Nasco Education

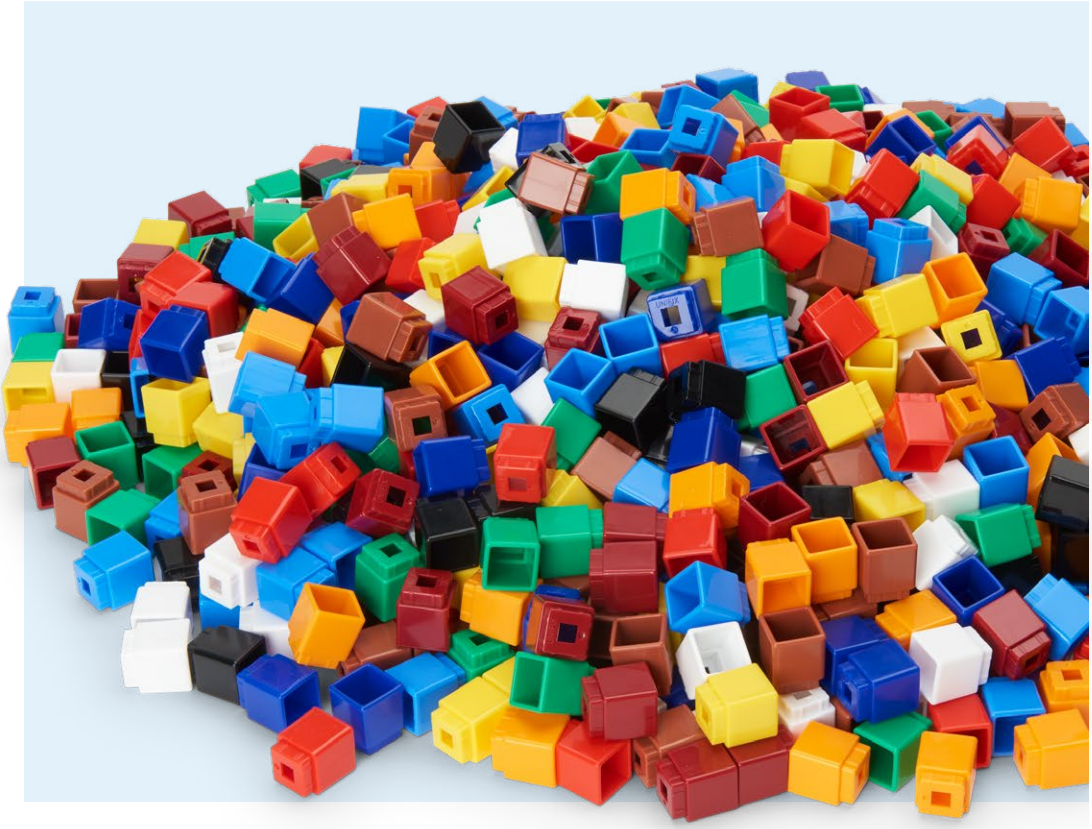
LESSON PLAN

Math

Developed with Kristin Hotter

Volume 37 | Gr. K-2

Subtraction with Unifix® Cubes

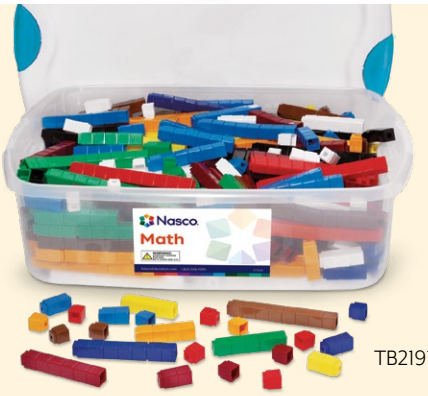


CCSS.MATH.CONTENT.K.OA.A.1
Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

CCSS.MATH.CONTENT.1.OA.D.8
Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

CCSS.MATH.CONTENT.1.OA.C.6
Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.

CCSS.MATH.CONTENT.2.OA.B.2
Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.



