



MISSISSIPPI

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Units & Lessons

MATHEMATICS

Grade 4

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Lesson 4: And the Winner Is...

Focus Standard(s): 4.NF.7

Standards for Mathematical Practice: SMP.3, SMP.5, SMP.6

Estimated Time: 45 minutes

Resources and Materials:

- Base Ten Blocks
- Chart Paper
- Index Card
- Markers
- Money (dollars, dimes, and pennies)
- Painter's Tape
- Sticky Notes
- Handout 1.2: Place Value Mat
- Handout 4.1: And The Winner Is....
- Handout 4.2: Comparing Decimals

Lesson Target(s):

- Students will compare two decimals to hundredths by reasoning about their size.
- Students will recognize that comparisons are valid only when the two decimals refer to the same whole.
- Students will record the results of comparisons with the symbols $>$, $=$, or $<$.
- Students will justify comparisons of two decimals to the tenths place or hundredths place.

Guiding Question(s):

- How can you use your understanding of place value to compare decimal fractions?
- How can various tools help you to compare decimal fractions?

Vocabulary

Academic Vocabulary:

- Decimal fraction
- Hundredths
- Inequality signs
- Tenths

Instructional Strategies for Academic Vocabulary:

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context
- Create pictures/symbols to represent words
- Write/discuss using the words

Note: Vocabulary instruction should be embedded into the lesson each day using the strategies suggested above.

Symbol

Type of Text and Interpretation of Symbol



Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level

✓

Assessment (Pre-assessment, Formative, Self, or Summative)

Instructional Plan

Understanding Lesson Purpose and Student Outcomes:

Students will learn to compare decimals using a variety of tools.

Anticipatory Set/Introduction to the Lesson:

Explain to students that they are almost ready for their own Olympic trials, but first must learn to compare decimals. Write 0.42 and 0.98 on the board. Have students talk with a partner about different ways to determine which number has a greater value.

Activity 1: Comparing Decimals Using a Place Value Chart

Provide students with a place value chart and dry erase marker. Review what each place is called. Ask students to write 0.42 in the appropriate location on the place value chart.

Point to 0.42

T: What is this number?

S: Forty-two hundredths

T: How many tenths?

S: 4

T: How many hundredths?

S: 2

T: What is this number again?

S: Forty-two hundredths

Point to 0.98 and follow the same procedure, asking students to write the number under 0.42.

T: When we are comparing numbers, how do we determine which is greater? Do we start from the left side or right side?

Show students how to write the comparison statement, reminding them how to write $>$, $<$, and $=$.

Complete this again with the numbers 1.32 and 5.3, reminding students that 5.3 is the same as 5.30 and addressing any misconceptions students may have.

Activity 2: Manipulative Mania

Explain to students that they have been using a number of tools and manipulatives this week to explore the world of decimal fractions, and they will learn to use those same tools to compare and order decimal fractions (SMP.5).

Place the following tools and manipulatives out for students to access: **Handout 1.2: Place Value Mat**, base ten blocks, money (dollars, dimes, and pennies), painter's tape, sticky notes, and chart paper for each group with the following displayed:

Place Value Chart		
Base Ten Blocks		
Money		
Number Line		
Comparison Statement		

Each student will also need a card from **Handout 4.1: The Winner Is...** Review the chart with the students, explaining that they must first use the manipulatives before drawing a pictorial representation of each value. Each team member must also be responsible for leading the group and recording at least one manipulative.

Actively monitor students working together in groups, making sure that students are stating the numbers correctly.

Possible prompting questions for scaffolding:

- Which number is in the ones place?
- Which number is in the tenths place?
- Which number is in the hundredths place?
- Which tool do you find most useful with this type of problem?
- Which tool do you find the most difficult to use for this problem?
- How do you read this number?
- What would these numbers look like as fractions?

Once all students have completed their charts, allow groups to participate in a Carousel Activity in which they rotate around the room with their country and check the work of their classmates. Each group should be given a different colored marker to make notes (SMP.3). Have them place a + in each box they feel is correct and a – with an explanation for the boxes they feel are incorrect. Allow students to fix their own chart if needed (SMP.6).

Reflection and Closing:

- ✓ Have students write one sentence on a notecard explaining why decimals are an essential part of the Olympics.

Homework

Provide students with **Handout 4.2: Comparing Decimals** to complete.

Handout 4.1: And the Winner Is...

During the 2012 Summer Olympics, Mitchell Watt jumped 8.16 meters and Greg Rutherford jumped 8.31 meters on the men's long jump. Who won the gold?



During the 2012 Summer Olympics, Brittney Reese jumped 7.12 meters and Elena Sokolova jumped 7.07 meters on the women's long jump. Who won the gold?



Team France reached 5.97 meters on the men's pole vault during the 2012 London Olympics. Team Germany reached 5.91 meters. Who won the gold?



Team USA reached 4.75 meters on the women's pole vault during the 2012 London Olympic Games. Team Russia scored 4.7. Who won the gold?



Handout 4.2: Comparing Decimals

Name: _____ Date: _____

1. Kayla explained to her math group that 0.13 is greater than 0.5 because 13 is greater than 5. Tony disagreed with Kayla. He stated that 0.5 is greater than 0.13 because 5 is greater than 3. Write your response to these statements on the lines provided.

2. Roman completed his homework and set it on the kitchen table. His twin brother, Rico, walked by and noticed that William wrote $0.4 > 0.48$. Rico told Roman he was incorrect. Which brother is right? Justify your answer on the line provided below.

Compare the following decimals. Use the symbols $>$, $=$, or $<$ to record your answers.

0.5 _____ 0.32

0.73 _____ 0.7

0.69 _____ 0.06

0.1 _____ 0.01

0.2 _____ 0.20

0.51 _____ 0.15

For training or questions regarding this unit,
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