

# Student Teaching Supervisor Observation

## Lesson 1: Adding Fractions

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### VITAL INFORMATION

**Subject(s)** Mathematics

**Topic** Adding Fractions

**Grade/Level** Grade 5

- Materials and resources:
- Technology resources:  
YouTube
- The number of computers required is 1.

**Attachments:**

- Resources**
1. **Adding Fractions (high level).docx**
  2. **Adding Fractions (low level worksheet).docx**
  3. **Adding Fractions Word Problem.docx**

**Links:**

1. [Adding and Subtracting Fractions Video](#)
2. [Website 1 used for planning](#)
3. [Website 2 used for planning](#)

### STANDARDS & ASSESSMENT

NJ- New Jersey Student Learning Standards for Mathematics (2016)

Grade: Grade 5

Area: Number and Operations—Fractions

**Standards**

**Standard:** A. Use equivalent fractions as a strategy to add and subtract fractions.

**Indicator:** 1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example,  $2/3 + 5/4 = 8/12 + 15/12 = 23/12$ . (In general,  $a/b + c/d = (ad + bc)/bd$ .)

**Learning**

**Objective(s)** Students will be able to add fractions with like and unlike denominators using manipulatives to assist with finding the least common denominator with 80% accuracy.

**(Learning**

**Target(s))**

There are 4 students with IEPs in this class and many other struggling learners. These students will be closely monitored during guided practice and assisted as needed. These students also have an in-class support teacher to provide assistance.

**Knowledge of**  
**Stdnts/Universal**  
**Design for**  
**Learning**

For independent practice, there are two different worksheets of different levels to meet students' needs. Higher level students will receive a higher level worksheet that will require them to select two out of three fractions provided to add. Most of these questions require students to add fractions with unlike denominators. There are seven questions like this in all. This worksheet also includes a challenge question asking them to consider how they could add all three fractions in a problem and provide an explanation and example. Meanwhile, lower level students will receive a lower level worksheet. This worksheet includes five problems in which students have to add fractions with like denominators and three questions that require students to add fractions with unlike denominators. This worksheet also includes directions that remind students to find the common denominator. Struggling learners and students with IEPs will receive a worksheet with a star on it that will indicate that they will complete the worksheet at the back table. These students will receive special assistance while completing the worksheet.

**Pre-assessment**

Students will be informally pre-assessed during the anticipatory set during the think-pair-share activity on adding fractions. This will allow for

assessment on what students already know about adding fractions.

#### Informal

#### Assessment Plan

- Students will be formatively assessed during guided practice with communicators. Students' answers will be quickly reviewed for accuracy and will be used to guide further instruction.
- Students will be formatively assessed during the thumbs-up, thumbs-down activity. Students' understanding of the concept will be used to guide further instruction.

#### Formal

- Students' independent practice worksheets will be collected and reviewed as a formative assessment to check for understanding and for trends in errors to guide further instruction.
- Students' exit tickets will be collected and reviewed as a formative assessment to check for understanding and guide further instruction.

## IMPLEMENTATION

Direct instruction is best for this lesson as this particular class does best with a very structured approach while being introduced to a new concept. The structure of this lesson allows for a clear introduction to the concept and allows for constant analysis of how students are doing with grasping the concept. Students will already have prior knowledge on how to find the least common multiple and least common denominator so that is not covered in depth in this lesson.

Students will be pre-assessed during the think-pair-share activity on their prior knowledge on adding fractions.

#### Lesson Rationale

The use of communicators and the thumbs-up thumbs-down activity allow for frequent formative assessment to guide further instruction throughout the lesson. Using communicators also helps in identifying which students may need further help during independent practice.

Worksheets for independent practice are layered to fit students needs. Students with IEPs and other struggling learners will be given a worksheet with a star on it as an indicator that they will go to the back table to work. These students will receive extra support while completing the worksheet. The in-class support teacher will also provide extra support. The high-level worksheet allows students to pick 2 out of 3 given fractions to add. This was done as a way to give students a choice in their work. These worksheets are collected to check for student understanding and to guide further instruction.

Students will be given a word problem requiring them to add fractions as a way for them to see the real-world application of the concept. This problem will be collected and reviewed to check for patterns in student errors to guide further instruction.

