

Spring Block 4

# Length, height and time

## Teacher guidance



### Key books

- *Superworm* by Julia Donaldson
- *Actual Size* by Steve Jenkins
- *Jim and the Beanstalk* by Raymond Briggs
- *I Can Only Draw Worms* by Will Mabbitt
- *Titch* by Pat Hutchins
- *Tall* by Jez Alborough
- *Jack and the Beanstalk*
- *The Giraffe Who Got in a Knot* by Paul Geraghty and John Bush
- *Five Minutes' Peace* by Jill Murphy
- *Mr Wolf's Week* by Colin Hawkins
- *A Dark, Dark Tale* by Ruth Brown
- *Jasper's Beanstalk* by Nick Butterworth

### Top tips

- Having calendars, timers and clocks around the provision helps support children to reference time.

### Key resources





## Small steps

Step 1

Explore length

Step 2

Compare length

Step 3

Explore height

Step 4

Compare height

Step 5

Talk about time

Step 6

Order and sequence time

# Explore length

## Notes and guidance

In this small step, children are encouraged to explore objects and begin to use the language of length to describe them.

Begin this process by exploring and describing two objects so that children can see 'long' and 'not long', and 'short' and 'not short'.

Ensure that resources in provision are varied and allow children to start to make simple comparisons to develop a sense of 'long and short'. Encourage children to physically move objects so they can see the difference. By using materials such as dough, children can see that materials can be changed by stretching them to make them longer.

Children should be shown how to make the ends of objects line up so that they can see the difference and should be taught that 'length' is the distance between two points. Encourage children to make collections of similar objects, such as sticks outside, to support them in gaining an understanding of length.



## Books

- *Superworm* by Julia Donaldson
- *Actual Size* by Steve Jenkins

## Key questions

- Which object is long/short?
- Have you found the longest \_\_\_\_\_?
- Have you found the shortest \_\_\_\_\_?

## Possible sentence stems

- The \_\_\_\_\_ is long/short.
- This is the longest \_\_\_\_\_.
- This is the shortest \_\_\_\_\_.

## Links to the curriculum

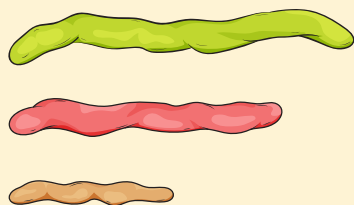
- Development Matters – Reception – Compare length, weight and capacity.
- *Birth to 5 Matters* – Range 6
  - Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy
  - Becomes familiar with measuring tools in everyday experiences and play

# Explore length

## Adult-led learning



After reading books such as *Superworm* by Julia Donaldson, prompt children to use dough to make worms of different lengths.



Encourage them to make a long worm and a short worm. What is the longest worm they can make?



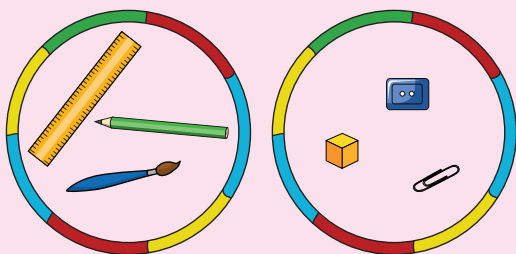
Go on a hunt for (or hide) sticks of different lengths in the outdoor environment. Prompt children to collect and sort the sticks. Encourage them to make a pile of short sticks and a pile of long sticks.



Do we have more short sticks than long sticks or more long sticks than short sticks?



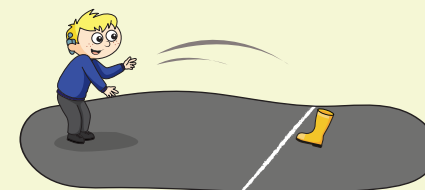
Prompt children to hunt for objects around the classroom. Encourage them to look for long objects, such as a long pencil, or short objects, such as a paper clip.



Sort objects into two hoops: a hoop of long objects and a hoop of short objects.



Give each child a small object, such as a beanbag or welly. Challenge children to throw the object as far as they can. Who has thrown their item the furthest? How could we check?



Encourage children to record their distances using their own methods. Have them throw their item again – did they manage to throw it further this time?

# Compare length

## Notes and guidance

In this small step, children build on their explorations of length to now make comparisons.

