MATHS

Lesson 11

Year 1

Topic: Number and place value

Representing two-digit numbers

Lesson concepts

- Number — Quantity
- Number — Counting
- Addition and subtraction — Part–part–whole (partitioning)
- Representations — Concrete
- Representations — Symbolic

Today students will:

- partition two-digit numbers
- represent two-digit numbers.

Resources

Digital

Video — Ways to represent two-digit numbers (3:30)

Find and prepare

Bundling materials (for example: blocks/ beads/shells/pasta/counters and resealable bags or paper plates; iceblock sticks and rubber bands)

Tens and ones number words (cut out from Sheet 5 in Lesson 7)

Sheets

Number symbols 0–100 (cut out)

Folded cards (cut out)

Hundred board 0–99

Key terms

counting on, digit, partitioning, represent

For definitions and explanations of terms, please see the Glossary.

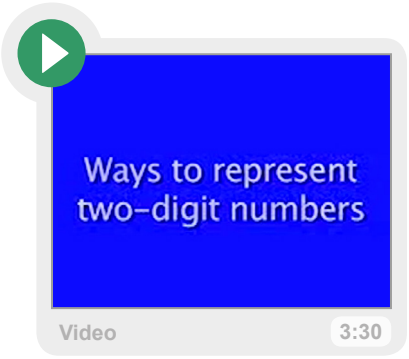
Lesson

Introduce the lesson

Explain to students

"In this lesson, you will learn about ways to show partitioning and two-digit numbers. The numbers 0 to 9 only have one digit. Two-digit numbers are all the numbers from 10 to 99."

Represent two-digit numbers



- Watch the **Video — Ways to represent two-digit numbers**.

  In this video, students are shown ways to represent or show, the two-digit number '52' using:
  - the hundred board
  - symbols and words
  - a collection of materials (not bundled)
  - bundled materials.

  Students are also shown how to 'use counting', or count on 1 or 2, from tens numbers to identify the total.
- Give students bundling materials (for example: blocks/beads/shells/pasta/counters and resealable bags or paper plates; iceblock sticks and rubber bands).

Say to students

"It's your turn to represent a two-digit number in different ways."

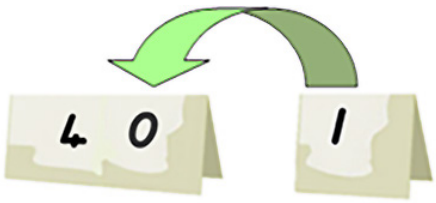
- Ask students to:
  - choose another two-digit number that ends in 1 or 2 (such as 41) and locate it on the **Hundred board 0–99**
  - write the numeral on a card
  - count a collection of 41 items.

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

Identify and record the tens and ones

- Ask students to:
  - bundle the collection into parts of tens and ones (for example, four bundles of 10 with 1 extra)

  - skip count the bundles of 10 (that is, count '10, 20, 30, 40')
  - 'use counting' or count on 1 (that is, count '40, 41').
- Help students to represent the tens and ones using cards cut from **Folded cards**.
- Ask students to:
  - fold each card on the solid line to create a stand-up numeral card
  - find the tens numeral card to match their representation (40)
  - find the ones numeral card to match their representation (1)
  - overlay the cards to create the two-digit numeral



  - find and assemble the number words for the tens number (forty) and the ones number (one) (cut from **Sheet 5 — Tens and ones number words** in Lesson 7)
  - join the words together with the hyphen card to create the new number word.

Explain to students

"The hyphen allows you to join words together to make new words."

Focus questions

Q. *How did you arrange the collection?*

A. For example: in groups of 10 and 1 left over

Q. *What parts can you see in this arrangement?*

A. For example: four parts of 10 and a part of 1

Q. *How could you tell how many without counting each item?*

A. For example: count in 10s and then count on 1

Q. *Which arrangement made it easiest for you to count the collection? Why?*

A. For example: when they were arranged in groups of 10

Q. *How could you show the number '42' using folded cards?*

A. Remove the '1' card and replace it with the '2' card.

Explore representations of two-digit numbers using partitioning

- Ask students to practise partitioning other two-digit numbers by:
  - choosing a two-digit number from the **Hundred board 0–99**
  - skip counting to identify the total
  - representing the same two-digit number using other structured materials, such as blocks
  - skip counting to identify the total
  - repeating the activity using dried beans or other unstructured materials, such as shells or beads.