#### Model of Instruction

Direct Instruction

#### Subject Specific Language

- Least common multiple
- Least common denominator
- Numerator
- Denominator
- Fraction
- Addition
- Sum

Students will have prior knowledge of all of these terms. These terms will be used to form meaningful discussion about the concept of addition of fractions.

#### Instructional Materials (handouts, etc.)

- White board
- Dry-erase markers (one for each student and teacher)
- Communicators (one for each student)
- Eraser (one for each student)
- Addition and subtraction video
- Math journals
- High level worksheets
- Low level worksheets
- multiplication chart (for finding LCD)
- Exit tickets (1 for each student)

I. Anticipatory Set

Draw two fractions with the same denominator on the board. Ask students how they think they would add the two fractions together. Have students think-pair-share by brainstorming with the person next to them before sharing. After students discuss with a partner, ask students to share what they discussed. When students share, make sure they are using proper terminology such as numerator and denominator. If students are not using proper terminology, ask them to restate what they said using the correct terminology. Write down any ideas students share on the board. After students share, go down the list and ask students if they agree or disagree with each statement. Ask students to explain why they agree or disagree. Explain to students further why each response is correct or incorrect, and erase each incorrect response. Explain to students that they will be learning how to add fractions. Explain to students that this lesson is important as fractions are a concept that will be using for the rest of their schooling and that they will use often in life and in many careers. Ask students if they can think of any careers that may require them to work with fractions. Ask students to explain how any careers they suggest would require them to work with fractions. These careers could include cooking, architecture, careers in the medical field, etc.. Suggest careers if students struggle to suggest any on their own by asking questions such as, "could you use fractions if you are a chef?" and allowing students to then come up with ways to use fractions as a chef. Show the video on adding and subtracting fractions to students.

## II. Instructional Phase

### Procedure

After students watch the video, ask if they can help compile a list of steps for adding fractions. Write down correct student responses in sequential order on the board. Have students write down these steps in the math journals. After creating the list, model for students how to add fractions by adding the fractions written on the board in the beginning of the lesson. Refer back to each step on the list as you go. Model this 1-3 more times as needed. Provide each student with a communicator, dry-erase marker and eraser. Write a problem on the board that requires students to add fractions with like denominators. Have students complete the problem on their communicators and hold up their responses when everyone is finished. Walk around and provide assistance as needed. Review student responses for accuracy and model more problems as needed until students seem to have a firm understanding. Write two fractions on the board that have unlike denominators. Ask students what they notice about these fractions. Ask students what they need to do first to be able to add the fractions. Allow students to take out any manipulatives they have used to help find least common denominators. Ask students to help find the least common denominator (LCD). After finding the LCD, add the fractions together. Model 1-3 more times as needed. Have students put their heads down. Ask students to give a thumbs up if they understand the concept, thumbs in the middle if they are still a little confused, and thumbs down if they do not get it at all. Take note of student responses. Use these responses to decide if further instruction is needed.

## III. Guided Practice

Write two fractions with unlike denominators on the board. Ask students to add the fractions on their communicators. Allow students to use any manipulatives they used previously to find the LCD, including multiplication charts. Walk around and provide assistance as needed, paying special attention to students with IEPs. After students complete the problem, have them hold up their communicators. Take note of accuracy of student responses. Have students solve more problems on their communicators until they appear to have a firm understanding.

## IV. Independent Practice

Provide each student with a worksheet. There are 2 different worksheets for students at different levels. Star worksheets for the lower level for the students with IEPs or who may need more guidance before handing them out. After handing out all worksheets, ask any students with stars on their worksheet to go to the back tables to work. Work with these students and provide extra guidance as needed. Allow students to work on their worksheets independently. Collect finished worksheets to check for understanding.

## V. Closure

If time permits, provide each student with an exit ticket that is a word problem requiring students to add fractions. Read the problem as a class and ask students if they know what the problem is asking them to do. Ask students how they know what the problem is asking them to do. Allow students to complete the problem. Collect students' completed work and check for understanding.

## COMMENTARY

### Attachments:

**Evidence-Based  
Reflection**

**Sample Student  
Products**