

# EISENHOWER PROFESSIONAL DEVELOPMENT PROGRAM

## Mathematics Within: Algebraic Patterns

### Lesson Plan

**Participant Name:** Jean Karschnia

**Broad Topic:** Fractions

**Subtopic:** Comparing Fractions

**Aim:**

*The goal of the lesson is to have students identify ways to compare fractions.*

**Specific Objective(s):**

- o To understand that fractions can be compared.
- o To use common denominators to compare fractions.
- o To use cross multiplication to compare fractions.
- o To show how both methods are related.
- o To practice comparing fractions using activities.

**Materials/Supplies:**

- o Deck of fraction cards for every two students
- o Paper/pencil

**Lesson**

- o The lesson will require 45 min. to 1 hour depending on prior knowledge of students.
- o The first 15-20 minutes are spent introducing the concept of fraction comparison. Students are shown groups of fractions and class discusses how they compare. Mini-lesson is done to show how to compare fractions using common denominators and/or cross multiplication. Give students example of real life situation. Would they rather have  $\frac{5}{7}$  or  $\frac{2}{3}$  of a candy bar. Have a drawing of the two options. Ask their reason why. Can we tell by just a drawing? What if the drawing is not accurate? How can we tell which piece is larger using math? Discuss common denominators and cross multiplication. How are the two methods related? Discuss why cross multiplication works. Walk through more examples as needed.
- o The class activity will take approximately 30 minutes. They will play a card game called Fraction War. It is best to work in pairs. The students are given decks of cards with fractions written on them.
- o Each student turns over one of their cards. The pair will find which fraction is greater. The student with the larger fraction keeps both cards. If the fractions are equivalent, the students will each turn over a new card. The player with the highest fraction will then keep all the cards from that play. The player with the most cards at the end of the game is the winner. The challenge is for the students to use the two methods discussed to find the larger fraction. Allow the students to continue playing as they are observed for their understanding of the concepts.
- o After the activity, students will reconvene and discuss the game. The discussion can be guided towards what issues may have come out during the activity.
- o The immediate assessment will be based on observation of the students in the class discussion and the activity.
- o Extensions can be done by pulling in more real life situations in which fractions must be compared.