# Bundle Up Tens and Ones

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|---|---|---|---|
| **Teacher** | | **Class** | Year 2 |
| **Subject** | Maths | **Topic** | Partitioning two-digit numbers |
| **Date** | | **Room** | |
| **Lesson length** | 60 minutes | **Country** | United Kingdom |

Students learn what each digit in a two-digit number is worth. They bundle sticks into tens and write numbers as tens plus ones.

## Curriculum links

- recognise the place value of each digit in a two-digit number (10s, 1s) [1]
- identify, represent and estimate numbers using different representations, including the number line [1]

## Learning objectives

- Students will recognise how many tens and ones make a two-digit number.
- Students will explain what each digit in a two-digit number is worth.
- Students will write a two-digit number as tens plus ones using bundles.

## Success criteria

- I can say how many tens and ones are in a number.
- I can say what each digit in my number is worth.
- I can write my number as tens plus ones.

## What students already know

Show 10 loose sticks. Ask: how could we count these fast? Listen for grouping into ten. Remind them to count in 10s from any number, forward and backward [1].

## Key words

| | |
|---|---|
| **tens** | a bundle made of 10 joined together [7] |
| **ones** | loose cubes counted on their own [7] |
| **partition** | to split a whole up into parts [4] |
| **place value** | what a digit is worth because of where it sits [1] |

## Materials

- counting sticks
- rubber bands
- tens and ones mats
- base-ten blocks
- place value charts
- whiteboards and pens
- Slides 1-4, 7, 10-11
- Worksheet pages 1 and 5

## Before the lesson

- Print Worksheet page 1 and Worksheet page 5, one copy per pair.
- Test Slides 1-4, 7, 10-11 on the board and have number cards 10-99 ready.
- Count out pots of counting sticks, rubber bands, tens and ones mats and base-ten blocks.
- Set tables for pairs with space to bundle and write.

## Lesson outline

**0–10 min** **Starter** 10 min · Whole class

*To spark ideas about fast counting and recall that ten ones make one ten.*

**YOU DO**

1. Tip a pot of counting sticks onto the carpet to set the scene.
2. Say the hook and invite ideas for tidying and counting fast.
3. Gather 12 sticks and wrap 10 with a rubber band, counting aloud.
4. Show the bundle and 2 loose sticks and ask what changed.

**STUDENTS DO**

1. Watch the spill and share quick counting ideas with a partner.
2. Count aloud in 10s as the teacher bundles.
3. Say what the bundle and loose sticks show.

**Say:** Oh no, all my counting sticks fell on the floor! How can we tidy and count them really fast without losing track? Watch how I tidy ten little ones into one neat bundle. Tell your partner what changed when I wrapped the band.

**Worked example:** 12 loose sticks: wrap 10 into 1 bundle, leave 2 loose. That is 1 ten and 2 ones. Ten little ones join together to make one big ten. So 12 = 10 + 2.

**Ask:** How many loose sticks fit in one bundle? (10, ten ones make one ten.) · I have 1 bundle and 2 loose. What number is that? (12, 1 ten and 2 ones.)

**Check understanding:** Hold up fingers for how many are in a bundle. If unsure, re-wrap and count 10 loose sticks together again.

**Support:** Let students hold the bundle and count the 10 sticks inside one by one. **Stretch:** Ask what 2 full bundles with 0 loose would make.

Use: Slides 1-2

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10–20 min **Teaching** 10 min · Whole class

*To teach tens, ones and partition using bundles and charts.*

**YOU DO**

1. Show bundles of sticks and base-ten rods on a place value chart [2].
2. Model 34 as 3 tens and 4 ones and write 30 + 4.
3. Teach key words tens, ones and partition with actions.
4. Compare 42 and 24 to show digit order changes value.

**STUDENTS DO**

1. Chorus the tens and ones for each build shown.
2. Repeat key words and show tens with a wide arm bundle and ones with finger dots.
3. Vote with thumbs for which build matches the number.

**Say:** In 23, 2 means 20! The first digit shows tens, the second shows ones. Splitting numbers apart like this is called partitioning [3]. We say pupils recognise the place value of each digit in a two-digit number (10s, 1s) [1].

**Worked example:** 34 has three tens and four ones [7]. Show 3 tens rods and 4 ones cubes. 3 tens = 30, so 34 = 30 + 4. 21 is the same as 20 + 1 [3] and 45 is the same as 40 + 5 [3].

**Ask:** In 34, what does the 3 mean? (3 tens, which is 30.) · Why is 42 not the same as 24? (The digits swapped places, so 42 is 40 and 2 while 24 is 20 and 4.) · What do we call splitting a number into parts? (Partition, to split a whole up into parts [4].)

**Check understanding:** Show 27 on mini whiteboards as tens + ones. If many write 2 + 7, rebuild 27 as two tens and seven ones [7] again.

