

## Index Card Game

**STRAND: Number and Number Sense**

**STRAND CONCEPT: Rational Number- Compare and Order**

**SOL 6.2a,b**

### *Remediation Plan Summary*

Students practice comparing and ordering fractions, decimals, and percents. (Optional: If the lesson includes SOL 7.1b and 8.1b, scientific notation is included.)

### *Common Misconceptions*

- Some students struggle with the idea that a fraction, decimal and percent can represent the same value.
- Some students think the fraction with the larger denominator is always the largest fraction.
- Some students write the decimal form of a fraction using the numerator as the first digit and the denominator as the second digit.
- Some students struggle with the direction to move the decimal when converting between decimals and percents.

### *Materials*

Index cards

### *Introductory Activity*

Review student strategies for ordering and comparing fractions, decimals, and percents. (Optional: Include scientific notation if the lesson includes SOL 7.1c and 8.1b.)

### *Plan for Instruction*

1. Create sets of playing cards for each group by writing the following fractions, decimals, and percents on index cards:
2. 0.001, 0.005, 0.01, 0.05, 0.10, 0.15, 0.2, 0.25, 0.45, 0.5, 0.55, 0.6, 0.75, 0.9, 1, 2, 2.5, 5, 0.1%, 0.5%, 1%, 5%, 10%, 15%, 20%, 25%, 45%, 50%, 55%, 60%, 75%, 90%, 100%, 200%, 250%, 500%,  $\frac{1}{100}$ ,  $\frac{1}{1000}$ ,  $\frac{5}{1000}$ ,  $\frac{5}{100}$ ,  $\frac{1}{10}$ ,  $\frac{15}{100}$ ,  $\frac{1}{5}$ ,  $\frac{1}{4}$ ,  $\frac{45}{100}$ ,  $\frac{1}{2}$ ,  $\frac{55}{100}$ ,  $\frac{3}{5}$ ,  $\frac{3}{4}$ ,  $\frac{9}{10}$ ,  $\frac{5}{5}$ ,  $\frac{10}{5}$ ,  $2\frac{1}{2}$ .
3. Put students in groups of two to four each, and give each group a set of the cards.
4. Have students shuffle the cards and place them face down on the table. In turn, each player draws two cards, places them face up, and orders the numbers from lowest to highest. If the two numbers are equal, the cards are placed one on top of the other. Correct ordering earns a player one point.
5. For the next round, each player draws three cards and orders the numbers from lowest to highest. If two numbers are equal, the cards are again placed one on top of the other. In this round, correct ordering earns a player two points.
6. In the next round, each player draws four cards and follows the same procedure as in the first two rounds. Correct ordering earns a player three points.

7. Students may continue with additional rounds, adding one more card and one more point per round. The player with the most points at the end of play wins.

***Pulling It All Together (Reflection)***

Give each student six blank index cards, and have each student create two sets of cards for use in the game. For each set, students must write an equivalent fraction, decimal, and percent. All the students' cards can be combined for use in playing the game again in a future lesson.