

## Grade 2 Lesson Summary

### Overall Objectives

This lesson will help students to:

- Represent two-digit numbers
- Count by 10's and 1's
- Trade 10 ones for a ten
- Compare numbers

### Learning Expectations

Students will:

- Represent whole numbers using concrete materials, drawings, numerals, and number words; 2m1
- Compare and order whole numbers using concrete materials, drawings, numerals, and number words to develop an understanding of place value; 2m2
- Read and print number words to twenty; 2m9
- Count by 1's, 2's, 5's, 10's, and 25's beyond 100 using multiples of 1, 2, and 5 as starting points; 2m10
- Compare, order, and represent whole numbers to 100 using concrete materials and drawings; 2m14
- Identify place-value patterns (e.g., trading 10 ones for 1 ten) and use zero as a place holder; 2m17

The code that follows each learning expectation comes from the Ontario Curriculum Unit Planner. See [www.ocup.org](http://www.ocup.org) for further details.

### Materials

- Base-ten blocks (tens and ones)
- Place-value mat for each pair of students
- Number cube for each pair of students
- Roll and Risk Recording Sheet for each pair of students
- Home Connections – Make 80!

### Approach

#### *Get Started*

In a guided learning session:

- Write “34” on the board, and ask students to represent the number using base-ten blocks on a place-value mat.
- Roll a number cube and announce the number. If you announce “3”, for example, students add 3 ones cubes to their set of base-ten blocks.
- Roll the number cubes a few more times, and have students add the amount to their collection of base-ten blocks. Remind students to trade 10 ones cubes for a tens rod whenever they have 10 or more ones.

- When the number represented by the base-ten blocks is close to 50, ask the students:
  - What number do I need to roll to get us over 50?
  - What other number would get us over 50?
  - What number would we have if we added your number to \_\_\_?

### *Work On It – Model the Activity*

In a guided learning session, explain how the students will be playing Roll and Risk with a partner:

- Choose two students from the class for the demonstration.
- To begin, the students roll a number cube twice to determine the digits of a two-digit target number. The first roll will provide the number of tens and the second roll will provide the number of ones. Students record the number on a copy of the Roll and Risk Recording Sheet and represent the number using base-ten blocks on a place-value mat.
- The students then take turns rolling the number cube. For each new number, they decide whether they wish to add that many tens or that many ones to their total number, keeping in mind the goal of the game – to get as close to the target number as possible without going over it. When the students believe they are as close to the target number as they can get, they quit the game and record their results on their recording sheet.
- After playing the game 5 times, the students look at the results on their recording sheet and circle the number that came closest to the target number without going over it.
- Now the whole class plays the game.

### *Work On It – Observe and Assist Students*

In a shared learning session:

- Observe how well students represent numbers using base-ten blocks, how well they trade 10 ones for a ten, how well they explain and apply strategies for getting close to a target number without going over, and how well they count by 10's and 1's.
- Probe students' thinking by asking questions such as:
  - Have you been able to get close to the target number? How close were you able to get?
  - Have you ever gone over?
  - How do you decide whether to choose tens or ones?
  - What strategies do you have for getting close to the target number without going over it?
  - How do you use counting in this activity?

### *Reflect and Connect*

In a guided learning session:

- Help your students reflect on the activity and their learning by asking questions such as:
  - Why is "Roll and Risk" a good name for this activity?
  - What strategies did you use in order to get close to your target number without going over it?
  - How did you decide whether to choose tens or ones after you rolled the number cube?
  - How did you use counting in this activity?
  - What did you need to do if you counted 10 or more cubes in the ones column?
  - What did you learn about numbers from this game?

## Assessment

Observe how well students:

- Represent numbers using base-ten blocks;
- Trade 10 ones for a ten;
- Explain and apply strategies for getting close to a target number without going over it;
- Count by 10's and 1's.

## Adaptations/Extensions

Simplify the game for students who are experiencing difficulty with the game or with place-value concepts. Allow them to roll the number cube and place that number of ones cubes in the ones column, trading 10 ones cubes for a tens rod when appropriate. The game finishes when a player acquires 5 tens rods.

Students requiring an extra challenge can play Take Away with a partner. Each player begins with a hundreds flat. Players take turns rolling a number cube and taking away that many tens rods or ones cubes. The player trades the hundreds flat for 10 tens rods, and a tens rod for 10 ones cubes when appropriate. A player can no longer play when the player rolls the number cube and cannot remove the corresponding number of pieces. The goal of the game is to be the player who gets closest to 0.

## Home Connections

Encourage students to play **Make 80!** with someone at home. Play the game in class to familiarize students with the activity.