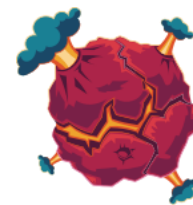
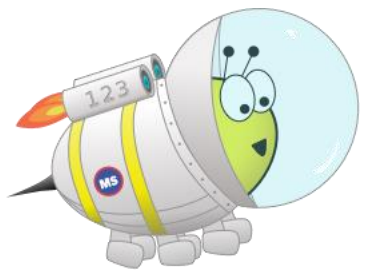




Maths Shed



Lesson: 2

To be able to describe full and part turns

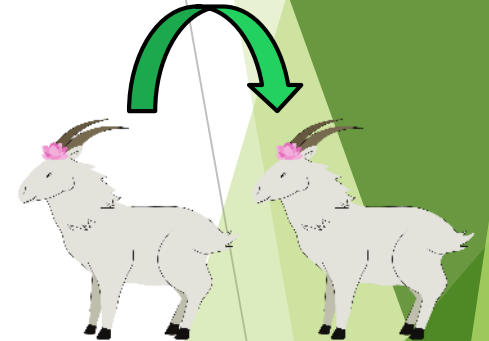
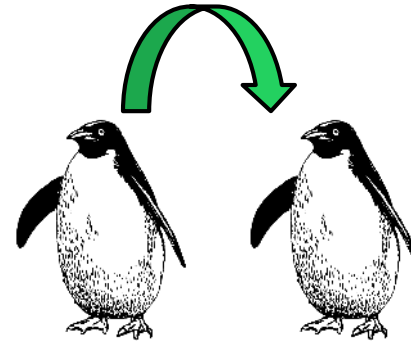
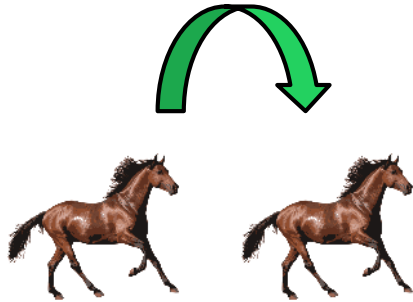
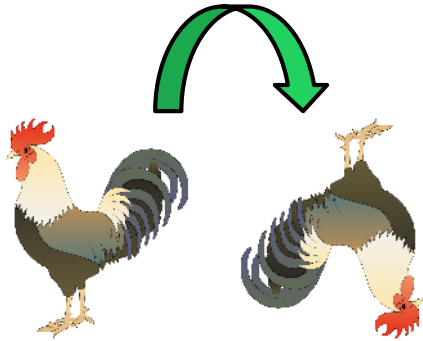
Success criteria:

- ✓ I can use terms like “full turn”, “half turn”, “quarter turn”, “three-quarter turn”, “clockwise” and “anti-clockwise” to describe a person’s rotation or an object’s rotation
- ✓ I can explain my reasoning when using terms like “full turn”, “half turn”, “quarter turn”, “three-quarter turn”, “clockwise” and “anti-clockwise” to describe a person’s rotation or an object’s rotation

To be able to describe full and part turns

Starter:

Thinking about full and half turns, which pair of animals doesn't belong?

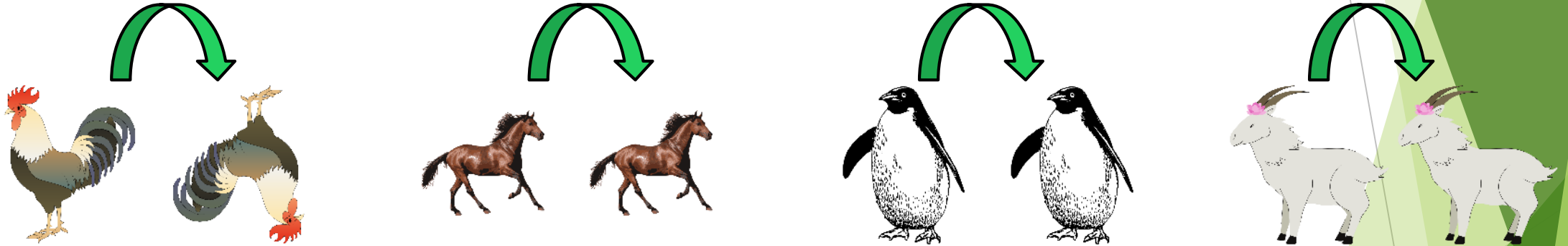


Explain your answer.

