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ETC 447

Micro Lesson

I. RATIONALE:

The purpose of this teaching this lesson is because it is taught it is in correlation to the curriculum that the students are currently learning. It also meets the Arizona Common Core standards.

II. OVERVIEW

Grade Level: 5th Grade

Subject(s): Math

Topic of Study: Mixed Fractions

Time Allotment: 45 minutes

Standards: 5.NF.A.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 (e.g., 2/3 + 5/4 = 8/12 + 15/12 = 23/12).

Objectives:

- Students will be able to add and subtract mixed fractions with like and unlike denominators.

- Students will be able to simplify their answers into mixed fractions or whole numbers.

III. IMPLEMENTATION

Procedure:

Anticipatory Set/Opening	**Key Vocabulary**
-The lesson will begin by going over classroom expectations. -Go over the objective, "Today we will be able to add and subtract mixed fractions with unlike denominators and simplify the answers into mixed fractions or whole numbers."	-Numerator -Denominators -Mixed fractions -Whole numbers

-Anticipatory set: Reviewing the concept of mixed fractions, LCD, improper fractions, and simplification. Ask the students to give an example of each and state what it means. Then, explain to the students that they will be learning how to add and subtract mixed fractions in this lesson.	-Simplify -Improper fractions -LCD (Least common denominator)

I Do:

Teacher Will:	**Student Will:**
- Review the concept of adding and subtracting fractions with denominators. Give an example, such as 1/4 + 2/4 = 3/4, and explain the process of adding the numerators while keeping the denominator the same. - Introduce the concept of adding and subtracting mixed fractions with denominators. Give an example, such as 1 1/4 + 2 1/4 = 3 2/4, and explain the process of adding the whole numbers, adding the fractions, and simplifying the answer into a mixed fraction. -Check for understanding by asking students	-Sit, watch, listen, and respond to the questions asked -Have white boards and markers or pencil and paper if needed for notes - Follow along and ask questions

We Do:

Teacher Will:	**Student Will:**
- Demonstrate how to add and subtract mixed fractions with unlike denominators. Give an example, such as 1 1/2 + 2 1/3 = 3 5/6, and explain the process of finding a common denominator, adding the numerators, and simplifying the answer into a mixed fraction. -Walk around the room to monitor the students' progress and provide assistance as needed. -Check for understanding	- Answer questions that teacher ask regarding the problem on the board -Help teacher define key vocabulary words - Use white boards and markers or pencil and paper as assistance to solve the problem with teacher

You Do:

Teacher Will:	**Student Will:**
- Hand out worksheet and have the students work independently on set of problems on their own. -Walk around classroom to observe students work -Instruct students to grab their laptop to login into Kahoot! Then log into their IXL account while they wait for the class to be done - Collect the completed worksheets after we reviewed the answers as a class.	-Complete worksheet independently and raise their hand when they are finished so teacher can look over it -Grab their laptop so they can begin to login into Kahoot! -Log into their IXL as they wait for class to be done

Closure/Assessment:

- To conclude the lesson, ask the students to share their answers and ask any questions they may have. Remind them of the steps to add and subtract mixed fractions and encourage them to continue practicing at home. -Teacher will go over what they accomplished in that lesson by restating the objective, “Today we were able to add and subtract mixed fractions with unlike denominators and simplify the answers into mixed fractions or whole numbers.” -Complete a Kahoot! as an exit ticket.

Assessments:

There will be two sets of assessments which will be done on paper and on their laptops. The worksheet will be given during the “you do” portion and the way to assess their “mastery” will be if students are able to add and subtract mixed fractions with unlike denominators with 90% accuracy on their independent worksheet.

***Technology Integration*:**

There was a good amount of technology integrated in the lesson. Throughout the lesson there was a projector used to show the worksheet, Kahoot, and objectives. There was also a video provided. Initially it was intended for students who needed a bit more help, but I ended up using it for the entire class (YouTube). The students also used IXL as they waited for the rest of the students to finish their worksheet. They also used their laptops for their exit ticket when playing the Kahoot game as a class.

