Fraction Card Games

Common Core Standard:

Extend understanding of fraction equivalence and ordering.

4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

Additional/Supporting Standards:

4.NF.1 Extend understanding of fraction equivalence and ordering

Standards for Mathematical Practice:

- 2. Reason abstractly and quantitatively
- 6. Attend to precision
- 7. Look for and make use of structure

Student Outcomes:

- I can compare two fractions with different numerators and/or denominators
- I can recognize equivalent fractions

Materials:

• Fraction Cards sets (1 set/pair) 38 cards in the set

Advance Preparation:

- Copy Fraction Cards on cardstock
- Consider how you will group students
- Students need to be familiar with fraction benchmarks such as $\frac{1}{2}$
- Students need to understand fractions as parts of whole
- Students need to be familiar with finding equivalent fractions
- Students need to understand the larger the denominator, the smaller the parts

Directions:

Game 1: Concentration (2-3 students)

- Deal cards face down in five rows
- Players take turns turning over two cards at a time
- If the fractions are equivalent, the student keeps the pair
- The winner is the person with the most cards

Game 2: Go Fish (2-3 students)

- Deal five cards to each player, stack the rest of the cards in the middle of the table
- The object is to get pairs of equivalent fractions
- At each turn players may ask others in the group for a certain fraction
- As long as someone gives the person a card, the player may keep asking

- When no one has an equivalent fraction to give the player, the person 'goes fishing' by drawing from the deck
- At end of game, the player with the most pairs wins

Game 3: War (2 students)

- Cards are divided between two players
- Each player lays down 1 card
- Players decide which fraction is greatest
 - Players may create common denominators
 - Compare to a benchmark fraction such as $0, \frac{1}{4}, \frac{1}{2}, \frac{3}{4}, 1$
- Player with the largest fraction picks up both cards
- If fractions are equivalent, players lay down a second card and compare
- At the end of the game the player with the most cards wins

Questions to Pose:

As students are playing games:

- What strategies are you going to use to figure out the value of the fraction?
- How might drawing a picture be helpful
- Give me an example of a fraction that is less than...greater than... equivalent to...?
- Describe the method you used to compare the fraction? Explain why it works?
- Is your fraction close to a benchmark? How can you tell?
- What are the benefits of using a common denominator to compare fractions?

Possible Misconceptions/Suggestions:

Possible Misconceptions	Suggestions
Students have difficulty seeing equivalent	Students work with models such as pattern
fractions	blocks, fraction strips, fraction circles and
	number lines to explore equivalents fractions,
	1 blue parallelogram is $1/3$ and 2 triangles are
	1/3 of a hexagon
Students do not use benchmark fractions when	As teacher circulates to monitor student
comparing fractions	understanding, ask: Is your fraction close to a
	benchmark number? How can you tell?s
	Give student different lengths of paper strips.
	Student folds in half then fourths. Student
	labels strips with 0, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1
Students have difficulty comparing fractions	Work with student to find common
with different denominators	denominators when comparing fractions

Special Notes:

Games need to be played multiple times. Classroom discussions after students play games should focus on strategies for efficiently comparing fractions using common denominators and benchmarks.

Solutions: N/A