To be able to describe full and part turns

Starter:

Thinking about full and half turns, which pair of animals doesn't belong?



The roosters don't belong as the second rooster has made a half turn, whereas the horses, penguins and goats have made a full turn.

To be able to describe full and part turns

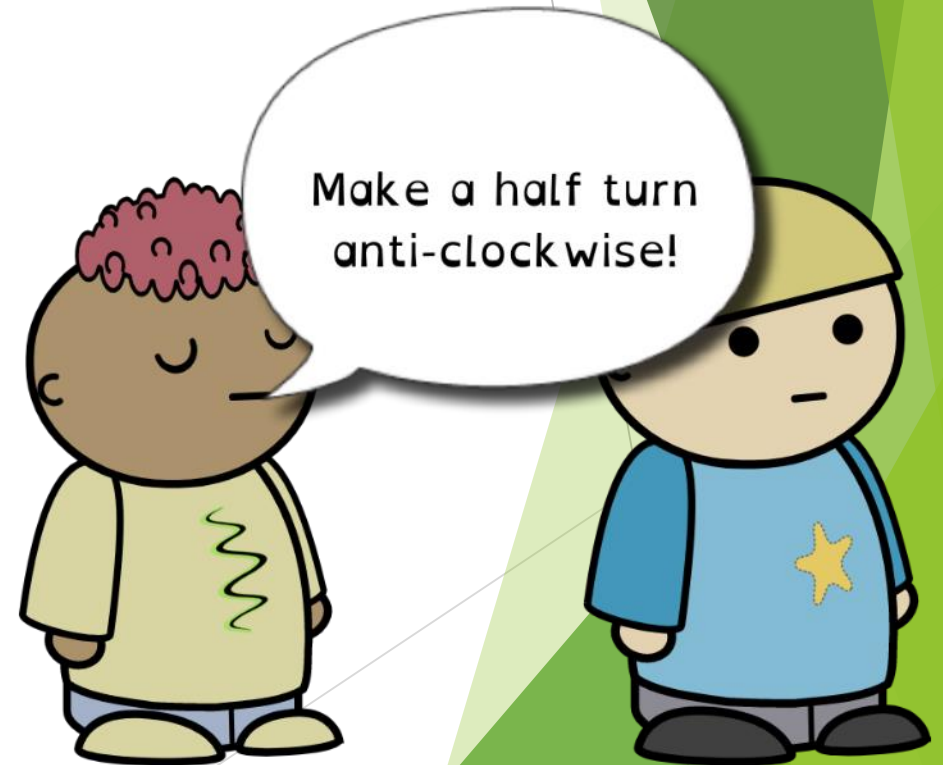
Activity 2:

Rotation Practice!

Partner 1 stands on the spot.

Partner 2 gives instructions, like:

- ▶ “Make a half turn clockwise.”
- ▶ “Make a full turn anti-clockwise.”
- ▶ “Make a three-quarter turn clockwise.”
- ▶ “Make an anti-clockwise quarter turn.”



To be able to describe full and part turns

Activity 2:

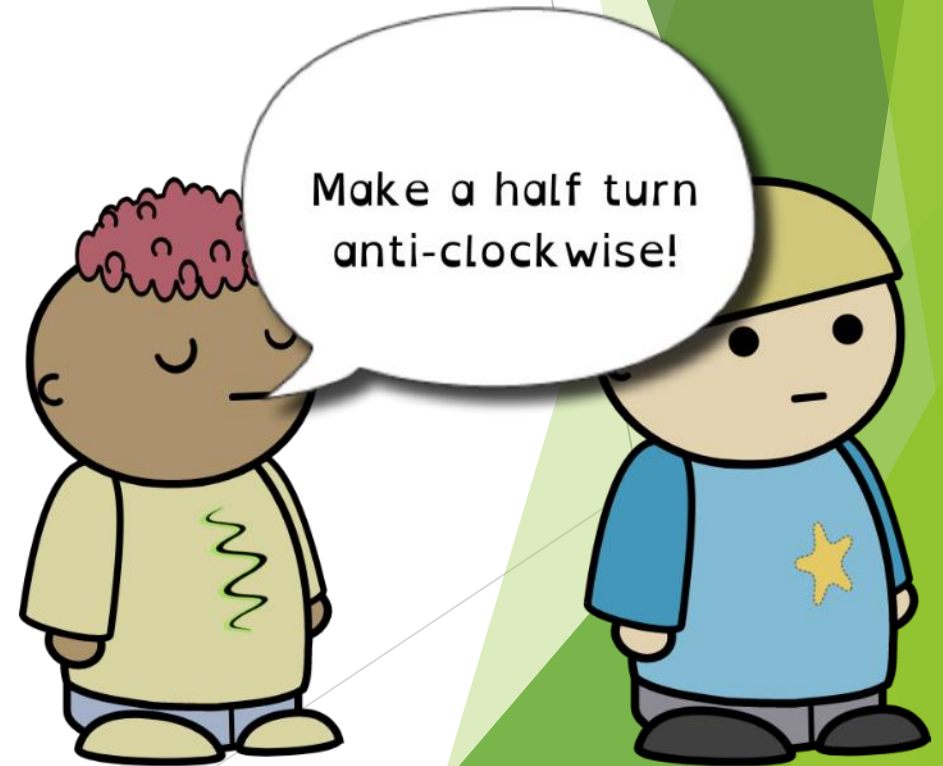
Rotation Practice!