Encourage children to use more specific vocabulary to describe an object, such as 'longer than' or 'shorter than' something else. Encourage children to make indirect comparisons using non-standard objects, such as blocks or cubes, to measure items, for example, "The sand tray is four blocks long."

A good way for children to explore the concept of length is by representing their thinking using their own mathematical graphics in mark-making. Encourage them to explain their ideas as they draw these representations.

Reading stories that involve using simple measuring equipment and enacting these scenarios, will encourage children to use the language and actions of measure in their play and own investigations.

## Key questions

- Which object is longer? How do you know?
- Which object is shorter? How do you know?
- Which objects are the same length as \_\_\_\_\_?
- How do you know that this one is the longest/shortest?

## Possible sentence stems

- The \_\_\_\_\_ is longer/shorter than the \_\_\_\_\_.
- The \_\_\_\_\_ is the same length as the \_\_\_\_\_.

## Links to the curriculum

- Development Matters – Reception – Compare length, weight and capacity.
- *Birth to 5 Matters* – Range 6
  - Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy
  - Becomes familiar with measuring tools in everyday experiences and play



## Books

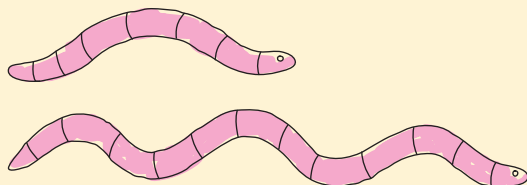
- *Jim and the Beanstalk* by Raymond Briggs
- *I Can Only Draw Worms* by Will Mabbitt

# Compare length

## Adult-led learning



After reading books such as *I Can Only Draw Worms* by Will Mabbitt, explore mark-making with children by prompting them to draw their own worms. This could be on a large scale outside using chalk or inside on a smaller scale.



Who can draw a worm longer than mine? Who can draw a shorter worm?

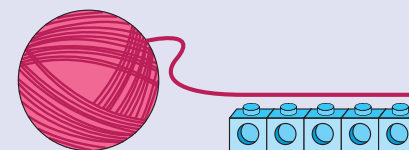


Provide children with ribbons of different lengths, widths and colours. Prompt them to line up the lengths of ribbon in order from longest to shortest.



Challenge children further by showing them a specific length of ribbon and asking them to find a ribbon that is longer or shorter.

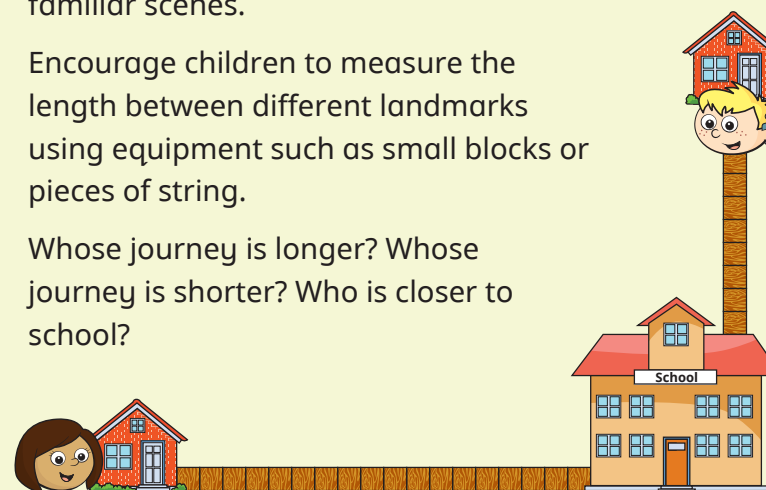
Provide children with wool or string. Prompt them to carefully use scissors to cut the wool to make worms or snakes of different lengths. Encourage children to use equipment such as cubes to measure and compare their worms or snakes.



Use small world resources to create different familiar scenes.

Encourage children to measure the length between different landmarks using equipment such as small blocks or pieces of string.

Whose journey is longer? Whose journey is shorter? Who is closer to school?



# Explore height

## Notes and guidance

In this small step, children build on the skills they have developed when exploring and comparing length by now exploring height.

Support children to understand that height is a type of length. Children should be introduced to the language of both 'short' objects and 'tall' objects through experiences. Going on walks and seeing buildings and trees that are tall in comparison to themselves and to other objects is a way to support this.

