

**Lesson Plan**  
Warehouse Grade 7 Adding Integers

<b>Standard: 6.0</b> Knowledge of Number Relationships and Computation/Arithmetic: Students will describe, represent, or apply numbers or their relationships or will estimate or compute using mental strategies, paper/pencil or technology.
<b>Topic:</b> C. Number Computation
<b>Indicator:</b> 1. Analyze number relations and compute
<b>Objective :</b> a. Add, subtract, multiply, and divide integers
<b>Clarification:</b> The clarification is an explanation of the indicator and objective and how these math concepts appear in the puzzle.
<b>Materials and/or Set Up:</b> <i>Adding Integers with Chips Sample, Assessment, Blank Number Line, Interactive Resource 1, Interactive Resource 2, Masking tape, Number Line Examples Interactive, Finding Sums of Integers, Finding Sums Part 2, Number signs, Scissors, Sea Level Illustration, The Accounting Game, Thermometer Interactive</i>
<b>Relevant Vocabulary:</b> difference, integer, negative, number line, positive, sum
<b>Note to Teacher</b> – Students should have attempted level 1 of the Warehouse puzzle before this lesson is implemented. Prior to implementing this lesson, the teacher should set up a masking tape number line on the floor with eleven equally spaced tick marks. The teacher should place the number zero (from the <i>Number Signs</i> ) in the center of the masking tape number line.
During the implementation of this lesson, it is recommended that the <i>Interactive Resources</i> be projected to encourage a rich and active discussion of math strategies and concepts.
<b>Activities:</b> <ol style="list-style-type: none"><li>1. After students have played level 2 of the Warehouse puzzle, have them share their experiences and strategies.</li><li>2. Pose the following questions: What is a negative number? (<i>a number less than zero</i>) When, in our real lives, do we encounter negative numbers? (<i>answers will vary but may include temperature, sea level, a checking account balance</i>)</li><li>3. Turn the students' attention to the number line that has been taped onto the floor. Distribute the <i>Number Signs</i> to 10 students and ask them to place them in the proper place on the number line. Distribute the blank <i>Number Line</i> and have students fill in the appropriate numbers. Have students make observations about the number line. (<i>Some observations may include that positive and negative integers are mirrored around the zero and that the numbers are equally spaced.</i>)</li><li>4. Display the <i>Thermometer</i>. Present the following scenario:<ul style="list-style-type: none"><li>• Imagine that the temperature in the morning is <math>-2^{\circ}</math> F and then over the course of the day, the temperature goes up 7 degrees. Ask students: What is the new temperature? (<i>Have students use the <b>Thermometer</b> to start at <math>-2^{\circ}</math> and add 7. The new temperature is <math>5^{\circ}</math> F.</i>)</li><li>• With students, write a math sentence to describe the increase in temperature? (<math>-2</math></li></ul></li></ol>