

# Unit 14

## Counting on and counting back

**Mastery Expert tip!** "Giving children plenty of opportunities throughout the day to count forwards and backwards between 1 and 10 will help them in their counting and enable them to use this skill in counting on and back. Counting forwards to 10 or back from 10 to encourage swift tidying up or when asking them to sit at their tables or to get lined up at the door are all good ways to practise."

**Don't forget to watch the Counting skills video!**

### Early Learning Goals

This unit supports the following ELGs:

→ **Number ELG:**

Have a deep understanding of number to 10, including the composition of each number

→ **Numerical Patterns ELG:**

Verbally count beyond 20, recognising the pattern of the counting system

### WHY THIS UNIT IS IMPORTANT

This unit focuses on counting forwards and backwards from a given number in order to add and subtract. Counting on and counting back are far more efficient than some of the other methods of addition and subtraction, therefore children need to become familiar and confident with this strategy.

### WAYS OF WORKING

Have 1–10 number tracks, counters and dice readily available for children to use to represent what is happening in the questions. Simple board games will also be useful. Concrete manipulatives will help children to recreate calculations using first, then, now stories.

### WHERE THIS UNIT FITS

- Unit 13: Exploring patterns
- **Unit 14: Counting on and counting back**
- Unit 15: Numbers to 20

In this unit, children will explore addition and subtraction through counting on and counting back. Children will use a number track to practise counting the number of jumps required to move on or back rather than the actual numbers they are landing on. This is the basis of addition and subtraction, so is vitally important.

#### Link to Key Stage 1

#### Number – addition and subtraction

- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as  $7 = \square - 9$ .

The focus in this unit on counting on to add and counting back to subtract will give children good foundation skills for the addition and subtraction strategies they will meet in Year 1, in particular the strategy of using a number line to add and subtract.

## ASSESSING MASTERY

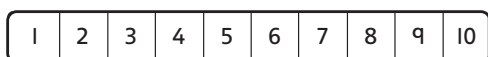
Children who have mastered this unit will be able to:

- count forwards and backwards between 1 and 10 confidently
- use a 1–10 number track to count on or count back
- add or take away numbers using a first, then, now story structure
- explain how they know what number to start on, how many jumps to make on the number line and how to identify the answer

COMMON MISCONCEPTIONS	STRENGTHENING UNDERSTANDING	GOING DEEPER
Children may not be confident with the stable order of counting forwards or backwards.	Use counting games and sing counting songs regularly. Encourage children to count during everyday tasks (lining up, tidying up, getting ready for story time). Display a large 1–10 number track to refer to when counting.	Ask children to spot mistakes in your counting and to explain where and how the mistake has been made.  When counting during daily tasks, give children instructions. Say: <i>Tell me when there are more than 8 people in the line.</i>
Children may count the number they are starting on when adding by counting on or subtracting by counting back.	Represent calculations as first, then, now stories and encourage children to create calculations with concrete manipulatives they can physically move to avoid miscounting. Give opportunities for children to work concretely, recreating the scenes given so that they begin to see that they should be counting the moves or jumps rather than the spaces on the number track.	Ask children to spot and correct mistakes and to explain why counting the number they are starting on is incorrect. Encourage children to put calculations into stories and represent them with concrete manipulatives or pictorial images.

## STRUCTURES AND REPRESENTATIONS

**Number tracks:** Number tracks can help children to add and subtract by counting on or back. They provide a visual representation to support children when adding or subtracting.



**Counters:** Counters can be useful to show the processes of adding and subtracting by placing counters on a number track and moving them the relevant number of jumps.



## RESOURCES

**Mandatory:** multilink cubes, counters, number tracks, ten frames (photocopiable 33), board game playing pieces

**Optional:** large dice, chalk, play people, toy vehicles, classroom objects, bags or baskets, classroom signs, puppets, soft toys, tape, board games (including Snakes and Ladders), dice, classroom items for treasure hunt, chairs, 1–10 number track (photocopiable 27), go forwards or back game cards (photocopiable 28)

## TEACHING TOOLS

number track

## KEY LANGUAGE

There is some key language that children will need to know as part of the learning in this unit:

- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, number
- count on/count back, move forwards, go back, jump forwards, jump back
- more, less, before, after
- add, take away
- forwards, backwards, direction, moves, jumps
- start, stop, first, then, now, finish
- altogether, total
- number track, dice
- largest, smallest, possibilities

# Adding by counting on

## Learning focus

This week, children will learn how to count on from a given number in order to add. Children will use the first, then, now structure to identify what number they are counting on from, and how many they are counting on.

