1. **GRADE LEVEL: Grade 7**

Subject Area: Mathematics

Quarter 1 – Week   
Duration: 45 minutes

1. **LEARNING OBJECTIVES**

Learners are expected to:

1. Students will be able to accurately place positive and negative fractions on a number line
2. Students will be able to place decimals on a number line
3. Students will be able to compare and order a set of rational numbers in different forms (fractions, decimals, percentages) by placing them on a number line.
4. **CONTENT**

* Title: The Rational Number Line-Up
* Learning Competency: order rational numbers on a number line.
* Particular Focus: Developing the skill of visualizing the magnitude of rational numbers by accurately placing them on a number line, and using this to compare them.

1. **LEARNING RESOURCES**

1. Teacher's Guide
2. Large classroom number line (can be made with masking tape on the floor)
3. Mini number line worksheets
4. Sets of cards with various rational numbers (e.g., 1/2, -0.75, 25%, -5/4)
5. PPT: 'Ordering Rational Numbers'
6. **PROCEDURE**

**Introduction:**

Draw a simple number line from -5 to 5 on the board. Give students integers (-2, 4, 0, -1) and have them place them correctly. Then, ask: 'But where would 1/2 go? What about -3.5?' Use this to introduce the idea that there are infinite numbers between the integers.

**Presentation:**  
The teacher models how to place a fraction on a number line by dividing the segment into the correct number of parts (e.g., to place 2/3, divide the space between 0 and 1 into three parts and mark the second one). They then model placing a decimal like -1.8. The key strategy of converting all numbers to a single format (usually decimals) to easily compare them is emphasized.

**Practice:**  
'Human Number Line'. Students are each given a card with a rational number on it. They must physically arrange themselves in the correct order at the front of the room using a large number line on the floor. This is followed by a worksheet where they must place a set of mixed rational numbers on a number line and then list them in ascending order.

**Integration:**  
Connect to real-world measurements that are not whole numbers, like temperature (-5.5°C), stock market changes (-1.25 points), or race times (9.58 seconds). This shows the necessity of understanding the order of non-integer values. Values: Precision, order, and logical reasoning.

**Assessment:**  
['1. Which is greater: -1/2 or -1/4? (-1/4)', ' 2. Place the following in order from least to greatest: 0.5, 25%, 3/4. (25%, 0.5, 3/4)', ' 3. On a number line, would -2.6 be to the left or right of -2.1? (Left)', ' 4. True or False: 5/4 is located between 0 and 1 on the number line. (False)']

**Enrichment:**  
['Remediation: Work only with positive numbers first. Use number lines that are already marked with fractions (e.g., a number line marked in fourths). Provide a calculator to help convert fractions to decimals easily.', " Enhancement: Give students a set of very close numbers (e.g., 0.8, 0.81, 4/5, 85%) and have them 'zoom in' on a small section of the number line to place them accurately."]  
**Asignment:**  
Create your own set of five rational number cards (must include at least one negative number, one fraction, one decimal). Bring them to class and be ready to challenge a partner to order them.

1. **EVALUATION TOOLS**

The 'Human Number Line' activity is a powerful formative assessment of the entire class's understanding. The worksheet will be graded for accuracy in placement and ordering. An exit ticket can ask students to place three mixed numbers on a number line.

1. **REMARKS**

['Negative fractions are often the most confusing for students (e.g., is -1/2 greater or less than -3/4?). Spend extra time on the negative side of the number line. The strategy of converting everything to decimals is the most reliable', ' encourage it heavily.']

1. **REFLECTION**

The 'Human Number Line' was chaotic but incredibly effective. The physical movement and peer discussions helped solidify their understanding of number placement, especially with negatives. The main challenge was comparing fractions with different denominators. The 'convert to decimal' strategy was a lifesaver for most students. I will emphasize this as the primary strategy from the beginning next time.