Partner 1 stands on the spot.

Partner 2 gives instructions, like:

- ▶ “Make a half turn clockwise.”
- ▶ “Make a full turn anti-clockwise.”
- ▶ “Make a three-quarter turn clockwise.”
- ▶ “Make an anti-clockwise quarter turn.”

Teacher / peer assessment

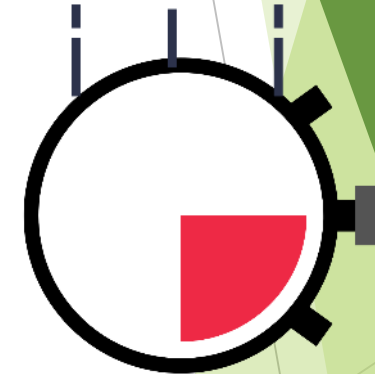
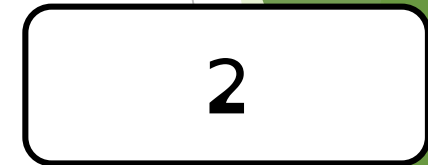
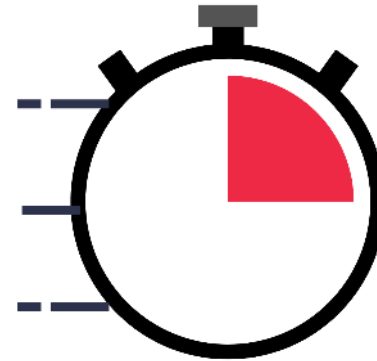
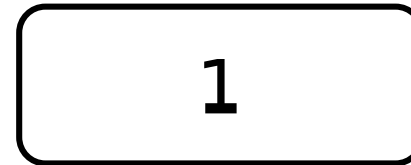


To be able to describe full and part turns

Talking Time:

Complete the sentence below.

The watch has made a
quarter turn _____.

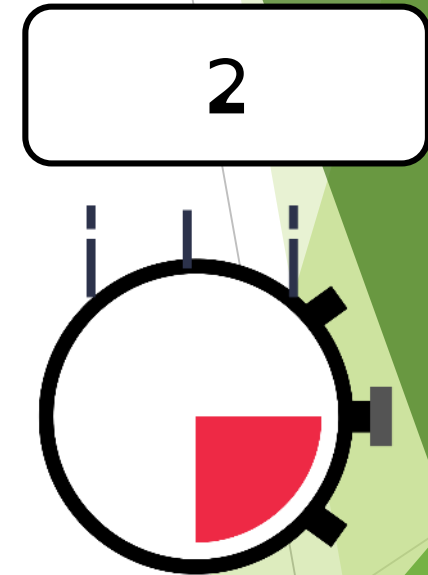
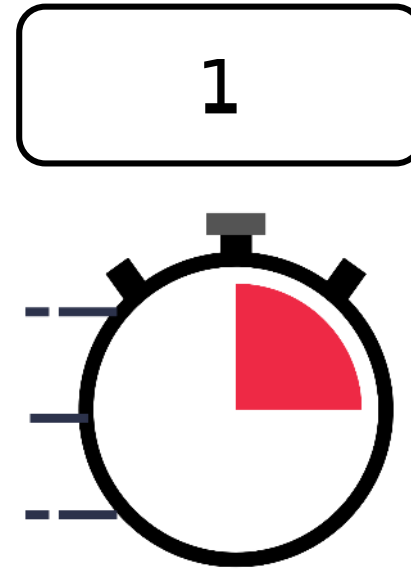


To be able to describe full and part turns

Talking Time:

Complete the sentence below.

