

What's Behind My Back? 20 Cubes

Students work with 20 cubes, organized into two towers of 10 cubes. One partner snaps the tower and puts one part behind their back and shows the other part to their partner. The other partner figures out how many cubes are behind their partner's back. Students record an addition equation with a blank to represent the missing cubes. Students may write equations with the blank as the first or second addend. Ask students to explain what each number and blank in the equation represents in the context of the center activity (MP2).

What's Behind My Back (V1)

- Use 20 Cubes files

Preparation:

- Each group of 2 needs 20 connecting cubes.
- Recording sheet

Launch:

- Groups of 2
- Give each group 20 connecting cubes and a recording sheet.
- "We are going to play What's Behind My Back, this time with 20 cubes."
- "How did you figure out how many connecting cubes were behind your partner's back last time?" (I thought about an addition expression that would make 10. I subtracted what they showed me from 10.)
- "Let's play a round with 20."
- Show students 2 towers of 10 cubes. Put the towers behind your back. Break off and display 8 of the cubes.
- "This time when you play, you are going to record an addition equation with a blank to represent the missing cubes, before you figure out how many are behind your partner's back. What equation should we record?" ($8 + \underline{\hspace{1cm}} = 20$)
- 30 seconds: quiet think time
- Share responses.
- "How many cubes are behind my back? How do you know?" (12 because 2 more makes 10 and then here's another tower of 10.)
- 30 seconds: quiet think time
- 30 seconds: partner discussion
- "Play with your partner. Don't forget to record an equation each round."

Activity:

- 10 minutes: partner work time

Synthesis:

- Display 9 cubes.
- "What's an addition equation I can write to represent the number of cubes you know and the number of cubes you need to figure out?" ($9 + \underline{\hspace{1cm}} = 20$)
- "Tell your partner how you can figure out how many cubes are missing."
- Monitor for students who talk about making a 10 and knowing there is one more 10.
- Share responses.