## Small steps

- Previous step: Exploring more complex patterns
- **This step: Adding by counting on**
- Next step: Taking away by counting back

## COMMON MISCONCEPTIONS

Children may lack confidence in the stable order of counting. Show children how to use number tracks with counters to support their counting on, reinforcing that they say the number in the count not the number on the number track.

Ask:

- Which number does the counter start on? Can you count out loud as you move the counter? Can you count out loud as you move along the number track?

Children may count the squares rather than the jumps and include the starting number in the count, giving the wrong answer. Give opportunities for children to work concretely, recreating the scenes given so that they begin to see that they should be counting the moves or jumps rather than the squares. Ask:

- Which number do you start on? How many jumps on the number track do you need to make?

## KEY LANGUAGE

**In lesson:** first, then, now, add, more, count on, number, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, number track

**Other language to be used by the teacher:** forwards, total, stop, finish, altogether, jumps, moves

## RESOURCES

**Mandatory:** multilink cubes, counters, number tracks, ten frames, board game playing pieces

**Optional:** large dice, chalk, play people, toy vehicles, classroom objects, bags or baskets, classroom signs, 1–10 number track (photocopiable 27), go forwards or back game cards (photocopiable 28)

## EXPLORE

Taking every opportunity throughout the school day to build and reinforce mathematical concepts gives children's learning purpose and meaning in the wider context of their lives.

ACTIVITY	AREA	DESCRIPTION	RESOURCES
Getting on the bus	Classroom	Provide play people to place on a bus or other mode of transport. Encourage children to use the first, then, now story structure to describe the number of people on board. Model the scenarios on a number track with counters to reinforce the skill of counting on to find the answer. Support children by giving them specific numbers to use or a certain number of people.	Play people, toy vehicles, number track, counters
Lining up	Classroom	When lining up, at various points in the day, orally rehearse first, then, now stories to count how many children are in the line.	
How many children can play here?	Classroom	Ensure the different areas of the classroom have signs to indicate how many children can play there. Ask 1–4 children to play in different classroom areas. Ask: <i>Who else would like to play here?</i> Choose some more children to join them and ask children to tell the first, then, now story about what has happened. Help children to make the decision on whether there is room for them to play.	Classroom signs

# Day 1

## Learning focus

Counting fluently to 10

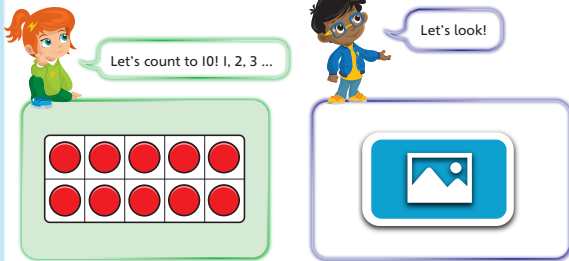
## Before you teach

- Can children accurately count to 10?
- Can children recognise and identify numbers to 10?
- Can children accurately count using one-to-one correspondence?
- Do children have an understanding of cardinality?

## Starter

### Unit 14 Counting on and counting back

#### Adding by counting on



#### PREREQUISITE CHECK

**PREREQUISITE CHECK** Counting to 10 using a full ten frame

**WAYS OF WORKING** Whole class

Have ten frames and counters available for children to replicate the picture.

**IN FOCUS** The focus of the **Prerequisite check** is to ensure that children are fluent in counting to 10. Initially, ask children to count to 10 while pointing to each of the counters on the ten frame, starting at the top left. Then cover the ten frame and count to 10 together. Repeat, missing some of the numbers so that children can fill in the gaps.

#### ASK

- Can you count to 10?
- What number comes after 5 (or 8 or 4)?
- How many counters are in a full ten frame?
- How many counters are in the top row of the ten frame?



#### STIMULUS

**STIMULUS** Photograph to prompt discussion  
The photograph shows a child playing hopscotch.

**WAYS OF WORKING** Whole class

**IN FOCUS** The **Stimulus** introduces the concept of games involving jumping from one number to the next, going forwards in sequence, and shows a version of a number track.

#### ASK

- What is the child doing?
- Which number will she jump to next? How do you know?
- Have you seen a game like this before?