Children will have little concept of their own size to begin with, so drawing around each other and then holding the paper up is a good way for children to recognise how tall they are. Join children in their play to make tall towers and short towers in box modelling or construction, modelling the language of height. Reading stories that use this language will support children to become familiar with the concept of height so that they can then demonstrate this in their play.

## Key questions

- Which object is tall/short?
- Who/what is the tallest?
- Who/what is the shortest?

## Possible sentence stems

- The \_\_\_\_\_ is tall/short.
- I have a tall \_\_\_\_\_.
- I have a short \_\_\_\_\_.

## Links to the curriculum

- Development Matters – Reception – Compare length, weight and capacity.
- *Birth to 5 Matters* – Range 6
  - Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy
  - Becomes familiar with measuring tools in everyday experiences and play



## Books

- *Titch* by Pat Hutchins
- *Tall* by Jez Alborough
- *Jack and the Beanstalk*

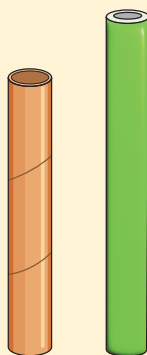
# Explore height

## Adult-led learning



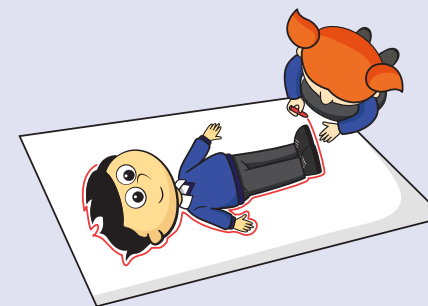
After reading the story *Jack and the Beanstalk*, support children to explore different heights by making their own beanstalk. Provide children with rolled up paper, tubes and recyclable junk modelling to use for building.

Who can make a tall beanstalk? Who can make a short beanstalk?



Provide children with large pieces of paper on the floor. Prompt them to lie down on the paper and help them to draw around each other.

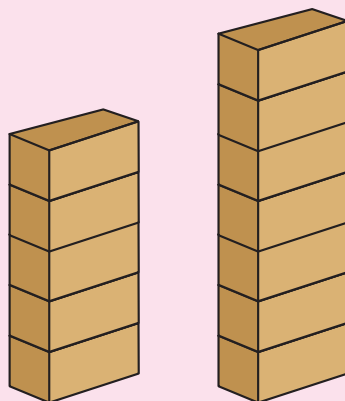
Pin the paper up to support children to see how tall they are.



Prompt children to use a range of materials to build a tower. Challenge them to build a tower the same height as yours, a shorter tower and a taller tower.

What is the tallest tower they can build?

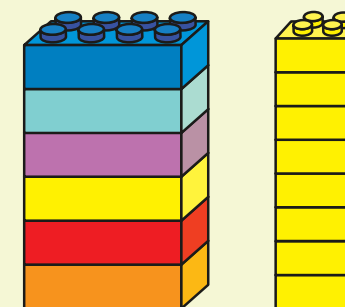
Support children by modelling effective methods for building taller structures.



Put children into pairs and ask them to build a tower. How tall can they build their tower before it falls down?

Support them to build a tower the same height as their partner's tower and record how many bricks there are in each.

Discuss that two towers the same height can have different amounts of bricks.



# Compare height

## Notes and guidance

Following on from exploring height, in this small step, children move on to using the language 'tallest', 'shortest', 'taller' and 'shorter' to make comparisons.

Demonstrate how objects and children themselves can be ordered according to height. This can begin with two objects and then extend to ordering more, such as a group of children in the class. Support children in their comparisons by building towers as tall as a partner's tower or as tall as different animals.

Use non-standard units, such as crates, to take learning outside and explore bigger structures. If supported and encouraged by adults in provision areas, children will compare and discuss length and height, using the language of each interchangeably in their play.



## Books

- *The Giraffe Who Got in a Knot* by Paul Geraghty and John Bush
- *Jack and the Beanstalk*
- *Actual Size* by Steve Jenkins

## Key questions

- Which object is taller? How do you know?
- Which object is shorter? How do you know?
- Who/which is the tallest? How do you know?
- Who/which is the shortest? How do you know?