**Support:** Point to each digit while placing rods and cubes on the chart. **Stretch:** Ask what 30 means when the ones digit is 0.

Use: Slides 3-4, 7

20–45 min **Main activity** 25 min · Pairs

*To build two-digit numbers with bundles and record them as tens plus ones.*

**YOU DO**

1. Demo grabbing a handful, wrapping every ten and laying bundles on the tens side.
2. Hand out sticks, bands, mats and Worksheet page 1 for recording.
3. Circulate, ask pairs to say and write their partition.
4. Stop the class halfway to share one strong example.

**STUDENTS DO**

1. Grab a handful, bundle tens with bands and keep ones loose.
2. Sort bundles and loose sticks on the tens and ones mat and say the tens and ones.
3. Write the partition as tens + ones and complete Worksheet page 1 together.

**Say:** Grab a handful of sticks, wrap every ten sticks with a rubber band and keep the rest loose. Lay bundles on the tens side and loose sticks on the ones side, then say and write tens plus ones. For example, 3 tens and 4 ones makes 34 [7].

**Worked example:** I grabbed 27 sticks. I wrapped 2 bundles and left 7 loose. That is two tens and seven ones [7]. I write 20 + 7 = 27. On Worksheet page 1 I draw it on the place value chart.

**Ask:** You have 4 bundles and 2 loose. How many tens and ones, and what number? (4 tens and 2 ones, 42 = 40 + 2.) · How do you know the 8 in 86 is worth 80? (It is 8 tens, so 86 as 80 + 6 = 86 [2].)

**Check understanding:** Pairs hold up mats and read their tens plus ones. If bundles are uneven, recount that bundle to check it holds 10.

**Support:** Start with handfuls under 20 and match each bundle to base-ten equipment on a place value chart [2]. **Stretch:** Try a larger handful and work out the total from the bundles first, without counting every stick.

Use: Slide 10, Worksheet page 1

45–60 min **Plenary** 15 min · Whole class

*To check everyone can match numbers to their tens and ones partitions.*

**YOU DO**

1. Run the quick quiz, asking pairs to write each answer on whiteboards.
2. Confirm each partition by rebuilding it fast with base-ten blocks.
3. Hand out Worksheet page 5 for pairs to draw matching lines.
4. Close by linking answers back to the success criteria.

**STUDENTS DO**

1. Answer quiz questions on whiteboards and explain tens and ones aloud.
2. Complete Worksheet page 5 by drawing a line to the matching split.
3. Self-check against the success criteria with thumbs up or sideways.

**Say:** Let us prove we can split numbers fast. I will show a number or its parts and you write the missing bit. Remember to say how many tens and how many ones each time.

**Worked example:** 34 = ? + 4. 34 has three tens and four ones, so the missing part is 30. 5 tens, 1 one makes 51. Split 27 as 20 + 7 because it has two tens and seven ones [7].

**Ask:** 34 = ? + 4. What is missing? (30, because 3 tens = 30.) · I have 5 tens and 1 one. What number? (51.) · How would you split 27? (20 + 7.)

**Check understanding:** Use whiteboards for the quiz and scan Worksheet page 5 lines. Reteach any number written as ones only, for example 2 + 7 for 27.

**Support:** Show each quiz number with base-ten blocks while students answer. **Stretch:** Ask students to write the parts in the other order, like 7 + 20 for 27.

Use: Slide 11, Worksheet page 5

## Common mistakes

| Mistake | How to spot it | How to fix it |
|---|---|---|
| Writes 34 as 3 + 4 instead of 30 + 4. | Partition adds to 7, not 34, on Worksheet page 1. | Rebuild 3 tens rods to show 3 tens = 30, so 21 is the same as 20 + 1 [3]. |
| Thinks 42 and 24 are the same because they use 4 and 2. | Builds both numbers the same way or orders them wrong. | Build both with blocks and compare place value of each digit in a two-digit number (10s, 1s) [1]. |
| Ignores 0 in numbers like 30, saying it shows nothing. | Says 30 is just 3 or writes 3 + 0. | Show 3 tens with no ones and explain 0 holds the ones place as a place holder [1]. |

## Support

- Start with handfuls under 20 and match each bundle to base-ten equipment on a place value chart [2].
- Keep a finished bundle of 10 on tables to check against when wrapping.

## Stretch

- Try a larger handful and work out the total from the bundles first, without counting every stick.
- Write partitions in a different order, such as 4 + 20 for 24.

## For the LSE or teaching assistant

Stay with the bundling tables. Help wrap bands, count bundles by 10 and prompt language: how many tens, how many ones, so the number is...?

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## Check for understanding

| Question | Answer |
| --- | --- |
| How many tens and ones in 46? | 4 tens and 6 ones. |
| Write 46 as tens plus ones. | 40 + 6 = 46. |
| What does the 4 mean in 42? | 40, four tens. |

## Homework

Pick two numbers from 10 to 99 at home and write each as tens plus ones.

## Sources


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