**GET ACTIVE** Use chalk to draw a hopscotch template and a number track outside, or use tape on the floor in the classroom or hall. Ask children to take turns to jump, step or hop along it, with everyone counting the numbers as they move. Ask a child to stand on a number and jump on a given number (up to 5). Encourage children to say the story with you. Say: *First \_\_\_\_ was on number 3, then they made 2 jumps, now they are on number 5.* Repeat with different starting numbers and numbers of jumps.

# Day 2

## Learning focus

Counting on (1)

## Discover

**WAYS OF WORKING** Whole class or small groups  
Children may benefit from having a large number track and a dice to roll.

**IN FOCUS** The **Discover** focuses on the concept of adding by counting on. Encourage children to identify where Sam currently is on the number track, what number is shown on the dice, and how many jumps he needs to make. Children should explore the concept of counting on from Sam's current position on the number track by saying the number in the count and counting the moves or jumps rather than the stepping stones. This will help them to overcome the misconception of counting the starting number. Use the first, then, now structure to highlight the change and the counting on element.

### ASK

- What number is Sam on at first?
- What number has he rolled on the dice?
- What does he need to do?
- How many jumps does Sam need to take?
- What number will he land on?
- Can you explain what Sam will do using a first, then, now story?

**STRENGTHEN** Use or create a giant number track and

## Share

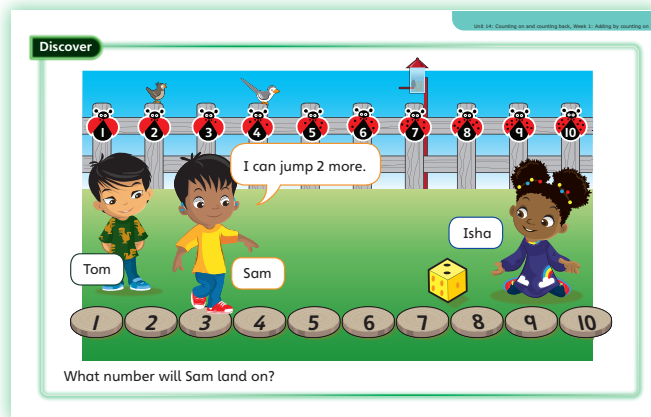
**WAYS OF WORKING** Whole class  
Use the **Number track teaching tool** to model counting on.

**IN FOCUS** The focus of **Share** is to model the process used to count on by counting the jumps. The emphasis should be on counting on from a given number rather than counting up. Prompt children to realise that the number Sam lands on is the total. Reinforce the first, then, now story and verbalise. Say: *First Sam was on 3, then he jumped on 2, now he is on 5.*

### ASK

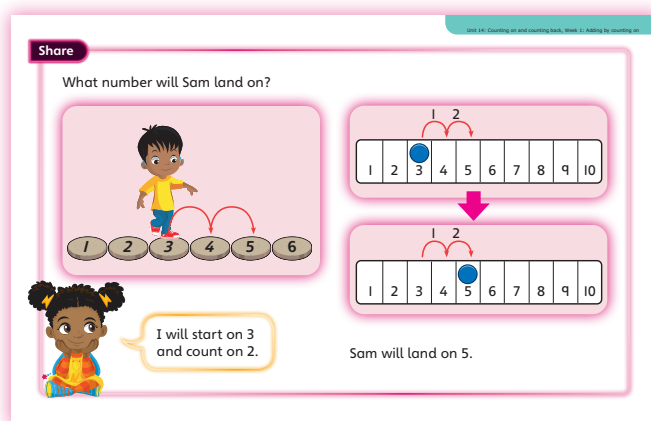
- Which number is Sam on?
- How many jumps forwards does Sam need to take?
- What number will Sam land on?
- Where do you need to start counting?
- What movement should you count?
- Can you describe Sam's movements using a first, then, now story?

**STRENGTHEN** Provide children with small play people, or other manipulatives, to represent Sam moving on a number track. Laminated number tracks will give the opportunity for children to label the jumps to help them see clearly how many jumps have been made and the element that should be counted.



encourage children to stand on the starting number and jump on 2 more. Reinforce the calculation by verbally saying the first, then, now story as children recreate elements of the scene.

**DEEPEN** Encourage children to replicate the activity in **Discover** in small groups using a number track, counter and a dice. They start on 1 and roll the dice to determine how many jumps to take. Some children may be able to identify how many more jumps are needed until they reach the end. If using more than one number track, children may be able to have discussions about who has jumped more or less.



