Math & Science Collaborative Lesson Plan

Northwest Educational Service District 189
Together We Can

Lesson Title: Estimate Fraction Sums and Differences

Unit Learning Target (Standard/Performance Expectation(s)) **5.2.G** ***CCSSM 4.NF.3***

Estimate sums and differences of fractions.

Building Block or Lesson Learning Target:
Estimation skills, addition skills, subtraction skills

Previous Lesson Learning Target:
Comparing and ordering fractions

Student Success Criteria:
The students will be able to estimate fractions to the nearest 0, ½, or 1 whole accurately and then add or subtract a set of two fractions. They will then identify the sum or difference on a number line.

Target Introduction/ Thinking Question *

Estimate the sum of 12/13 + 7/8. The choices are, 1, 2, 19, or 21.

Lesson Progression (Flow) with Talk-Structures

Present opening question – ask students to explain how they solved this - support with visuals.
Review math content objectives
Practice Fraction Sort attached)
Present 1/3 + 8/9 = 9/12 - Do you agree with this? Why or why not?
Review the number line with this problem
Present a subtraction problem
Students work with a partner on practice pages A&B
Remind students they can use ant manipulatives to help them find solutions.

Anticipated Misconceptions:

Adding numerators and denominators straight across without finding a common denominator first

Key Terms In Lesson:

estimate
sums
differences

Formative Task or Question*
Designed to elicit student misconception(s)

Warm up question

Exit slip question

Lesson Closure
Whole group review of selected practice problems and group discussions on successful ways to solve them.

Exit Task* Exit Slip Question:
Estimate the sum 2/5 + 7/11

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Do the Math for the Thinking Question	**Anticipated Misconceptions:**
Write 12/13 + 7/8 = ____ on the board. Give the students 3-4 minutes to try and solve the problem on their own. Whole group discussion: Ask: "Would you estimate 12/13 to be closer to 0, ½, or 1 whole? Call on a few students and ask them to explain their thinking. Do the same with 7/8 and have students explain their thinking. Write their estimation on the board under the actual question. Use visuals such as pie/candy bar/ruler to help students visualize. Then, add the addends together. Ask the students if this is the exact answer to the problem. Explain why.	Students will add the numerators and denominators straight across.

Instructional Adjustment(s) (if needed) ***Tied to common misconception(s)***	**Manipulatives and materials to include and have ready to support the lesson ***
The first question in the actual lesson "Does 1/3 + 8/9 = 9/12? Why or why not? This question will describe why their misconception is not the accurate way to add or subtract fractions.	Parts of a whole poster on whiteboard, they all have rulers, the students may all draw out their problems on paper.

* Opportunity for formative assessment

Fraction Sort

Near 0	Near 1/2		Near 1
4/7	1/7	4/9	3/5
2/3	1/10	9/11	6/11
4/5	6/7	4/8	5/12
1/8	3/8	8/9	7/14