

Student Teacher Candidate: Courtney Harriman  
Lesson Subject(s)/Title: Reducing Fractions (Technology Lesson)

Lesson Date(s): 9/13/19  
Course & Grade(s): EDUC 220

**INSTRUCTIONAL MATERIALS:**

Laptop/chrome book, graphic organizer, fraction workshop

**ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:**

How do we reduce fractions?  
What do fractions represent?  
How do we know when a fraction is fully reduced?

**PURPOSE:**

Students will be able to simply fractions through the use of an online fractions workshop.

**SPECIFIC LEARNING OBJECTIVES: (clear, observable)**

Students will take notes on example problems done together as a class.  
Students will complete 15 problems using a fraction workshop.  
Students will work cooperatively and respectfully with classmates while they complete the practice problems.

**STANDARDS:**

CCSS.MATH.CONTENT.5.NF. B.7

Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions

**ANTICIPATORY SET:**

Test student's prior knowledge on reducing fractions. I will ask the following questions to see how much they may or may not already know:

1. What is a fraction?
2. What is the denominator of a fraction?
3. What is the numerator of a fraction?
4. How do you simplify a fraction?

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

**INPUT/ ACQUIRE NEW KNOWLEDGE:**

Prior to this lesson, there is a very good chance that students will already be very familiar with fractions, but they will need some explanation as to how to simplify them. I created a simple 3 step process graphic organizer that I will have uploaded unto google docs for all students to refer to. I will have that graphic organizer pulled up on the screen and go over each step as an entire class. After we went through the 3-step process, I would do a few examples on the board again as an entire class. During this time, students will take notes on the example problems and refer back to their graphic organizer as we move through the example problems. The following fractions would be modeled on the board:  $5/30$ ,  $4/24$ ,  $6/18$ , and  $7/28$

**APPLY/ DEEPEN NEW KNOWLEDGE:**

Students will work on a fraction workshop where they will reduce fractions. The workshop allows you to set a number of questions they will solve, tells students whether or not their answers are correct, has an online provided calculator, and has a visualization button that may help students that prefer more visual math concepts. Students will be asked to write down any problems that they may have struggled with or need a further explanation of. They will be completing the workshop individually, however, I will encourage working with a neighbor/other classmate to help as well as help from myself.

<https://mrnuusbaum.com/fraction-workshop-online>

**DIFFERENTIATION STRATEGIES:**

Some students may have an easier time completing the workshop than others. If this is the case, after the student completes the section of the workshop, I have planned for them, a list of other workshops involving fractions will pop up. It increases in difficulty level after you complete each one. If a student finishes early, then they can start another workshop.

**CLOSURE/ASSESSMENT:**

We will go over any of the problems throughout the workshop that students may have struggled with. I will identify these problems as I walk around and observe as well as having students write down the problems they struggled with themselves.

**INSTRUCTIONAL PROCEDURES:****Time:**

<p>The teacher will:</p> <ol style="list-style-type: none"> <li>1. Test students on their prior knowledge of fractions.</li> <li>2. Pull up the graphic</li> </ol>	<p>The students will:</p> <ol style="list-style-type: none"> <li>1. Discuss their prior knowledge on fractions</li> <li>2. Open the document on</li> </ol>
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<p>organizer on the 3-step process used to reduce fractions</p> <ol style="list-style-type: none"> <li>3. Discuss how the 3-step process is used to solve equations</li> <li>4. Go over example problems as an entire class</li> <li>5. Have students open up the fraction workshop and observe/help as they complete it</li> <li>6. Go over any problems that students may have struggled with</li> </ol>	<p>google docs (shared with them so they have it for future reference)</p> <ol style="list-style-type: none"> <li>3. Take any additional notes they may need/want to take</li> <li>4. Take notes/write down the example problems and steps that go along with each one</li> <li>5. Work on the problems in the workshop (each student will complete the workshop independently but are aloud to use classmates as a resource for help)</li> <li>6. Take additional notes on any problems they may have struggled with</li> </ol>
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# Reducing Fractions in 3 Simple Steps!!

Reducing a fraction mean that you divide the numerator and the denominator by the highest number which can divide the numbers exactly.

To reduce a fraction...

## Step 1

Find a number (Except 1) by which both the **numerator** and the **denominator** can be exactly divided by.

## Step 2

Divide both the numerator and denominator by that number.

## Step 3

See if it can be reduced again.

Practice: Complete the following fraction workshop:  
<https://mrnussbaum.com/fraction-workshop-online>