**DEEPEN** Ask children to investigate where Sam would land if he rolled a different number on the dice. Encourage them to work systematically. Some children may be able to discuss or predict how close to the end of the track Sam will be. Ask: *What number would Sam need to throw on the dice to get to the end of the track?*

**GET ACTIVE** Set up a number track outside for children to replicate the game in small groups. Ask children to tell the first, then, now story while they are playing, and to say what they are counting on.

# Day 3

## Learning focus

Counting on (2)

## Think together

### WAYS OF WORKING

Whole class

Have laminated number tracks, or large chalked or taped versions available. The **Number track teaching tool** can also be used to model each question. Children may benefit from having counters to move along number tracks to visually represent the 'jumps' when counting on.

### IN FOCUS

The **Think together** practises the concept of adding by counting on. Question 1 moves children on from **Discover** by counting on a larger amount. Question 2 moves children from concrete to pictorial representation.

### ASK


- Questions 1 and 2: *What number are you starting on? What number has been rolled on the dice? How many jumps do you need to make? Why?*
- Questions 1 and 2: *What number do you need to count on from? Where will you land? How did you work it out?*
- Questions 1 and 2: *Can you explain the movements using a first, then, now story?*
- Question 2: *What is the same and what is different about the two questions? What do you notice about the answer? Why do you think that is?*

### STRENGTHEN

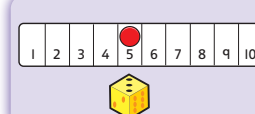
Provide laminated number tracks and counters for children to move along them. Ensure that children jump

**Think together**

1 Where will Isha land?



2 Where will the counter land?



I will count each jump along the track.

I can see the same numbers as before.

one square at a time as they move along the number track to avoid miscounting. Check that children are saying the number in the count rather than the numbers they are landing on. If children need help getting started, make the first count with them or discuss the number of jumps needed before they begin to count and move.

### DEEPEN

Draw children's attention to Ash's statement to introduce the idea of commutativity. Draw out that 3 and 5 gets the same answer as 5 and 3. Ask children to explore more examples of using the same two numbers but changing them around. Ask: *Do you always land on the same number?*

## Practice: Journal 1

### WAYS OF WORKING

Independent thinking

### IN FOCUS

The **Practice** activity allows children to consolidate the skill of adding by counting on a number track. The first part provides a structure to help them count the jumps. In the second part, children might want to draw the jumps or use a counter or a finger to move along the number track.

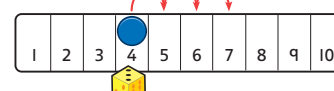
### MASTERY CHECKPOINT

Children who have mastered this concept can confidently identify where they are counting on from, how many they are counting on and that the number they finish on is the answer. Children can explain how they knew where to start counting on from and how they knew how many to count on.

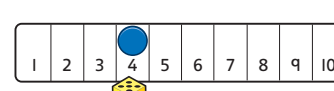
Unit 14: Counting on and counting back, Week 1: Adding by counting on

**Practice**


Circle the number the counter will land on.



Circle the number the counter will land on.



Use your finger to help you count the jumps.



**Number ELG:** Have a deep understanding of number to 10, including the composition of each number.  
**Numerical Patterns ELG:** Verbally count beyond 20, recognising the pattern of the counting system.

**Ask:** Where is the counter? What number is on the dice? How many jumps will the counter make? Do you count the number the counter is on? Where will the counter land? Can you use a real counter to help you? Can you use your finger to count the jumps?

**Deepen:** What is the same about both number tracks? How do you know when to stop counting on? Can you use your finger to check you have counted correctly?

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# Day 4

## Learning focus

Applying a first, then, now story structure to adding by counting on

## Challenge

**WAYS OF WORKING** Whole class or small groups

This activity should be attempted by all children, but those who have not yet mastered the concept of adding by counting on should work closely with adult support, using concrete manipulatives to recreate the first, then, now story.

**IN FOCUS** The **Challenge** gives children the opportunity to explore how to solve a first, then, now story problem using counting on to add. The question challenges children as they need to use counting on to add people rather than jumps. It gives them the opportunity to practise recognising which number they need to count on from and how many they need to count on.

### ASK

- How many children are there at first? How could you show this?
- Where do you need to count on from? How do you know?
- How many do you need to count on?
- How can you show how many you've counted on?
- Now how many children are there?