## Possible sentence stems

- \_\_\_\_\_ is taller than \_\_\_\_\_.
- \_\_\_\_\_ is shorter than \_\_\_\_\_.
- The \_\_\_\_\_ is the same height as the \_\_\_\_\_.
- The \_\_\_\_\_ is the shortest.
- The \_\_\_\_\_ is the longest.

## Links to the curriculum

- Development Matters – Reception – Compare length, weight and capacity.
- Birth to 5 Matters – Range 6 – Becomes familiar with measuring tools in everyday experiences and play

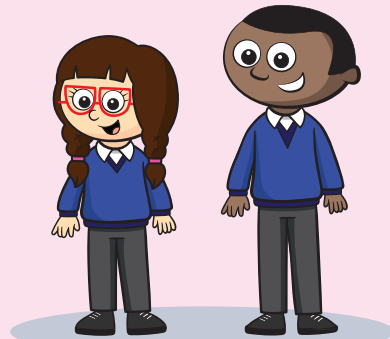


# Compare height

## Adult-led learning



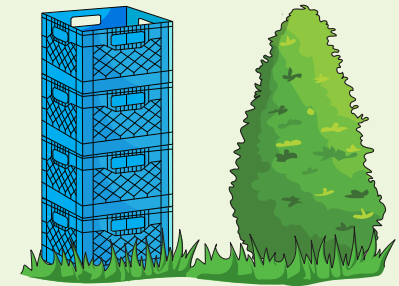
Choose two children to stand side by side. Ask the rest of the class which child is taller. How do they know? Ask who is shorter. How do they know? Repeat with other pairs of children.



Task children to find a partner who is taller or shorter than them.



Use crates to measure different structures and plants outside, such as climbing frames, small trees and bushes. Compare the different heights. Encourage children to make their own choices about what or who to measure.

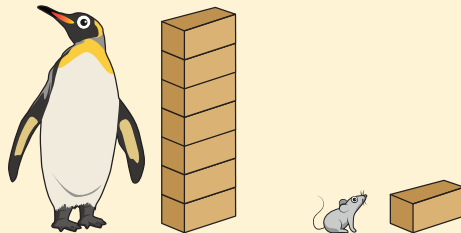


How many crates tall is the teacher compared to the sunflower?



After exploring books such as *Actual Size* by Steve Jenkins, display actual size pictures of various animals in the construction area.

Encourage children to make a tower as tall as a penguin. How is it different to a tower as tall as a mouse?



Encourage children to use simple non-standard units to measure the heights of different objects. For example, use paperclips strung together to measure the height of a pot.



# Talk about time

## Notes and guidance

In previous steps, children will have already begun to understand simple time differences, such as night and day. In this small step, children are encouraged to talk about time in more detail.

Support children by giving them reference points, such as photographs of events on a journey wall or in a book, so that they can recall past experiences and notice seasonal change. Discuss what is happening tomorrow, next week or at the weekend to support children to talk about the more immediate future.

To give children a concept of time passing, make regular references to time in daily routines, sing songs such as *Days of the Week* and recall the days that have passed.



### Rhymes

- *Days of the Week*



### Books

- *Five Minutes' Peace* by Jill Murphy
- *Mr Wolf's Week* by Colin Hawkins

## Key questions

- What can you do in one minute?
- How long does it take you to ...?
- What is happening this evening/tomorrow/next week/at the weekend?
- What happened yesterday/last week/last month/last year?

## Possible sentence stems

- I can do \_\_\_\_\_ in one minute.
- It takes me \_\_\_\_\_ to...
- Tomorrow we will...
- Yesterday we ...

## Links to the curriculum

- *Development Matters* – 3 and 4-year-olds – Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'
- *Birth to 5 Matters* – Range 6 – Is increasingly able to order and sequence events using everyday language related to time

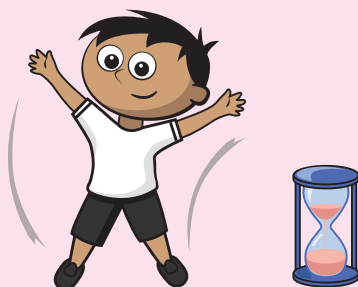
# Talk about time

## Adult-led learning



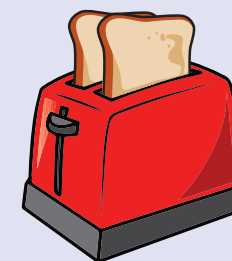
After reading stories such as *Five Minutes' Peace* by Jill Murphy, challenge children to see how many tasks they can complete in one minute.

