14: 1 Scoop, 2 Scoops, 3 Scoops

Number of Students

Partner pairs

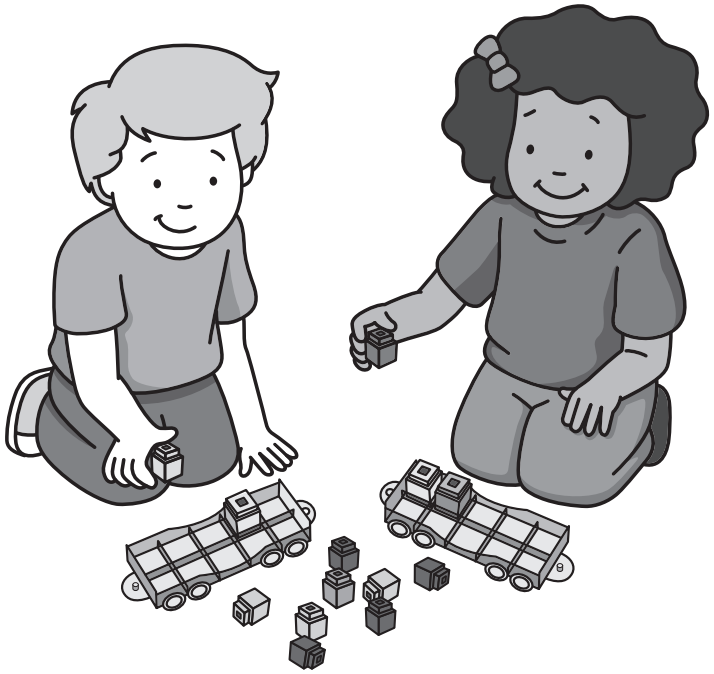
Materials

For each student:

- Unifix Ten-Frame Trains (commercially available)
- 20 Unifix Cubes

Overview

In this activity, partner pairs of students will "scoop" handfuls of Unifix Cubes with the purpose of joining (adding) the handfuls of cubes together to create a Unifix train.



Common Core State Standards

Content Standards:

Grade Level: K

Domain: Operations and Algebraic Thinking (K.OA)

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Practice Standards:

2. **Reason abstractly and quantitatively.**

   Students must make sense of the quantities involved in the activity.

4. **Model with mathematics.**

   Students will use Unifix Cubes to model addition.

Presenting the Activity

1. Distribute 20 cubes to each student.
2. Group the students into partner pairs.
3. Say to the students:

   “Student 1, scoop one handful of Unifix Cubes, and count the cubes as you place them on your ten-frame train.

   Student 1, now state the number of cubes you placed (for example, “6”).

   Student 2, scoop one handful of Unifix Cubes, and count the cubes as you place them on your ten-frame train.

   Student 2, state the number of cubes you placed (for example, “5”).

   Student pairs, join your two trains together and state the number of cubes each of you placed, such as “6 and 5.”

   Student pairs, add (6) cubes and (5) cubes.

   Now explain your strategy for finding the total.

4. Round 2 begins with the partner pairs each scooping **two** handfuls of cubes.
5. Say to the students:

   “Student 1, count both handfuls of your cubes (for example, “9”) and place them on your ten-frame train.

   Student 2, do the same (for example, “8”).

   Student pairs, join both trains together to find the total number of cubes.

   Explain your strategy for finding the total.

6. Finally, the partner pairs each scoop **three** handfuls of cubes and repeat the process described above.
7. Say to the students:

   “Student 1, count all three handfuls of your cubes (for example, “3 + 2 + 5 = 10”) and place them on your ten-frame train.

   Student 2, count all three handfuls of your cubes (for example, “2 + 3 + 4 = 9”) and place them on your ten-frame train.

   Student pairs, join both trains together to find the total number of cubes (for example, 10 + 9 = 19).

   Now explain the strategy you used for finding the total.

Assessing Student Responses

The following questions will help you assess your students’ responses to the activity:

- Did the student(s) use the appropriate terminology, such as *added to*, *joined*, *equals*, and so on?
- Did the student(s) understand the concept of addition?
- Did the student(s) use strategies for combining the sets?

30: Sum to 20

Number of Students

2–3

Materials

For each group:

- Ten-Frame Cards 1–20, 2 sets (pages 114–115)
- Scrap paper

Overview

The game, like "Go Fish," involves students asking for Ten-Frame Cards from other players to make the sum of 20 using two or three cards.

Common Core State Standards

Content Standards:

Grade Level: 1

Domain: Operations and Algebraic Thinking (1.OA)

Represent and solve problems involving addition and subtraction.

2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Add and subtract within 20.

6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.

Practice Standards:

2. Reason abstractly and quantitatively.

Students have been making 10 using various strategies, such as counting on. They incorporate these strategies in working with more than two addends.

7. Look for and make use of structure.

Activities that focus on subitization have been used extensively in Kindergarten. Similar observations work with sums to 20.