### STRENGTHEN

Read the sentences out loud one at a time and model them with play people to allow children to see the progression of the story. As you are doing so, place the play people on a number track to link to counting on. Encourage children to count on from 2 rather than counting all the play people. Repeat, but this time modelling the story using a counter on a number track, helping children to see that the number of children joining the group can be counted using jumps. This will help children to see the link between the concrete or pictorial and the abstract. It may help to place two play people on the number track to represent the 'first' part of the story so that children see how to find the starting number on the number track.

Unit 14: Counting on and counting back, Week 1: Adding by counting on

**CHALLENGE** First there are 2 children. Then 4 more children come. How many children are there now?

I will use a  and  to help me.

Say the numbers as you count the children.

### DEEPEN

To deepen understanding, say one part of a first, then, now story and encourage children to explore how many ways they can complete the other two sentences using a number track. For example, say: *Then 5 children came.* Children explore how many there might have been at first and how many that creates in total.

### GET ACTIVE

Set up a large number track in the outdoor area. Encourage children to make a first, then, now story for a partner to recreate by counting on, using themselves or an object on the number track. For example: *First there were 3 children, then 2 more joined in, now there are 5 children.*

# Day 5

## Learning focus

Creating addition stories to practise flexible counting on

## Practical activities

**WAYS OF WORKING** Whole class

**IN FOCUS** These **Practical activities** allow children to practise the concept of first, then, now, and adding by counting on, in a range of contexts. Children acting out first, then, now stories will give a clear idea as to whether they understand the different elements of the story and what the numbers represent.

**GET ACTIVE** **Treasure hunt**

Give teams of four children a small number of classroom objects (up to four) and ask them to find some more. As children bring the objects back to a team leader they should add to their current total by counting on. Encourage children to link this to a first, then, now story. Ask: *How many did you have at first? Then what happened? How many do you have now?*

### Adding to a group

Put some children into a small group (up to 6). Ask 2, 3 or 4 more children to join the group. Discuss what has happened in terms of a first, then, now story. Say: *First there were (6) children in the group, then (3) more children joined the group, now there are (9) children in the group.* Encourage children to replicate the story on a number track using the counting on strategy.

### All aboard!

Create a form of transportation in the classroom or outdoor area (train, bus, boat). Have different stops around the area and encourage the driver to pick passengers up. After each 'pick up', get the children on board to verbalise a First, Then and Now story to describe how many were on board, how many more got on and how many are now on board.

## Reflect: Journal 2

**WAYS OF WORKING** Independent thinking

**IN FOCUS** The **Reflect** activity gives children the opportunity to consolidate counting on using a first, then, now story. The picture provides a structure for children who need it, but also allows children to explore various possible answers.

**MASTERY CHECKPOINT** **Children who have mastered this concept** can confidently and accurately count on from a given number to find a total. Children can use first, then, now stories to explain how they worked out an answer and why that answer is correct.

**Children who have not yet mastered this concept** can count on from a given number to find a total with support. Children can use concrete manipulatives to support them in telling first, then, now stories and with support can recognise what number they need to start on and how many they need to count on.

**Children who fully understand this concept** may want to solve basic addition calculations by counting on and find missing numbers or a range of possible answers. Children can explain how and where numbers have come from and how they used them. When solving problems, children can work systematically in order to find all possible answers.

Unit 14: Counting on and counting back, Week 1: Adding by counting on

**Reflect**

First there were 4 children playing.  
Then \_\_\_ children joined in.  
Now there are \_\_\_ children playing.



1	2	3	4	5	6	7	8	9	10
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**Ask:** **Strengthen:** How many children are playing at first? How can you show that? How many children are not playing? Could one child join in? How would you show this? What number would you count on from? How many will you count on? How many are there now? Can more than one child join in? What if \_\_\_ children joined in? How would the story change?  
**Deepen:** How many different ways can you complete the story? What is the smallest/biggest number of children that can be playing? How? Can you describe it using a first, then, now story? Can you work systematically? Can you explain your system?

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# Taking away by counting back

## Learning focus

This week, children will learn how to count back from a given number in order to subtract. Children will use the first, then, now structure in order to identify what number they are counting back from, and how many they are counting back.

