainder	Line of Symmetry
Parallel Lines	Isosceles Triangle	Composite Number	Quadrilateral
Right Angle	Obtuse Angle	Intersecting Lines	Protractor
Numerator	Right Triangle	Straight Angle	Equilateral Triangle

vocabulary cards (page 2)