**Level: Gr 6**

**Category: Numeracy**

**Title of Lesson: Mixed numbers and decimals**

**Goals/Objectives:**

Big Idea:

• Mixed numbers and decimal numbers represent quantities that can be decomposed into parts and wholes.

Curricular Content:

• Relationship between mixed numbers and improper fractions

• Relationship between decimals and fractions

Curricular Competencies:

• Apply multiple strategies to solve problems

• Visualize to explore mathematical concepts

**Materials Needed:**

* Deck of Cards

**Task Instructions: (Step by Step)**

**Activity 1: Problems with decimals and fractions**

**5/3 2/3 8/3 4/5**

Of the four fractions above, which one doesn’t belong?

Why doesn’t it belong?
Can you make an argument for any of the 4 fractions?

Suppose the numerator of a fraction is 10 more than the denominator.

Write a fraction for each statement:

1. The fraction is greater than 2
2. The fraction is less than $1\frac{1}{10}$
3. The fraction is greater than 8
4. The fraction is greater than 12

Name 3 fractions with different denominators that are easy to turn into percents.

Explain why it is easy to represent them as percents.

**Activity 2: Fraction Fluency Practice**

**Largest Fraction**:

For this game, students can use a regular deck of playing cards with all the face cards and joker cards removed. Ace cards = a value of 1." Shuffle the cards. Deal four cards to each player. Players use the cards they were dealt to make the largest possible fractions.

Example:

 Player 1 holds the cards 2, 3, 6, and 8

 Player 2 holds the cards 1, 3, 3, and 7\*

 Each player makes the largest proper fraction s/he can make:

 Player 1: 6/8 Player 2: 3/7\*

\*Note: Player 2 could make the fraction 3/3, but that is not a proper fraction. A proper fraction always has a smaller number in the numerator than it has in the denominator.

Player 1 has the largest proper fraction, so player one gets a point. Shuffle the deck and play another round. First player to 10 points wins.

**Activity 3: Open Question**

Use the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 exactly once. Complete

the following:

Fraction < decimal < fraction < whole # < percentage

What strategies did you use? How many ways can you find?

**Adaptations/Adjustments: (consider different environments)**

-Look at the activities in the Grade 5 Week 1 Lessons

**Extensions (Optional):**

More fraction card games here: <https://www.educationworld.com/a_lesson/dailylp/dailylp/dailylp139.shtml>

Try this limits game: <https://www.stem.org.uk/resources/elibrary/resource/28198/fraction-activities-students-aged-11-13#&gid=undefined&pid=5>

References:

Marian Small; Carole Fullerton; <https://www.educationworld.com/a_lesson/dailylp/dailylp/dailylp139.shtml>