## Small steps

- Previous step: Adding by counting on
- **This step: Taking away by counting back**
- Next step: Counting to and from 20

## COMMON MISCONCEPTIONS

Children may not be confident with the stable order of counting backwards. Draw their attention to the numbers on the number track and show them how to use them to help them count back. Ask:

- *What number comes before/after 6? Is 5 before or after 8 on the number track? Can you count backwards from 6 to 1, using the number track to help you?*

Children may count the number they are starting on as the first number when counting back. Working concretely and recreating the scenes given can help with understanding that they should count the moves backwards. Ask:

- *Do you include the start number in the count? How many jumps back do you need to make? What is the first number you will jump back to?*

## KEY LANGUAGE

**In lesson:** start, first, then, now, count back, go back, move forwards, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, number track

**Other language to be used by the teacher:** take away, before, after, jump back, direction, forwards, backwards, dice, largest, smallest, possibilities

## RESOURCES

**Mandatory:** counters, number tracks

**Optional:** puppets, soft toys, play people, multilink cubes, toy vehicles, large dice, chalk or tape, board games (including Snakes and Ladders), dice, classroom items for treasure hunt, chairs, 1–10 number track (photocopiable 27), go forwards or back game cards (photocopiable 28)

## EXPLORE

Taking every opportunity throughout the school day to build and reinforce mathematical concepts gives children's learning purpose and meaning in the wider context of their lives.

ACTIVITY	AREA	DESCRIPTION	RESOURCES
Singing	All	Sing songs that involve counting back from 5 or 10. For example, 5 Little Ducks, 10 Green Bottles and 5 Little Speckled Frogs. Ask: <i>How many ___ are there? Now what happens? How many are there now?</i> Acting out the songs with props or puppets will help children to visualise what is happening.	Puppets, soft toys
How many are on the bus?	Small world	Provide a range of toy vehicles and play people. Encourage children to use the first, then, now story structure to tell a story about the number of people on board, the number getting off and how many are left. Model the scenarios on a number track with cubes or counters to reinforce the skill of counting back to find the answer. Give children specific numbers if they need help getting started.	Play people, toy vehicles, number track, counters, cubes
Count down to ...	Classroom	While doing morning routines, the class could have a number track counting down to an event (for example, the weekend, the holidays, a school trip, as long as it's fewer than 10 days away). Each morning model counting back one day on the number track and ask: <i>How many days were you waiting at first? Then, how many days did you count back? Now, how many days are left?</i>	Number track

# Day 1

## Learning focus

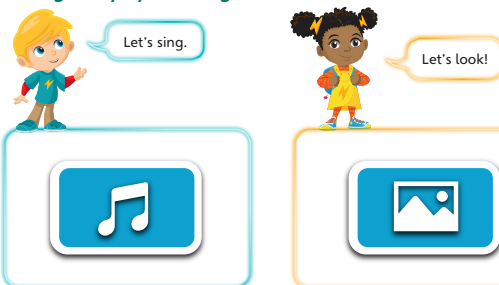
Counting fluently backwards from 10

## Before you teach

- Can children accurately count backwards from 10?
- Can children recognise and identify numbers to 10?
- Can children accurately count using one-to-one correspondence?
- Do children have an understanding of cardinality?

## Starter

### Taking away by counting back



### PREREQUISITE CHECK

#### Song: I'm a little rocket

*I'm a little rocket  
And I point up to the sky,  
I'm a little rocket  
And I really want to fly.*

*I'll take you to the stars  
And I'll take you to the moon,  
Come on an adventure  
We can zoom, zoom, zoom!*

*Let's begin the countdown  
We can start from number 10,  
And when we land back on the earth  
We'll do it all again!*

*10, 9, 8, 7, 6, 5, 4, 3, 2, 1 ... BLAST OFF!!*

**PREREQUISITE CHECK** Song: I'm a little rocket

**WAYS OF WORKING** Whole class

**IN FOCUS** The **Prerequisite check** focuses on counting back from 10 to ensure that children are secure with this. The song is a fun introduction to counting back and gives children the opportunity to practise and revisit some of the numbers they will be working with.

### ASK

- What number do you start counting from?
- Are you counting forwards or backwards?
- When counting backwards, what number do you say after 7?
- When counting backwards, what number do you say before 3?



### STIMULUS

**STIMULUS** Photograph to prompt a guided activity  
The photograph shows children playing a board game.

**WAYS OF WORKING** Whole class

**IN FOCUS** This **Stimulus** introduces children to the idea of multidirectional board games. Explain that in some games you can move backwards as well as forwards. Model how to play Snakes and Ladders, rolling a dice to tell you how many spaces to move forwards, moving up ladders and sliding down snakes.