***Differentiated Instruction*:**

Cognitive Delay	- Provide pre filled out worksheet with all the terms defined with examples/shorten worksheet. Provide video with examples and explanations (https://www.youtube.com/watch?v=yXiG2iv1Vq8) - Work with a partner - Check list will be provided as guidance - Provide more guidance and modeling during guided practice. - Allow extra time for independent practice. -Provide additional practice problems that focus on one step at a time, such as finding a common denominator or adding the numerators.
Gifted	-Encourage students to simplify their answers into improper fractions or to write their answers as mixed numbers with improper fractions. - Provide extension activities that involve adding and subtracting mixed fractions with more complex denominators or larger whole numbers. - Provide opportunities for these students to work independently or with a partner to solve more challenging problems.
ELL	-Translated worksheet -Use fraction strips or circles to show the concept visually, if available. -Work with a partner - Provide more guidance and modeling during guided practice. - Allow extra time for independent practice.

- *Instruments*:

Adding and Subtracting Mixed Fractions (A)

Find the value of each expression in lowest terms.

1. $2\frac{1}{5}+1\frac{3}{4}$
2. $3\frac{1}{2}-2\frac{2}{3}$
3. $3\frac{1}{2}-3\frac{1}{2}$
4. $5\frac{3}{4}-5\frac{1}{4}$
5. $1\frac{1}{2}+2\frac{3}{5}$
6. $3\frac{1}{2}-2\frac{5}{9}$
7. $2\frac{3}{4}+1\frac{1}{5}$
8. $3\frac{1}{4}-2\frac{3}{8}$
9. $3\frac{1}{2}-1\frac{1}{2}$
10. $5\frac{1}{2}+5\frac{1}{4}$
11. $1\frac{10}{11}-1\frac{1}{3}$
12. $1\frac{5}{12}+3\frac{1}{3}$

Adding and Subtracting Mixed Fractions (A) Answers

Find the value of each expression in lowest terms.

1. $2\frac{1}{5}+1\frac{3}{4}$
$=\frac{79}{20}=3\frac{19}{20}$

2. $3\frac{1}{2}-2\frac{2}{3}$
$=\frac{5}{6}$

3. $3\frac{1}{2}-3\frac{1}{2}$
$=0$

4. $5\frac{3}{4}-5\frac{1}{4}$
$=\frac{1}{2}$

5. $1\frac{1}{2}+2\frac{3}{5}$
$=\frac{41}{10}=4\frac{1}{10}$

6. $3\frac{1}{2}-2\frac{5}{9}$
$=\frac{17}{18}$

7. $2\frac{3}{4}+1\frac{1}{5}$
$=\frac{79}{20}=3\frac{19}{20}$

8. $3\frac{1}{4}-2\frac{3}{8}$
$=\frac{7}{8}$

9. $3\frac{1}{2}-1\frac{1}{2}$
$=2$

10. $5\frac{1}{2}+5\frac{1}{4}$
$=\frac{43}{4}=10\frac{3}{4}$

11. $1\frac{10}{11}-1\frac{1}{3}$
$=\frac{19}{33}$

12. $1\frac{5}{12}+3\frac{1}{3}$
$=\frac{19}{4}=4\frac{3}{4}$

V. MATERIALS AND RESOURCES

Materials:

- Whiteboard (class set and teacher set)
- Dry eraser/ marker (class set and teacher set)

- Fraction worksheets (class set)
- Pencil (class set)
- Calculator (class set)
- Projector
- Vocabulary sheet
- Fraction strips (class set)
- Additional practice problems (students who need more help)
- Extension activities for students who needs a challenge

Resources:
YouTube: https://www.youtube.com/watch?v=yXiG2iv1Vq8
IXL: https://www.ixl.com/signin/mentagnora
Kahoot!: https://create.kahoot.it/auth/