The watch has made a
quarter turn clockwise.

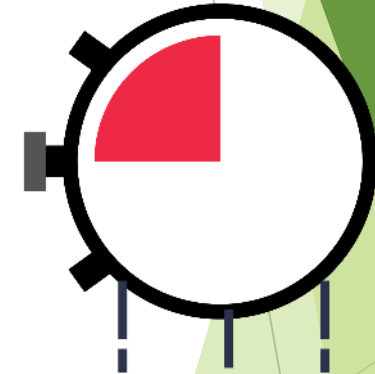
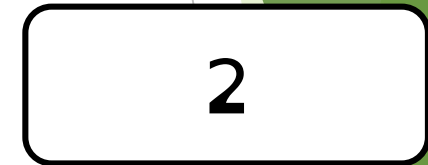
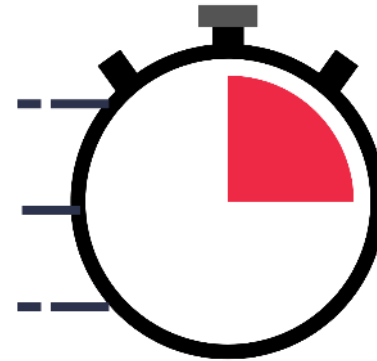
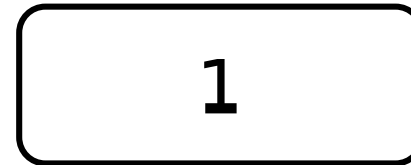


To be able to describe full and part turns

Talking Time:

Complete the sentence below.

The watch has made a three-quarter turn _____.

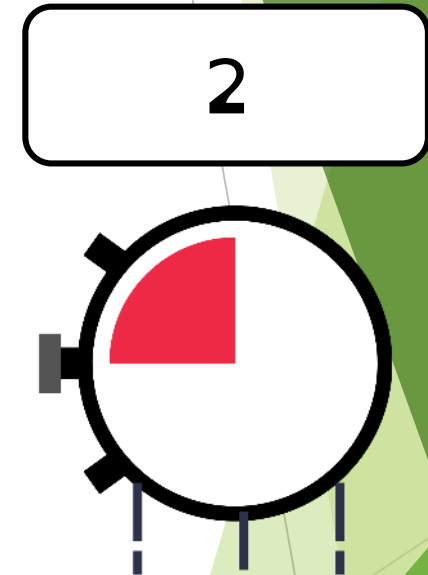
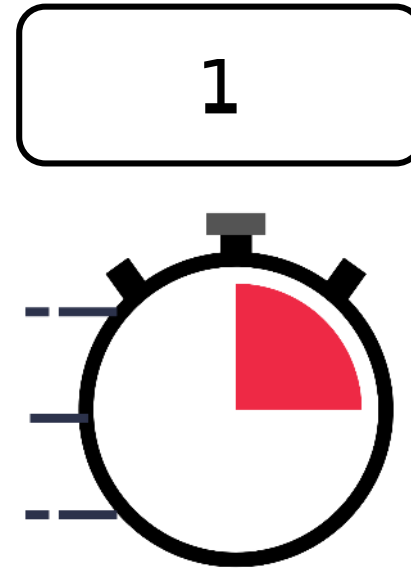


To be able to describe full and part turns

Talking Time:

Complete the sentence below.

The watch has made a three-quarter turn clockwise.



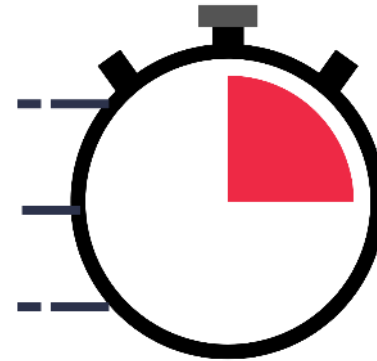
To be able to describe full and part turns

Talking Time:

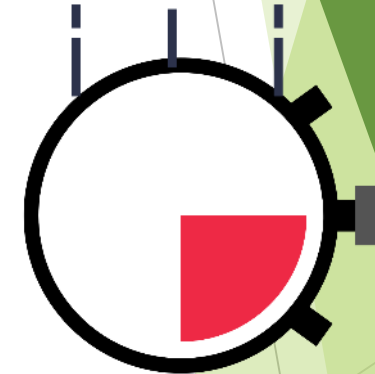
Complete the sentence below.