For example, how many star jumps they can do or how many times they can write their name.

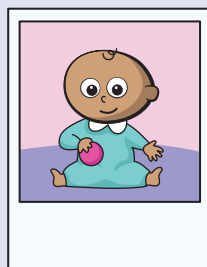
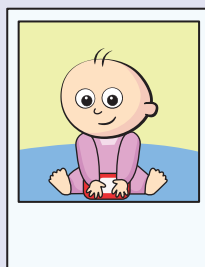


During snack time, supervise children to make toast. How does the bread change when you toast it?

How long does the toast need to be in the toaster to make it golden? What happens if it is toasted for too long? What happens if it is not toasted for long enough?

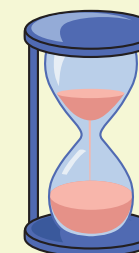


Ask children and key adults to bring in a photograph of themselves from when they were younger. Prompt them to look at the photos carefully – whose picture is whose? How have they changed?



Provide a range of timers that measure different units of time. Encourage children to explore measuring time in a variety of ways. How many star jumps can they do in 30 seconds or how many beanbags can they throw into the hoop in one minute?

Challenge them to use the timer to measure how long it takes to do various activities.



# Order and sequence time

## Notes and guidance

In this small step, children are encouraged to use simple strategies to discuss time and then progress to ordering and sequencing simple events. Use calendars to mark off the days leading up to special events to help to show the passing of time. Children will not yet understand standard units of time; however, pointing out when key events are happening, such as the clock showing twelve for lunchtime, can help to develop this. Use real life scenarios to support children to sequence events that require a time, such as baking or preparing snack. Enacting stories that follow a sequence of events or the days of the week will support children to sequence time in simple ways.



### Rhymes

- *Days of the Week*



### Books

- *A Dark, Dark Tale* by Ruth Brown
- *Jasper's Beanstalk* by Nick Butterworth
- *Mr Wolf's Week* by Colin Hawkins

## Key questions

- What did we do yesterday/last week?
- What will we do tomorrow/next week/at the weekend?
- What will we do before/after school?

## Possible sentence stems

- Tomorrow is/yesterday was \_\_\_\_\_.
- First/then/after we will...
- There are \_\_\_\_\_ days/sleeps until \_\_\_\_\_.

## Links to the curriculum

- *Development Matters* – 3 and 4-year-olds – Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'
- *Birth to 5 Matters* – Range 6
  - Is increasingly able to order and sequence events using everyday language related to time
  - Beginning to experience measuring time with timers and calendars

# Order and sequence time




## Adult-led learning



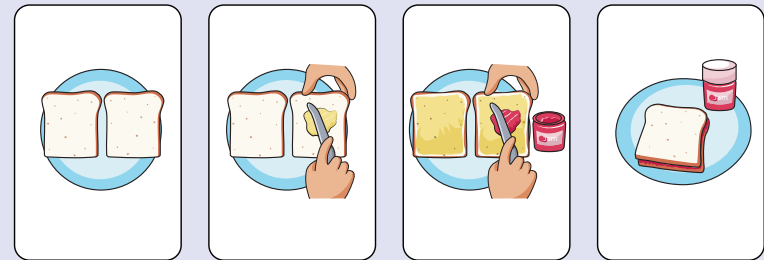
Use stories such as *Mr Wolf's Week* by Colin Hawkins or *Jasper's Beanstalk* by Nick Butterworth to support children's learning of the days of the week. Sequence the days of the week and ask children to order and match the key events or pictures from the story to the correct day.



Sing the *Days of the Week* song. Sequence the days of the week to make a class timetable. Order key events that happen on certain days during the week, such as P.E. Place these on the correct days on the weekly timetable.

Mon	Tues	Wed	Thurs	Fri	Sat	Sun
			P.E.   			

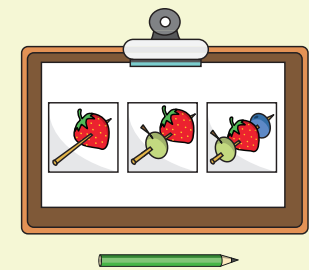
Carry out a simple task such as making a sandwich. Sequence a set of pictures that show instructions of how to carry out the task.