TB21918

Materials list

- Unifix® Cubes Set of 3,000 **(TB21918)**
- Unifix® Cubes Set of 1,000 **(TB11561)**
- Unifix® Cubes Set of 100 **(TB11548)**

20 Unifix® Cubes needed per student

Content

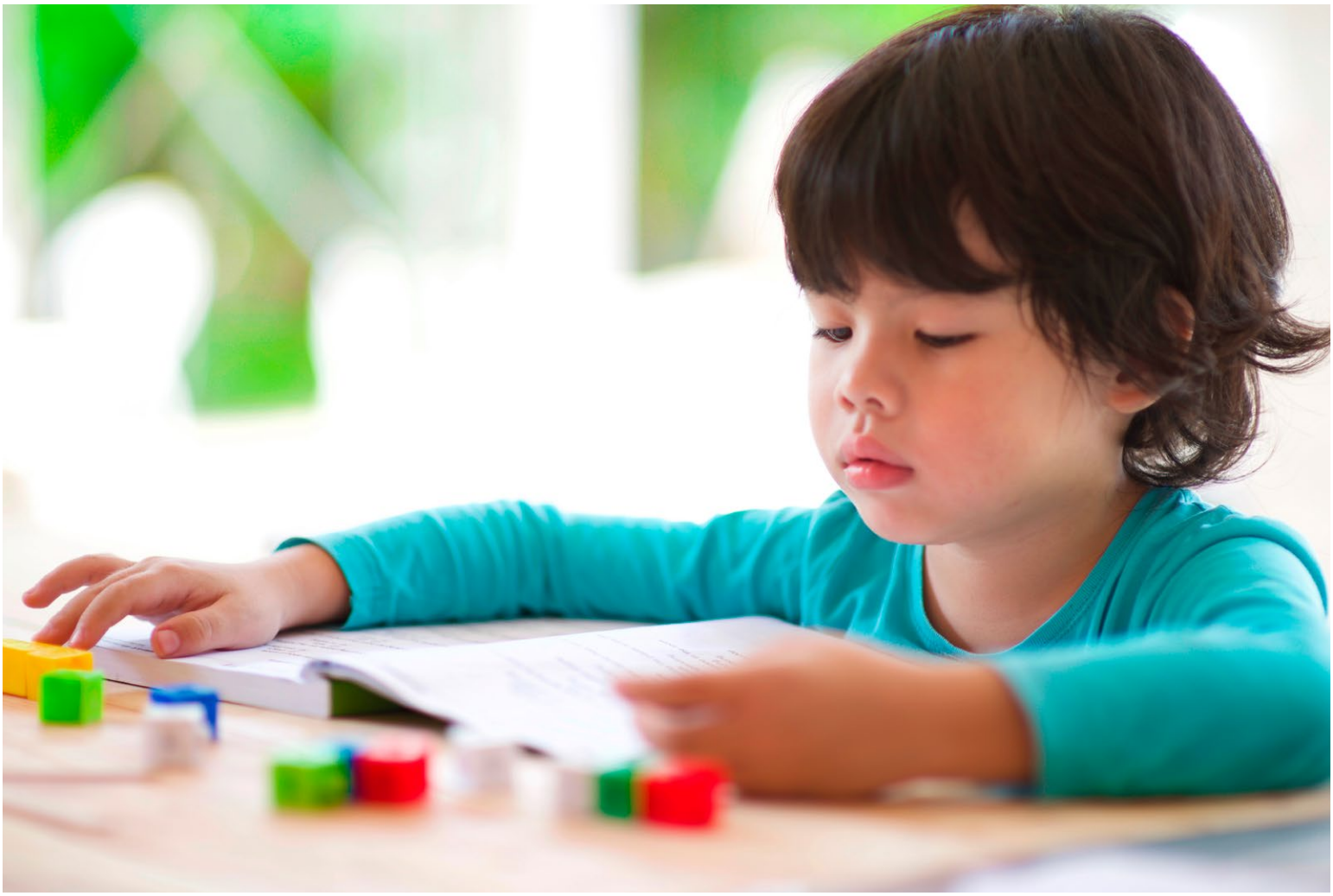
In this lesson, students will be introduced to the algebraic foundations of subtraction. They'll begin by using Unifix® Cubes to practice subtraction problems up to 20. As they work through the lesson, they'll discover how to use those Unifix® Cubes to determine an unknown number in a given subtraction problem. They'll be provided with additional practice when they play a game called ***Subtract It*** with a partner at the conclusion of the lesson.

Included with this lesson, are two sets of cards to promote additional student learning on the topic. One provides additional practice of subtraction equations with numbers up to 10. The other provides additional practice with equations with numbers up to 20. The independent learning cards will need to be copied and cut prior to the lesson. One set of cards is needed for every pair of students.

Objectives

Students will...

- Be able to determine an unknown number in a subtraction sentence
- Be able to use objects to subtract with numbers up to 20



Introduction

Today we're going to learn a little bit more about subtraction. Remember that when we "subtract" that's just a fancy way to say "take away." Before we take our next step, let's review what we already know about subtraction.

To introduce students to Unifix® Cubes, use to demonstrate these problems.