**GET ACTIVE** Put children into small groups and provide a selection of multi-directional board games. Encourage children to play the games and familiarise themselves with the concept of moving forwards and backwards in the game. Encourage children to tell the first, then, now story of what happened, for example, *First I was on this square, then I went down a snake, now I am on this square.*

### ASK

- What number were you on at first?
- What number did you roll on the dice?
- What do you need to do?
- How can you work out where you will land?
- How many jumps do you need to take?
- What number will you land on?
- Can you explain what happened using a first, then, now story?



# Day 3

## Learning focus

Counting back a given amount (2)

## Think together

### WAYS OF WORKING Whole class

Have number tracks and counters available for children to use if needed. Use the **Number track teaching tool** to model answering each question by counting the moves backwards.

**IN FOCUS** Question 1 uses the board game context again, but with different numbers. The small step of progression in Question 2 is the move from the real-life scenario of playing a board game to the pictorial concept of a counter on a number track. The wording of the question has also become more mathematical.

### ASK

- Question 1: *Where is the playing piece? How many moves back does it need to go?*
- Question 1: *What numbers will you say when counting back? Will you say number 3? Why not?*
- Question 1: *Where will the playing piece land?*
- Question 2: *How is this similar to the board game?*
- Question 2: *Where is the counter? How many do you need to count back?*
- Question 2: *In which direction do you need to move the counter? How do you know? Where will the counter land?*

## Practice: Journal 1


### WAYS OF WORKING Independent thinking

**IN FOCUS** The **Practice** activity gives children the opportunity to consolidate the skill of counting back using a number track. The first part models how to draw the jumps to support children in drawing them to find the answer. In the second part, children might want to draw the jumps or use a counter or a finger to move back along the number track.

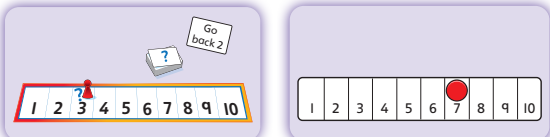
**MASTERY CHECKPOINT** Children who have mastered this concept can confidently identify where they are counting back from, how many they are counting back and that the number they finish on is the answer. Children can explain how they knew where to start counting back from and how many to count back.

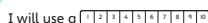

Unit 14: Counting on and counting back, Week 2: Taking away by counting back

**Think together**

1 Where will the  land?

2 Count back 4.



I will use a  and  to help me.

This looks like the game.

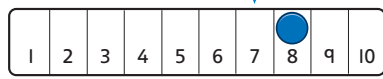
**STRENGTHEN** Give children number tracks and the opportunity to physically move counters. Encourage them to draw the jumps as they count back. Ask: *Can you count the jumps as you draw them?* Give different start numbers but the same instruction to help children to see that the number of jumps is the same but the answers will be different, depending on the start number.

**DEEPEN** Challenge children to find the largest number that could be on the 'go back' card in Question 1 and explain or show why. Encourage them to work systematically and list the possibilities of the different cards and where the red playing piece would land.

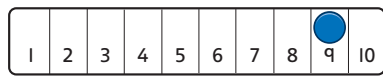
Unit 14: Counting on and counting back, Week 2: Taking away by counting back

**Practice**

Go back 5.



Go back 6.



**Number ELG:** Have a deep understanding of number to 10, including the composition of each number.  
**Numerical Patterns ELG:** Verbally count beyond 20, recognising the pattern of the counting system.

**ASK** **Strengthen:** *In which direction do you need to move? How many squares back do you need to move? How can you keep track of how many you have counted back? What number comes before 8?*  
**Deepen:** *How do you know where to count back from? What if the counter had been on ...? Where would you have started counting from? Where would you have ended up? How did you know when to stop counting? What is the biggest number you could have counted back? How do you know? Why couldn't you have counted back 9?*

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# Day 4

## Learning focus

Exploring the inverse relationship of counting on and counting back

## Challenge

**WAYS OF WORKING** Whole class or small groups

Children who are still mastering this concept should work with an adult for support, using concrete manipulatives and a number track to recreate the scenario to support their counting back. Encourage children to use the first, then, now story structure to work out which part of the story they need to find.

**IN FOCUS** The **Challenge** introduces the inverse relationship of counting on and counting back. Children should consider how to solve this problem and understand that they need to work backwards, considering what has already happened rather than what needs to happen. Use the **Number track teaching tool** to model solving the problem.