Presenting the Activity

1. Distribute a deck of Ten-Frame Cards to each group of players
2. Say to the students:

> This is a card game like "Go Fish." One of you starts by dealing three cards to each player. Then place the remaining cards facedown on the playing area.
>
> Look at your cards. You want the numbers represented on the ten-frames to add up to 20.
>
> If you have two or three cards in your hand that add up to 20, or if you have the 20 Ten-Frame Card, lay down those cards on your turn.
>
> On scrap paper, write an addition number sentence showing the sum you have.
>
> If none of your cards add up to 20, figure out what Ten-Frame Card you need to make 20. Write a subtraction number sentence to show what you need to make 20. Then, on your turn, ask the player on your left for that particular Ten-Frame Card.
>
> If the player has that card, he or she gives it to you. You can then lay down your cards that sum to 20. If the player does not have the card you need, he or she will say "Go Fish" and you will need to draw a Ten-Frame Card from the deck.
>
> Then the next player will ask for a card.
>
> Every time you lay down all or some of your cards, draw again so that you always have three cards in your hand.

3. The game is over when all of the cards have been drawn. The player who has laid down the most cards is the winner.
4. You may need to provide an example for students, such as the following:

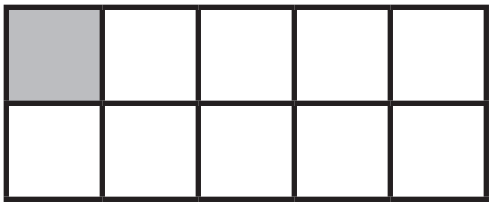
> I have a Ten-Frame Card representing 2, another one representing 5, and another representing 7. So, $2 + 5 + 7 = 14$. What Ten-Frame Card should I ask for on my turn?
>
> I could ask for 6, so I could lay down all of my cards.
>
> I could ask for 13, since $2 + 5 + 13 = 20$.
>
> I could ask for 11, since $2 + 7 + 11 = 20$.
>
> I could ask for 8, since $5 + 7 + 8 = 20$.

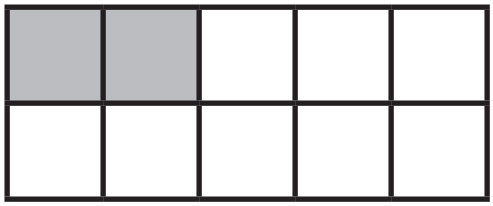
5. Allow time for students to finish the game.

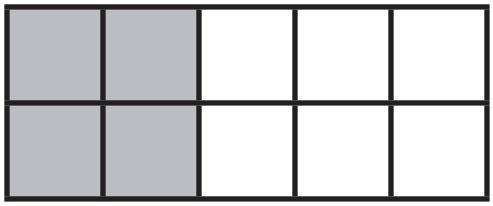
Assessing Student Responses

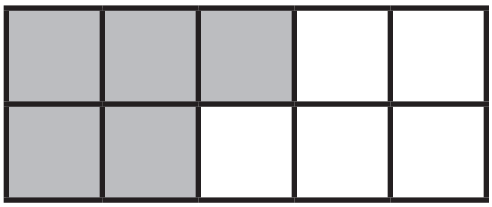
- The following questions will help you assess your students' responses to the activities:
- Did the student(s) correctly find the sum of numbers represented on the Ten-Frame Cards?
- Did the student(s) write the correct addition number sentence for each turn?
- Did the student(s) write the correct subtraction number sentence for each turn?
- Did the student(s) use any noticeable fact strategies in finding the sums or differences?

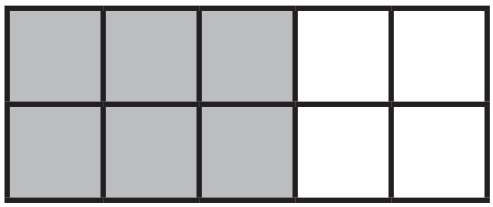
Ten-Frame Cards 1–10

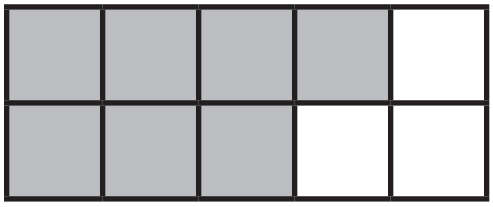


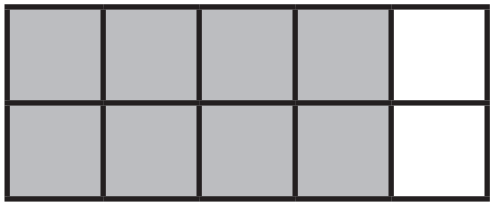


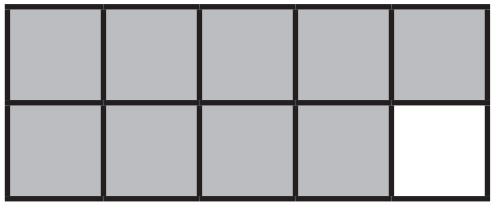


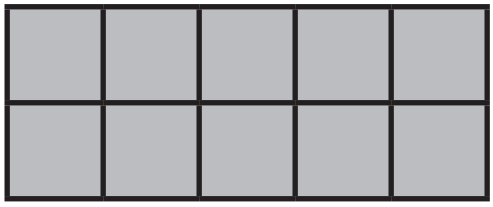












Ten-Frame Cards 11–20