- I have 7 Unifix® Cubes. If I subtract, or take away, 3 Unifix® Cubes, how many do I have left?
- I have 12 Unifix® Cubes. If I subtract, or take away, 7 Unifix® Cubes, how many do I have left?

Once you have modeled the above problems, ask students to come up and help you with the problems. You can have one student do the entire problem or ask three different students to each complete one part of the problem.

Write 5 - 2 = ___

We have 5 Unifix® Cubes. If we subtract, or take away, 2 Unifix® Cubes, how many do we have left?

Write 9 - 6 = ____

We have 9 Unifix® Cubes. If we subtract, or take away, 6 Unifix® Cubes, how many do we have left?

Write 14 - 8 = ___

We have 14 Unifix® Cubes. If we subtract, or take away, 8 Unifix® Cubes, how many do we have left?

Write 17 - 5 = ____

We have 17 Unifix® Cubes. If we subtract, or take away, 5 Unifix® Cubes, how many do we have left?

Activity

Write 7 - ___ = 2.

- How is this problem similar to the other problems we have solved? (It's subtraction, there is a missing number, there are two numbers.)
- How is this problem different than the other problems we have solved? (The missing number is in a different spot.)

Sometimes we have a different missing piece that we need to find when we're solving math problems.

Let's think about this problem.

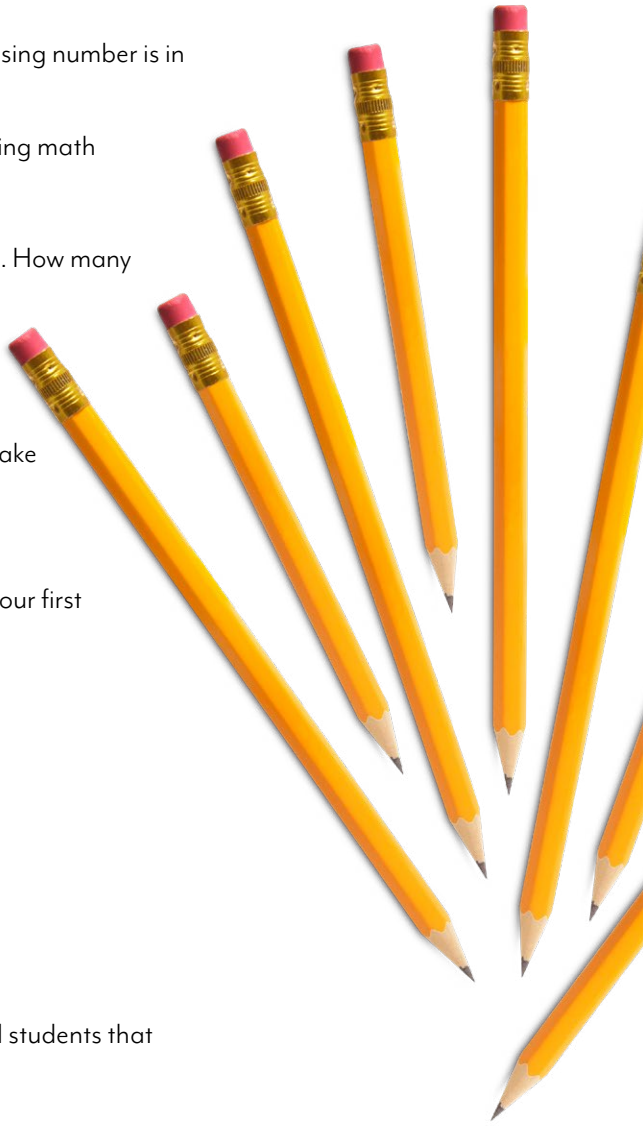
James had 7 pencils. He gave some of his pencils to Julie. Now he has 2 pencils left. How many pencils did he give to Julie?

- What do we know? (James started with 7 pencils. He ended with 2.)

Let's use Unifix® Cubes to help us figure out just how many pencils James gave to Julie. (Create a line of 7 Unifix® Cubes.)

- I have 7 Unifix® Cubes. Each one represents one of James' pencils. I'm going to take 2 Cubes. Those 2 Cubes are the 2 pencils James has left.
- How many did he give to Julie? (5)
- How do you know? (There are 5 Unifix® Cubes left.)

Look at that. We solved this problem almost exactly the same way that we solved our first problems.



Try another problem.

Write 11 - ___ = 7

First, I need to create a line of 11 Unifix® Cubes.
Next, I need to move 7 over. Those are the 7 that I'm left with at the end.

- How many did I take away to end up with 7? (4)
- 11 - 4 = 7

Write 18 - ___ = 11

Ask a student to come up and build a tower of 18 Unifix® Cubes.
Ask another student to come up and move 11 of those Unifix® Cubes over. Remind students that the different between 18 and the missing number.

