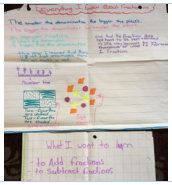
I Wonder

Description

This assessment-for-learning task can be used as an assessment tool and/or checkpoint activity. It may be completed in a group or as an individual assessment and used to guide instruction.



Mathematics

Students come to school with some understanding of fractions grounded in experience with 'fair shares'. This experience is often connected to contexts of sharing food equally (e.g., half of my sandwich, half of a cookie). If completed at the beginning of a school year, this task has the potential to guide instruction based on existing schemas of the students. It may also uncover common misconceptions which can be addressed with intentional instruction focused on cells in the Unit Fractions cluster in the Fractions Learning Pathways. Student responses to this task will help with decisions about where to focus instruction in the cluster. Mid-year, it could be used for guiding differentiated instruction based on what is known about student understanding or misconceptions. At the end of the year, it can be used for assessment of learning.

Curriculum Connections

Students will: (Mathematical Process Expectations)

- communicate mathematical thinking orally, visually and in writing, using a variety of representations (Communicating);
- reflect on and monitor their thinking to clarify their understanding (Reflecting);
- relate mathematical ideas to situations drawn from everyday contexts (Connecting).

Instructional Sequence

1. Ask students to think of a time that they used fractions in their daily lives. Students can use "think, pair, share" to generate ideas and discuss.
2. After a whole group debrief, divide students into groups of 2 or 3 to discuss: (a) what they know about fractions; and (b) what they are still wondering about. Have manipulatives available for each group.
3. Using a communication method of your choice (chart paper, apps or websites such as Padlet, Explain Everything, Notepad, etc.), have students record their thinking individually and then discuss as a small group, recording their collective thinking on BLM 1. As students are working, check in with groups using the key questions to prompt conversations and observations.
4. Share thinking across groups using consolidation method of choice (e.g., Gallery Walk, Pairs, Bansho etc.). Encourage students to seek answers to their wonderings in others' work and provide insight into other students' wonderings where possible. Some or all of these can remain posted in the room as a reference point during investigations and/or a celebration of learning.

Highlights of Student Thinking

Students may:

- have very little (or a lot of) understanding of fractions;
- represent fractions in a variety of ways;
- demonstrate misconceptions in 'What they know' section; and
- have procedural knowledge, but struggle to articulate understanding of the concepts discussed.

Key Questions

1. Can represent your understanding in a different way?
2. Can you explain why you chose this representation?
3. What do you notice about…?
4. What is a definition for…?
5. What other math have you done that is similar to this?

Materials

- BLM 1 (one copy per student, if using)
- Chart paper/markers and/or devices
- A variety of math manipulatives (e.g., relational rods, colour tiles, fraction pieces)