Use of ongoing questions to inform instruction and planning

Establish goals of lesson → PLANNING based on goals including how you will collect evidence of student thinking to inform instruction and learning. → Lesson ↔ Analyze evidence of student thinking

Administer exit question.

Consider how evidence influences next day's instruction
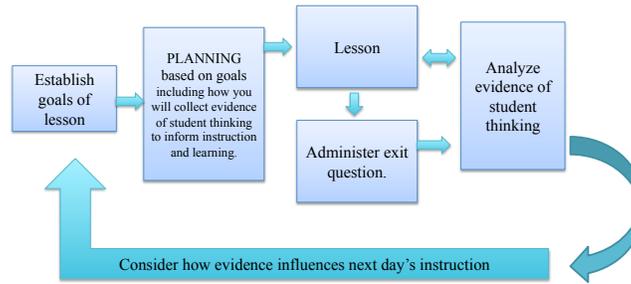
Part I. Ms. Smith's Lesson Background – Number Lines

Goal:

A. To strengthen understanding of fractions as quantities students will locate fractions on number lines in which the size and number of units on the number lines vary.

Part II. Exit Question

At the end of the lesson Ms. Smith decided to give her students the number line question below. This question was slightly different than the ones students worked with in class. Although the number lines in class all varied in the number of units and the size of the units, the number lines all had *whole units* defined unlike in the exit question that follows.

Exit Question (N4)

Draw and label a point on the number line below to show where $\dfrac{7}{4}$ is located.

$\dfrac{1}{2}$

0

1) Solve the exit question (N4). Consider the strategies that students might use

Part III: Analyze Evidence in Student Responses

1) Use the OGAP Fraction Progression to sort to analyze the set of student work using the OGAP Sort. (Record the evidence collection sheet (Page 97).
2) Complete planning questions on Telling the Story (page 98)
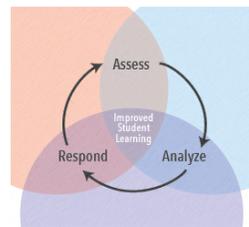
Part IV: Planning Based on Evidence

Question A: Tom walked ¾ of a mile in the morning and ½ a mile in the afternoon. Use the number line below to show how far Tom walked altogether.
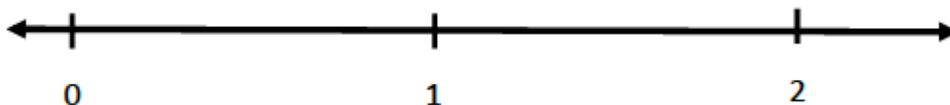
Question B: Susie is walking $2\frac{7}{8}$ miles from her home to school. At $1\frac{3}{8}$ miles from her home she stops for a drink of water. How much further does she need to walk to school? Use a number line to solve the problem.

Questions about Questions A and B

1) Solve QA and QB above.

2) Based on the evidence in the student work from the number line exit question, what strategies do you anticipate students will use to solve these problems?

3) Why are these good questions to extend the number line work and start to develop fraction addition and subtraction concepts?

Part V: Take Aways What are three take-aways from the case study?