The watch has made a three-quarter turn _____.

1



2

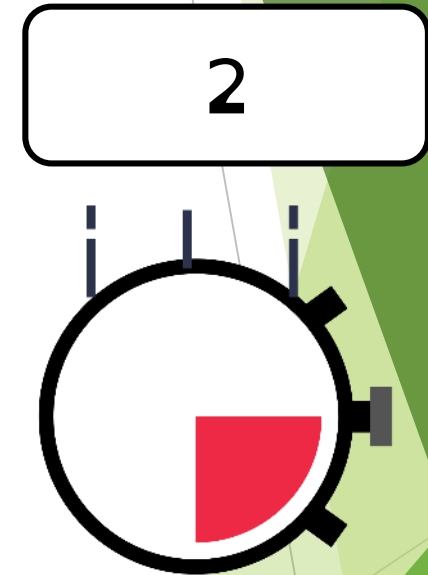
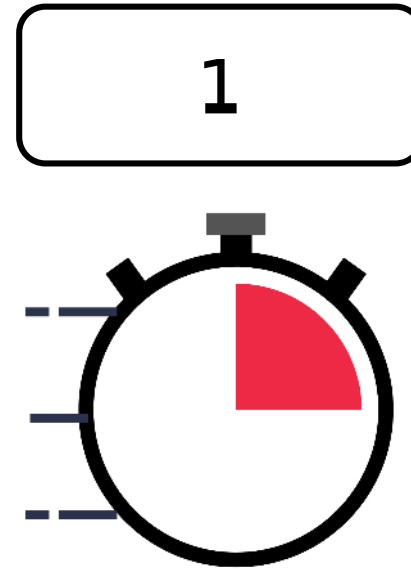


To be able to describe full and part turns

Talking Time:

Complete the sentence below.

The watch has made a three-quarter turn anti-clockwise.

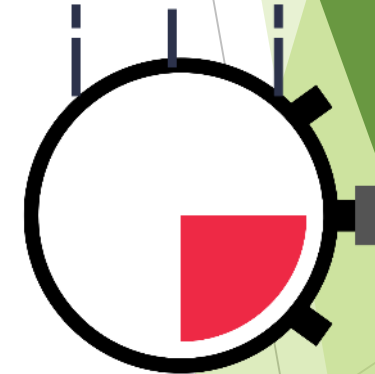
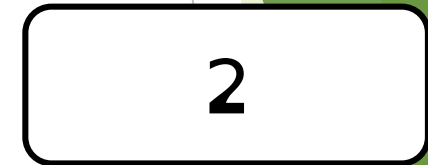
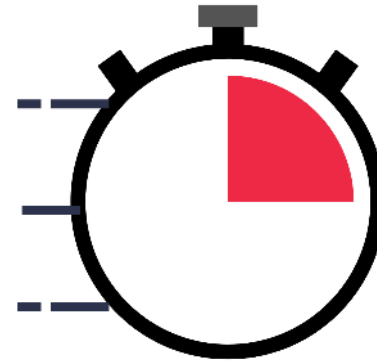
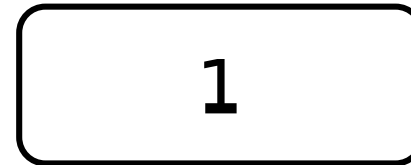


To be able to describe full and part turns

Talking Time:

Complete the sentence below.

The watch has made
a _____ turn.

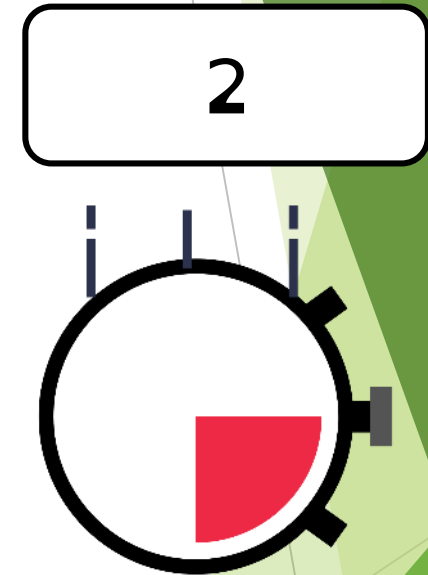
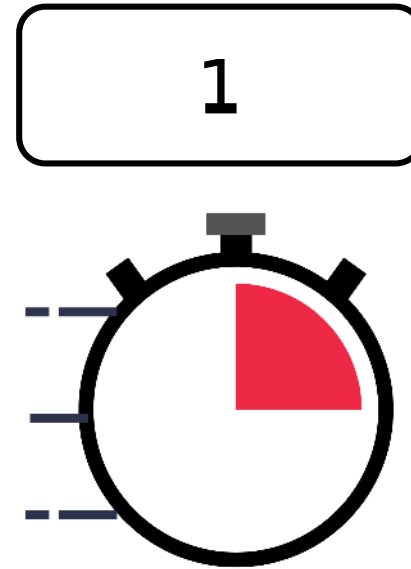