Prompt children to discuss what we need to do 'first', 'next', 'then', 'after' and 'finally'.



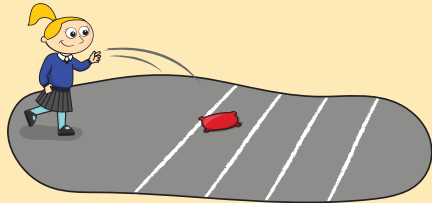
Encourage children to think of their own set of instructions for completing a simple task, such as making a drink or snack. Prompt them to draw pictures in the correct sequence or to take photographs in the correct order.



## Continuous provision

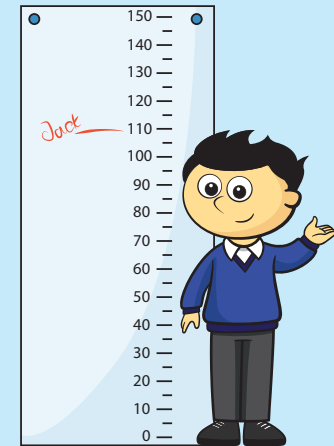
Mark different lengths on the ground using chalk or masking tape.

Encourage children to see how far they can throw their welly or beanbag. Children can compare how far they threw their welly to how far a partner threw theirs. Who has the longest throw?



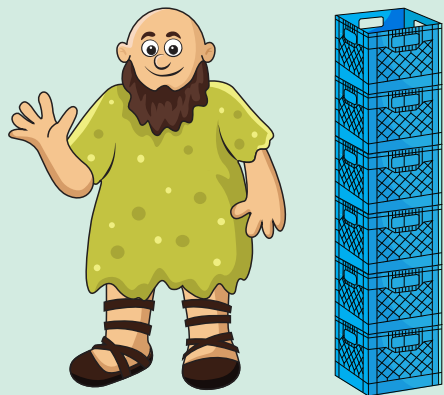
Set up a class height chart and encourage children to stand next to the wall and mark each other's height.

Prompt them to use the language of height to compare the height of different children.



A giant has been in the classroom and has bumped into the walls, leaving marks. How tall could the giant be?

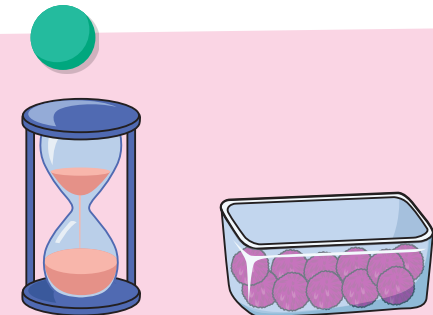
Provide children with non-standard units for them to measure and predict how tall the giant is.



Set up a timer station in provision with timers of different durations and a range of loose parts to fill

containers with. Encourage children to fill containers for the duration of the timer.

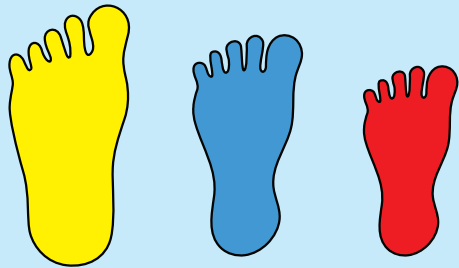
How much can you fill the container before the timer stops?



# End of block checkpoint

## Checkpoint 1

Support each child to make their own footprint. Are they able to find items which are longer than, shorter than or the same size as their foot?



Are children able to use the language of length to compare and order the footprints?

## Checkpoint 2

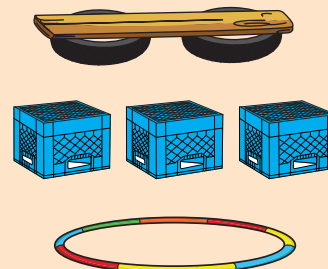
Measure the height of some children using string. Choose one of the pieces of string and play a game of 'Who could it be?'.



Are children able to use the language of height to talk about who is the same height as the piece of string?

## Checkpoint 3

Provide children with a range of picture cards showing different obstacles. Encourage children to sequence the pictures to make a set of instructions for a partner using the language 'first', 'then', 'next', 'after', and 'finally'.



Children follow the instructions in the correct order to complete the obstacle course.