Decomposing 10

Ten Flashing Fireflies
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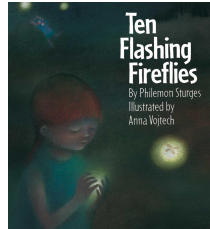
Task

I am going to give you 10 counters and a picture of a jar.
Can you find all the different ways to arrange the counters with some in the cup and some outside the cup?
Write number sentences to show each way.

Standards and Learning Targets

Standard K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way by using objects or drawings. Record each decomposition by a drawing or equation. For example, 5 = 2 + 3 and 5 = 4 + 1.

Learning Target: Decompose the number 10

Lesson Outline

Anticipate Strategies: Before you begin this lesson, anticipate the strategies your students might use to decompose the number 10 using the Picture Book Problem Monitoring Chart. For example, students might draw a jar and use counters to put some fireflies in the jar and some outside, some students might methodically find all the ways to make ten, and some students might work randomly.

Launch: Read aloud Ten Flashing Fireflies. As you read the story, note how many fireflies are inside the jar and how many are outside of the jar on each page.

After reading the book, pose the problem: I am going to give you 10 counters and a picture of a jar. Can you find all the different ways to arrange the counters with some in the jar and some outside the jar? When you find a way, I want you to record a number sentence to show how you made ten.

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Decomposing Ten Recording Sheet
***Keep in mind that your students may not have experiences with fireflies, so you might have to talk about what they are before reading the story. Here is a brief video of a child catching fireflies.
Explore: Students work independently or in pairs to figure out all the ways they can use their coins to make 10. If students appear to be struggling using the cup and counters, try giving them a ten frame. As students work, use the monitoring chart to identify strategies students are using as they decompose 10 to help facilitate the discussion.
Summarize: Once students have completed finding all of the ways they decomposed 10, ask them to share the number sentences they found. As they share, discuss strategies they used to ensure they found all the ways. As students share their thinking, create an anchor chart showing all the ways to make 10.
Extension Ideas: Practice decomposing tens using ten frames.

Thank you for using one of our Picture Book Tasks! We would love to know more about your students' strategies when solving the problem, ideas you had for improving the task, and other math problems you and your students noticed or wondered about after reading the book.

Please complete our Picture Book Task Survey so that we can learn more about your experience teaching, how students solve problems, and improve our Picture Book Task Bank.