- How many were taken away to end up with 11? (7)
- What is the missing number? (7)
- 18 - 7 = 11

Check for understanding

Use the first two problems of the student worksheet to check for student understanding. Circulate and ask students to use their Unifix® Cubes to show you they are able to construct and deconstruct the problem.

Intervention

Work only with problems up to 10.

Extension

Show students how these problems relate to addition. Ask students to create fact families for some of the problems they've solved.

Example:

14 - ___ = 8

14 - 6 = 8	14 - 8 = 6	6 + 8 = 14	8 + 6 = 14

Name: _____ Date: _____

Use Unifix® Cubes to solve.

8 - ☐ = 3	9 - ☐ = 6	13 - ☐ = 7
16 - ☐ = 10	12 - ☐ = 5	11 - ☐ = 3
14 - ☐ = 8	10 - ☐ = 2	17 - ☐ = 8

Name: _____ Date: _____

The goal of the game is to give students additional practice with subtraction problems with a missing number. Depending on where your students are, they can use either set of independent learning cards to play the game.
Students will work in pairs to play the game. They will keep score by tallying the missing number of each problem.

Step 1: Stack the *Subtract It!* cards face down.

Step 2: Player 1 draws the top card. Using Unifix® Cubes, Player 1 solve the problem.
Example: Player 1 draws 15 - ___ = 8 . Since the answer is 7, Player 1 gets 7 points for this problem.

Step 3: Player 2 draws the next card and uses Unifix® Cubes to solve the problem.
Example: Player 2 draws 8 - ___ = 3. Since the answer is 5, Player 2 gets 5 points for this problem.

Play continues until all cards are used or until one player reaches a certain score, such as 50.

Independent Learning Cards (through 10)

Cut these cards out prior to starting lesson. You may also want to laminate them to use over and over.

3 - ☐ = 1	4 - ☐ = 1	4 - ☐ = 2	5 - ☐ = 1
5 - ☐ = 2	5 - ☐ = 3	5 - ☐ = 4	6 - ☐ = 1
6 - ☐ = 2	6 - ☐ = 3	6 - ☐ = 4	6 - ☐ = 5
7 - ☐ = 1	7 - ☐ = 2	7 - ☐ = 3	6 - ☐ = 4

cont. next page

Independent Learning Cards (through 10) cont.

Cut these cards out prior to starting lesson. You may also want to laminate them to use over and over.

7 - ☐ = 5	7 - ☐ = 6	8 - ☐ = 1	8 - ☐ = 2
8 - ☐ = 3	8 - ☐ = 5	8 - ☐ = 6	9 - ☐ = 1
9 - ☐ = 2	9 - ☐ = 3	9 - ☐ = 4	9 - ☐ = 5
9 - ☐ = 6	9 - ☐ = 7	9 - ☐ = 8	10 - ☐ = 1
10 - ☐ = 2	10 - ☐ = 3	10 - ☐ = 4	10 - ☐ = 5
10 - ☐ = 6	10 - ☐ = 7	10 - ☐ = 8	10 - ☐ = 9

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Independent Learning Cards (through 20)

Cut these cards out prior to starting lesson. You may also want to laminate them to use over and over.

5 - ☐ = 2	6 - ☐ = 4	7 - ☐ = 3	8 - ☐ = 3
8 - ☐ = 6	9 - ☐ = 5	9 - ☐ = 6	10 - ☐ = 7
10 - ☐ = 4	11 - ☐ = 7	11 - ☐ = 5	12 - ☐ = 9
12 - ☐ = 8	12 - ☐ = 5	13 - ☐ = 9	13 - ☐ = 8
13 - ☐ = 5	13 - ☐ = 7	14 - ☐ = 6	14 - ☐ = 9
14 - ☐ = 7	15 - ☐ = 4	15 - ☐ = 9	15 - ☐ = 8

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Independent Learning Cards (through 20) cont.

Cut these cards out prior to starting lesson. You may also want to laminate them to use over and over.

15 - ☐ = 12	16 - ☐ = 7	16 - ☐ = 5	16 - ☐ = 12
17 - ☐ = 8	17 - ☐ = 11	17 - ☐ = 6	18 - ☐ = 7
18 - ☐ = 12	18 - ☐ = 10	19 - ☐ = 5	19 - ☐ = 8
19 - ☐ = 13	20 - ☐ = 14	20 - ☐ = 7	20 - ☐ = 4

Blank learning cards

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Students can use these cards to create their own equations.

Cut these cards out prior to starting lesson.

_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____
_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____
_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____
_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____	_____ - _____ = _____