

Lesson 3: Relate Addition and Subtraction within 20

Standards Alignments

Addressing 2.OA.B.2

Teacher-facing Learning Goals

- Find the number that makes equations within 20 true using the relationship between addition and subtraction.

Student-facing Learning Goals

- Let's find the number that makes equations with 20 true.

Lesson Purpose

The purpose of this lesson is for students to find the number that makes equations true within 20.

In this lesson, students apply the reasoning they used in previous lessons with addends that make 10 to find the number that makes an equations true that include the number 20. In the first activity, students learn stage 3 of the What's Behind My Back center in which they work with 20 cubes, organized into two towers of 10 cubes. In the second activity, students find the number that makes different equations with addition and subtraction expressions true. Throughout the lesson, students have opportunities to use what they know about the structure of whole numbers and the relationship of addition and subtraction to find the unknown numbers and explain their methods (MP3, MP7).

Math Community

In the lesson synthesis, students use their Mathematical Community Poster to create norms for the classroom.

Access for:

Students with Disabilities

- Representation (Activity 1)

English Learners

- MLR7 (Activity 1)

Instructional Routines

Number Talk (Warm-up)

Materials to Gather

- Connecting cubes: Activity 1, Activity 2

Materials to Copy

- What's Behind My Back Stage 3 Recording Sheet (groups of 1): Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	20 min
Activity 2	15 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

What makes someone good at math? In what ways are you making assumptions about which of your students are good at math?

Cool-down (to be completed at the end of the lesson)

 5 min

Which Equations Are True?

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Student-facing Task Statement

Find the number that makes each equation true.

1. _____ + 17 = 20
2. $20 - 9 =$ _____
3. _____ + 5 = 20
4. $20 -$ _____ = 8

Student Responses

1. 3. Sample response: 18, 19, 20. I counted 3 more.
2. 11. Sample response: $9 + 1 = 10$, $10 + 10 = 20$, $10 + 1 = 11$
3. 15. Sample response: $5 + 5 = 10$, $10 + 10 = 20$, $10 + 5 = 15$
4. 12. Sample response: $8 + 2 = 10$, $10 + 10 = 20$, $10 + 2 = 12$