

Sharing Oranges

Strand:	Number and Number Sense
Topic:	Sharing equally with two sharers
Primary SOL:	K.5 The student will investigate fractions by representing and solving practical problems involving equal sharing with two sharers.
Related SOL:	None

Materials

- Oranges, cookies, brownie, or candy bar pieces for beginning activity
- Orange for each pair or small group of students
- Chart paper for recording
- Paper and pencil for small group work

Vocabulary

*equal share, fair share, *half, *halves, part, share, whole*

**Note: It is appropriate for the teacher to use the terms “half” and “halves” to introduce this vocabulary. However, students at this age are not expected to use fraction vocabulary or notation.*

Student/Teacher Actions: What should students be doing? What should teachers be doing?

1. Introduce the activity by dividing the orange, cookie, brownie, or candy bar into different sized parts so the students can see. Pose the question, “If I give everyone a piece of the _____, will this be an equal way of sharing the _____? Why or why not? How could the _____ be shared equally?” Have students brainstorm and discuss their ideas. (Students should realize that the parts are not equal-sized and thus not an equal way of sharing.)
2. Divide a second orange, cookie, brownie, or candy bar into equal shares using one of the student’s strategies for division, and let the students enjoy the treat while you begin the next part of the activity.
3. Next, explain to the students that they will be working with a partner or in a small group to solve the following problem: *There are two children who want to share one orange so that each child gets the same amount. Show how many orange pieces each child can have. Explain your thinking using pictures, numbers, and words.*
4. Discuss the problem with students. Ask, “What are we trying to figure out? How many children are sharing? How many oranges are they sharing? What are some ways we could show our work on this problem?”
5. Set the small groups to work and remind students that they need to draw pictures to show how many parts one child will get if they share the orange equally.
6. Allow students to work on the problem and then explain their thinking.
7. Monitor students as they work to see how they are approaching the problem. What strategies are they using? Are they sharing the oranges equally among the children in the problem? Do their pictures accurately represent equal parts? What difficulties are

they having? What are students doing well? How are they recording to show how many orange pieces one child will get?

8. After students have had time to explore the problem, pull the whole class back together to discuss the strategies students used to determine how many orange pieces each child would get if sharing the orange equally. Ask, *“How did you solve the problem? How many orange pieces did the children have to share? Did you use the whole orange without throwing any of it away? Did the children get equal parts? How do you know? Is there another way to solve this problem? How did you record your thinking? What numbers did you use to show how much one child will get? Does anyone know what the pieces/parts are called?”*
9. Record various students’ solutions on chart paper or the board during the whole class discussion. Be sure to discuss the various strategies students used to solve the problem.

Assessment

• Questions

- What are we trying to determine with the oranges?
- How many children are sharing?
- How many oranges are they sharing?
- What are some ways you could show your work on this problem?
- How did you solve the problem?
- Did you use the whole orange(s) without throwing any parts away?
- Did each of the children get an equal part? How do you know?
- Is there another way to solve this problem?
- Did anyone have a different picture for your solution?
- How did you record your thinking?
- What numbers did you use to show how much one child will get?
- Does anyone know what the pieces/parts are called?

• Journal/writing prompts

- Demonstrate for students what one out of two students’ shares looks like (e.g., half of a set of buttons, or half a pile of jelly beans). Then ask: “Draw what the other student’s share looks like.” Or: “Draw what the whole set looks like.”
- “You and a friend are sharing a pizza. Draw or show how you will share your pizza. How much will each person get?”

• Other Assessments (include informal assessment ideas)

- Provide a set of objects. Have students share the objects between two sharers.

Extensions and Connections (for all students)

- Give students opportunities to work with many different wholes and sharing situations. Always identify the whole, or show students the shares and ask them to describe what the whole would be.
- Incorporate sharing situations into everyday classroom tasks. For example, if you want to form two teams, you are “sharing” the people between the teams. Share books between two baskets.

- Explore sharing situations where there is a remainder (i.e., sharing three cookies among two people).

Strategies for Differentiation

- For students who are ready for more of a challenge, try using numbers that involve each child receiving a whole orange and part of another orange (e.g., two children could be sharing three oranges) to observe strategies students use to solve the problems and share the oranges equally.
- For students who may not be able to work with food, provide paper orange sections.

The following pages are intended for classroom use for students as a visual aid to learning.