Curriculum Literacy Assessment
Elementary Math

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Part 1: Lesson Selection and Justification

Part I Directions
Two lessons about fractions with the launch/hook and main activity have been provided for your work in Part I:

- Lesson 1
- Lesson 2

Read the scenario below. Then, respond to the following questions.

Scenario for Part I

You are teaching **3rd** grade mathematics. The school serves students from a range of backgrounds and includes a large number of students who are new to the United States. Your class includes 30 students, 10 of whom are multilingual. Seven of the multilingual students speak Spanish as their home language, two speak Portuguese, and one speaks Arabic as their home language. All of these students are proficient in conversational English, but you recognize that conversational English is different from academic language. Several students have Individualized Education Plans with the following accommodations influencing your daily lesson planning:

- The teacher should use visual presentations of verbal materials
- Provide instructions in written and verbal form
- Use cooperative learning

You are preparing to launch a unit on fractions where students will start by learning to represent fractions greater than zero and less than or equal to 1 with denominators of 2, 3, 4, 6, and 8, using concrete objects and pictorial models including strip diagrams and number lines.

While you don't normally choose materials outside of the provided curriculum, you want to get the unit started with a strong lesson, so you decide to compare your provided lesson with two other unit launching lessons from other curricula. **Your goal for this launching lesson is to allow students to do some exploratory work that will foster curiosity about the key ideas of the unit, continue to build a mathematics community, and to support students to communicate their mathematical ideas**.

Assessment Questions:

1a. Examine the set of sample lessons provided above and determine which lesson:
- Best meets the goals and content objective provided in the scenario,
- Is sufficiently challenging for students,
- Is most likely to engage the students described in the scenario, and
- Is reasonable to accomplish in a 60 minute Math block.

Select the lesson that best meets these criteria.
- ☐ Lesson 1
- ☐ Lesson 2

1b. Provide additional justification for your lesson choice. This can be brief and bulleted, but make sure to attend to the criteria above and provide a comparison of your chosen lesson with the other lesson.

2a. Both lessons have merit but looking at Lesson 2, is this lesson well aligned to 3rd grade standards? The standard is above in purple text. Give evidence for your answer. Please consider multiple

features of the lesson plans in your answer, and feel free to use bullet points.

2b. Where do you see math rigor or challenge? Please consider multiple features of the lesson plans in your answer, and feel free to use bullet points.

3. Now looking at Lesson 1, identify strategies that align to researched based practices like those of Vygotsky, Piaget, Brunner, and what research tells us about ***how*** students learn mathematics. Please consider multiple features of the lesson plan in your answer, and feel free to use bullet points.

4a. Describe the parts of Lesson 1 that support multilingual learners? Please consider multiple features of the lesson plan in your answer, and feel free to use bullet points.

4b. How would you make the support for multilingual learners even stronger? Please consider multiple features of the lesson plan in your answer, and feel free to use bullet points.

Part II: Modifying an Important Part of the Lesson

Part II Directions
Continue to use the two lessons about fractions with the launch/hook and main activity that have been provided for your work in Part II:

- Lesson 1
- Lesson 2

Assessment Questions:

5a. Looking at both lessons, describe the parts of the lesson that support cultural responsiveness. Please consider multiple features of the lesson plans in your answer, and feel free to use bullet points.

5b. What changes would you make to better support cultural responsiveness? Please consider multiple features of the lesson plans in your answer, and feel free to use bullet points.

6a. Looking at both lessons, describe the parts of the lesson that support student-centered learning. Please consider multiple features of the lesson plans in your answer, and feel free to use bullet points.

6b. What changes would you make to better support student-centered learning? Please consider multiple features of the lesson plans in your answer, and feel free to use bullet points.

7a. During a pre-assessment, you notice that your third graders have not yet learned some of the interconnected concepts and skills for the upcoming unit on fractions, which of the following adaptations, if any, are likely to be appropriate? Select all that apply.

a. I will first reteach the missed standards so all students are ready for the unit.
b. I will teach the grade-level standard, as this is the learning objective for the 3rd grade.
c. I will scaffold the lesson by asking students to use and connect math representations, talk about the mathematics, and solve problems.
d. For my below level students, I will create heterogeneous groups so above grade level can support my struggling students.
e. I will adapt the opening activity to include the interconnected concepts and skills needed for the unit.

7b. What considerations were at the front of your mind in answering this question?

8a. Now imagine that you are preparing to teach this unit to a class of third graders in which a small handful of students have demonstrated proficiency with fractions in the pre-assessment. Which of the following adaptations, if any, are likely to be appropriate? Select all that apply.

a. I will ask the above level students to help the rest of the class.
b. I will plan a task for students to create their own fractions by partitioning with a different number than 2,3,4,6,8.
c. I will ask students to show with models or explain in words how they know they have created the said fraction.
d. I will provide a matching worksheet for practicing the same fractions so students can demonstrate their understanding.
e. I will look at the next grade level standard in order to plan an enrichment task.

8b. What considerations were at the front of your mind in answering this question?

Part III: Plan for Implementation

Part III Directions
Use the two lessons (linked below) and modifications described in Part II to respond to questions in Part III.

- Lesson 1
- Lesson 2

Assessment Questions

9. In the space below, anticipate student response and thinking patterns you would expect to see or hear in relation to your modified lesson segment. Describe at least three possible student responses.

10a. Imagine that you have finished teaching the unit. Overall, it went well; most of your students did well on the final performance tasks and are beginning to improve their ability to represent fractions greater than zero and less than or equal to 1 with denominators of 2, 3, 4, 6, and 8. At this point, you realize that you have only about two hours to prepare for the next lesson on fractions, which supports students in Math. Which of the following is likely to be the best use of your time? Select all that apply.

a. I will plan to start the unit by reteaching the most missed problems on the unit posttest.
b. I will review and solve the student problems within the unit myself to better understand possible misunderstandings.
c. I will anticipate different student strategies (multiple correct and multiple incorrect).
d. I will read my district's pacing document and follow that lesson plan.

10b. What considerations were at the front of your mind in answering this question?

11a. Imagine that you are preparing to teach a new unit during a pandemic that has significantly reduced class time. Third grade teachers in your district have been advised to focus the limited time they do have with students on fractions above all else. You know that you will not have the time to implement these lessons as they are written, and that you will need to eliminate some instructional activities or make them asynchronous assignments. Which of the following are reasonable modifications to these lessons given the circumstances? Select all that apply.

a. I will create an asynchronous lesson using a YouTube Video and BrainPop.
b. I will prepare a parent letter to share strategies and ideas about the unit including links to virtual manipulatives and games.
c. I will send the workbook pages home for the missed assignments and lessons.
d. I will show the step-by-step procedure for representing fractions greater than zero and less than or equal to 1 with denominators of 2, 3, 4, 6, and 8.
e. I will identify activities that could be implemented independently from this lesson to share with families.

11b. What considerations were at the front of your mind in answering this question?