

Grade 1 Lesson Summary

Overall Objectives

This lesson will help students to:

- Find two numbers that combine to make 10;
- Add numbers using concrete materials;
- Record addition number sentences.

Learning Expectations

Students will:

- Understand whole numbers by exploring number relationships using concrete materials (e.g., demonstrate with blocks that 7 is one less than 8 or two more than 5); 1m1
- Understand and explain basic operations (addition and subtraction) of whole numbers by modelling and discussing a variety of problem situations (e.g., show that addition involves joining); 1m6
- Investigate number meanings (e.g., the concept of 5); 1m19
- Demonstrate that addition involves joining and that subtraction involves taking one group away from another; 1m28
- Represent addition and subtraction sentences (e.g., $5 + 6 = 11$) using concrete materials (e.g., counters); 1m30
- Identify the effect of zero in addition and subtraction; 1m31
- Mentally add one-digit numbers; 1m32
- Use concrete materials to help solve simple number problems; 1m35
- Describe their thinking as they solve problems; 1m36
- Explore patterns and pattern rules. 1m82

The code that follows each learning expectation comes from the Ontario Curriculum Unit Planner. See www.ocup.org for further details.

Materials

- Interlocking cubes snapped together in rows of 1 to 10 cubes
- Number cube (numbers 1 to 6) per pair of students
- Large quantity of interlocking cubes for each pair of students
- Home Connections – “Make 10!” Activity Sheet (one per student)

Approach

Get Started

In a guided learning session:

- Show students cubes that have been snapped together in rows (1 to 10 cubes). For each row, ask, “How many cubes are in this row? How many cubes would I need to add to make 10?” Snap on the cubes needed to make a row of 10, and have the students count the cubes.
- Explain the procedures for finding a partner: “I am going to give you a row of cubes. You need to look at the colour of your cubes and count your cubes. Then you need to find the person with the same colour. If you and the other person have 10 cubes all together, then you are partners.”

Work on It – Model the Activity

In a guided learning session:

- Guide two students in demonstrating the activity:
 - Student A rolls a number cube.
 - Student B snaps together, in a row, the number of cubes shown on the number cube (using one colour).
 - Student A snaps on more cubes of a different colour to make a row of 10 cubes.
 - Both students count to make sure that the row has 10 cubes.

Work on It – Observe the Students

In a shared learning session:

- Observe how well students are able to make rows of 10 cubes.
- Probe students’ thinking by asking questions such as:
 - How many cubes did you snap together?
 - How many cubes do you need to add to make 10?
 - How can you check to make sure that you have 10?
 - What are some numbers that go together to make 10?

Reflect and Connect

In a guided learning session:

- Help students reflect on the activity and their learning by asking questions such as:
 - What if you had 3 cubes? How many more cubes would you have to add to make 10?
 - What if you had 6 cubes? How many more cubes would you have to add to make 10?
 - What if you have a row of 10 cubes, and you break off 4 cubes. How many cubes are left in the other part?
 - What number goes with 2 to make 10? What number goes with 8 to make 10?
 - What are all the ways to make 10?
- On the board or on chart paper, develop a list of number sentences for 10. Begin by asking students to tell the number that needs to be added to 1 to make 10. Record $1 + 9 = 10$. Continue to develop the list:
 - $1 + 9 = 10$
 - $2 + 8 = 10$
 - $3 + 7 = 10$
 - $10 + 0 = 10$
- Ask students to describe any patterns they observe in the list of addition sentences for 10.

Assessment

Observe students to assess how well they:

- Find and describe number combinations for 10;
- Record make-ten combinations as addition sentences (e.g., $4 + 6 = 10$);
- Recognize and describe number patterns.

Extensions/Adaptations

If students are not developmentally ready for this activity, provide them with a large quantity of interlocking cubes and challenge them to make as many rows of 10 as possible.

For able students, ask them to use two colours of interlocking cubes to show all the ways to make 10 (0 green and 10 blue, 1 green and 9 blue, 2 green and 8 blue, 3 green and 7 blue, etc.). Ask them to describe the patterns they notice.

Students with a sound understanding of addition can use a make-ten strategy in addition questions such as $3 + 4 + 7$. Students add the two addends that equal 10 first ($3 + 7$), and then add on the remaining addend ($10 + 4$). Ask the students to use counters to show how changing the order of the addends does not change the sum.

Home Connections

Provide each student with a copy of the Home Connections – “Make 10!” Activity Sheet. Encourage the students to play the “Make 10!” game with someone at home. Provide opportunities for students to practise how they will explain the game to friends and family members.