Using the LAP strategy to Teach Addition and Subtraction of Fractions. Lesson 2

Objective: To teach students to understand how to get a common denominator.

Setting and Materials:

Settings: Special Education Resource Classroom

Materials:

- Notecards of Fraction problems (30) (2 sets of a deck for the games)
- Paper
- Pencil

Content Taught

Teach students to use a mnemonic strategy to add and subtract fractions.

Teaching Procedures

1. Pair students by ability level for this lesson.
2. *Teach the students how to determine if the smallest denominator will divide into the largest denominator without a remainder. These are referred to as Type II Fractions.*
3. Problem: $\frac{3}{8} + \frac{1}{4}$
    a) Explain that the smallest number on the bottom will divide evenly into the largest.
    b) Instruct the students to place a box around the smallest number on the bottom side of the fraction.
    c) Ask "how many times will 4 divide into 8?"
    d) Instruct students to place a times sign and the answer they get when they divide into the box $\frac{8}{2} = 2$
    e) Instruct students to write the fraction that is not being changed under the original problem.
    $\frac{3}{8} + \frac{1}{4}$
    $\frac{3}{8}$
    f) Instruct students to write down their sign and draw a new fraction line beside the sign $\frac{1}{4} \times \frac{2}{2}$

g) Instruct students to multiply their op numbers in the box. 1x 2 = 2 4 x 2 8 $1 \times 2 = 2,\ 4 \times 2 = 8$

h) Instruct students to write their new answer down under the new fraction line $\frac{3}{8} + \frac{2}{8}$

i) Instruct the students to add their top numbers and the bottom numbers stay the same

$$\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$$

4. Practice in pairs dividing the smallest denominator into the largest using teacher made activities including Fraction Football and Fraction Basketball.
5. Fraction Football: designed for two players
    a. A student draws a card from a deck of 30 different fraction problems.
    b. The student divides the smallest denominator into the largest denominator.
    c. If correct, the student picks a card from the yardage deck (gives them positive yardage)
    d. If incorrect, the student loses a down.
    e. The student with the most points at the end of the game wins.
6. Fraction Basketball: designed for two players
    a. A student draws a card from a deck of 30 different fraction problems.
    b. The student divides the smallest denominator into the largest denominator.
    c. If correct, the student gets two points.
    d. If incorrect, the student does not get any points.
    e. The student with the most points at the end of the game wins.

Evaluation

Students were given an 18-item LAP fractions test to assess their learning.

Lesson Plan Based on:

Test, D.W., & Ellis, M. F. (2005). The effects of LAP fractions on addition and subtraction of fractions with students with mild disabilities. Education and Treatment of Children. 1, 11-24

Instruction in italics were added by NTACT in order to create this lesson plan.

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