

Lesson: Positive and Negative Numbers

TODAY'S LESSON: To become familiar with the relationship between positive and negative numbers, specifically on the number line.

CCSS The Number System, 6th Grade. (To understand that positive and negative numbers are used together to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.) 6.NS.5

Focus Lesson 1

"We have learned a lot about positive numbers. We have also learned about fractions and decimals. All of the numbers we've discussed are positive numbers. Today we are going to start learning about the existence of negative numbers and their relationship to positive numbers."

Begin the lesson by asking students to make the following connections. *"I would like you to think about temperature. We have heard that the temperature can be below zero. We have also heard that land may be below or above sea level. How can this be explained, when we know the meaning of zero?"*

The teacher asks the students to discuss with a partner these different situations. *"Today we are going to explore the number line with positive and negative numbers."* The teacher draws a number line on the board. The number line goes up to 10 and back to negative 10. The teacher thinks aloud and says, *"I am used to seeing a number line that starts at zero and goes up. This number line goes below zero. We can use both sides of the number line to find answers to problems."*

The teacher then writes the following example on the board: (-4 degrees F is greater than -6 degrees F). Thinking aloud, the teacher says, *"We can look at the number line to find whether this statement is true or false. We can find the answer like this."* Still thinking aloud, the teacher points and says, *"Here is negative 4 on the number line. It is below zero. That means it is a negative number. Here is negative 6. Negative 4 is closer to zero than negative 6. That means negative 4 IS greater than negative 6."*

Lesson: Positive and Negative Numbers (continued)

ROUND OF MATH DAILY 3

Focus Lesson 2

The teacher needs to hand out a list of problems. The teacher says, *"We are going to practice finding out whether each statement is true or false. You are going to get six different problems. You and a partner will decide whether each statement is true or false. We will then check these together as a class."*

The teacher then proceeds to hand out a list of six problems. The students should work with their partner to find out the answer to each problem. After the majority of pairs are finished, the teacher brings the class together again as a whole, and the teacher and students work through each problem.

Here are some possible problems:

- $-8 < 4$
- $0 > -10$
- $-2 > -9$
- $-3 < 4$

ROUND OF MATH DAILY 3

Focus Lesson 3

The teacher gives the following directions to the class:

"You are going to create a list of 10 problems for a classmate. Your problems will consist of positive and negative numbers. You will not only write the problem, but create a list of answers. I will check them over. Tomorrow, your partner will have to write $<$ or $>$ for each problem. Then they will get your list of answers to check their work."

The teacher then gives the students time to write their 10 problems and answers. The next day, the teacher hands out the problems to different students. The students solve them and then check the answers.

STUDENT SHARING