### ASK

- Where is Isha's counter?
- What direction is forwards?
- How many jumps forwards has she moved? Where has she landed?
- How could you work out where Isha's counter was before she moved it?
- Draw children's attention to what Flo is saying. Why does Flo think she needs to count back?
- Why do you need to move backwards?
- How many moves backwards do you need to take?
- Where will you end up? How do you know this was Isha's starting number?
- How could you check your answer?

### STRENGTHEN

Recreate the board game scenario using a number track and allow children to move counters forwards and backwards. Support children to break the problem down into more manageable steps. Ask them to choose a start number, move the counter 4 jumps forwards, then 4 squares backwards. Ask: *What do you notice? Where is the counter now? If you moved forwards 4, how many do you need to move back to get to your starting place?*

Unit 14: Counting on and counting back, Week 2: Taking away by counting back

**CHALLENGE** Isha has moved forwards 4. What number did she start on?

Isha landed on 10.

I think I need to count back.

### DEEPEN

To deepen learning, give children additional problems where they can explore the inverse relationship. Ask: *If the counter is on 7, how many moves forwards could it have made?* Encourage children to work systematically to explore all the possibilities.

### GET ACTIVE

Set up board games in the classroom. Encourage children to play these as independently as possible in small groups. A giant game board could be created in the outdoor area using chalk or tape. Children could use themselves as counters and move forwards and backwards around the board, counting as they move. Refer to the **Explore** table on page 32 for more activity ideas.

# Day 5

## Learning focus

Creating subtraction stories to practise flexible taking away

## Practical activities

**WAYS OF WORKING** Whole class

**IN FOCUS** These **Practical activities** allow children to practise using first, then, now stories to take away by counting back in a range of contexts. Acting out first, then, now stories will give children the chance to demonstrate their understanding of the different elements of the story and what the numbers represent.

**GET ACTIVE** **Treasure hunt**

Set up treasure hunts around the classroom to encourage children to find 10 of certain items or pictures. They should count back from 10 as they collect the items. At certain points ask: *What number are you on in your count down? How many have you got left to find? How many have you already collected?*

**On and off the bus**

Set up a pretend bus using 10 chairs in a long row to represent the 1–10 number track. Ask 6–10 children to get

on the bus and together check how many are on the bus. Ask a number of children at the back of the bus to get off, again replicating the number line counting back. Ask: *How many children are on the bus now?* Repeat with different groups of children getting on and off the bus. End with everyone on the bus getting off, to see if children can predict that if 8 are on the bus and 8 get off, there will not be any children left on the bus.

**Counting songs**

Use props to recreate counting back songs that the children are familiar with such as 10 green bottles. Get the children to sing part of the song and recreate it with the props. Stop the children after each verse and ask them to describe what has happened using a First, Then and Now subtraction story. Once confident, you could stop children at random points so that they can practise forming subtraction stories with a range of numbers.

## Reflect: Journal 2

**WAYS OF WORKING** Independent thinking

**IN FOCUS** The **Reflect** activity gives children the opportunity to consolidate the skills they have learnt, and incorporates an element of problem solving. Children use a number track to count backwards, finding all the possibilities for how many Hana could move back.

**MASTERY CHECKPOINT** **Children who have mastered this concept** can confidently and accurately count back from a given number to find out where they will land. Children can use first, then, now stories to explain how they worked out an answer and why that answer is correct.

**Children who have not yet mastered this concept** can count back a given amount with support. By using concrete manipulatives and first, then, now stories, children begin to recognise what number they are counting back from and how many they are counting back.

**Children who fully understand this concept** may want to solve basic problems by counting back and find missing numbers or a range of possible answers. Children can explain how and where numbers have come from and how they used them. When doing problem-solving activities, children can work systematically in order to find all possible answers.

Unit 14: Counting on and counting back, Week 2: Taking away by counting back

Reflect

Where might Hana land?



1	2	3	4	5	6	7	8	9	10
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I will try all the numbers!

**ASK** **Strengthen:** What number is Hana starting on? How do you know? What if the card says 'Go back 1? How many would you need to count back? What number would Hana land on? What else could the card say? Could you count back that many? What number would Hana land on? Encourage children to work systematically, counting back 2, 3, 4, 5 and so on.  
**Deepen:** Can you find all the possible answers? How do you know you have found them all? What is the smallest number that could be on the card? How do you know? How many would you need to count back? Can you describe it using a first, then, now story? What is the biggest number that you could count back? How do you know? Give children problems such as: I count back 4. I am now on 5. Where did I start? Explain how you know.

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