To be able to describe full and part turns

Talking Time:

Complete the sentence below.

The watch has made
a half turn.



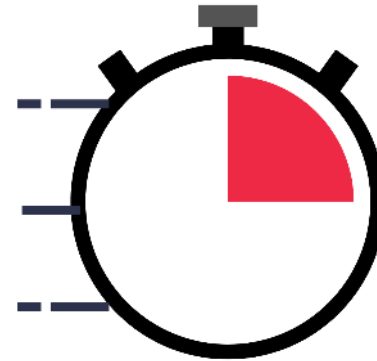
To be able to describe full and part turns

Activity 3:

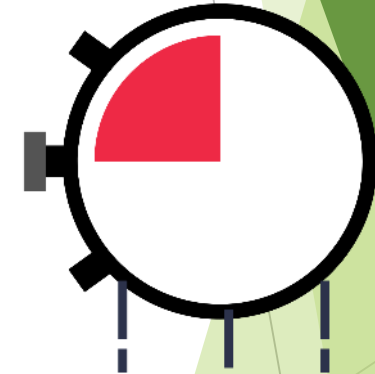
Complete the sentence below.

The watch has made a
quarter turn _____.

1



2

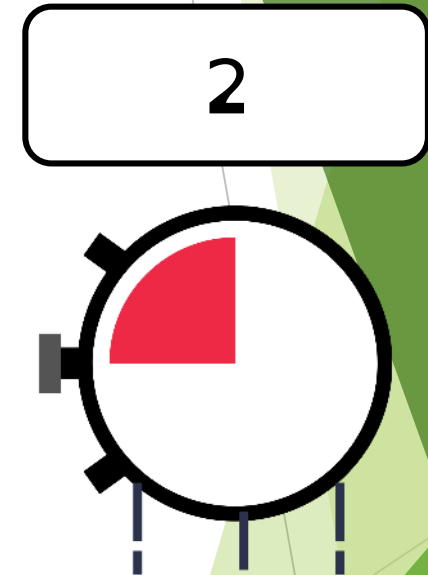
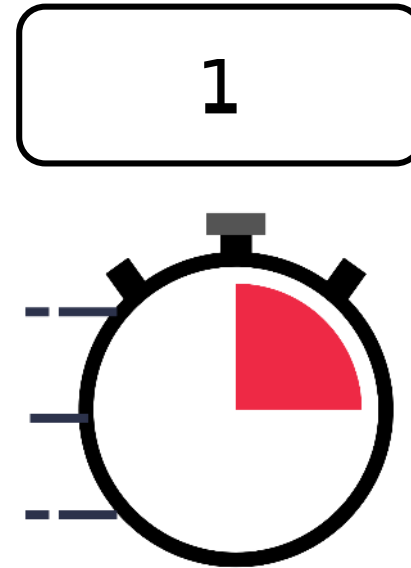


To be able to describe full and part turns

Activity 3:

Complete the sentence below.

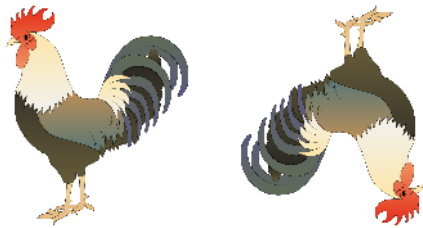
The watch has made a
quarter turn anti-clockwise.



To be able to describe full and part turns

Talking Time:

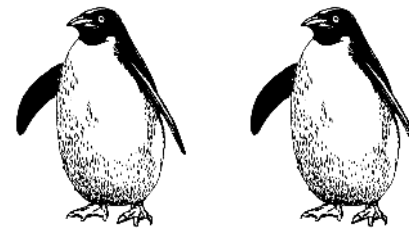
Match the description to the correct representation.



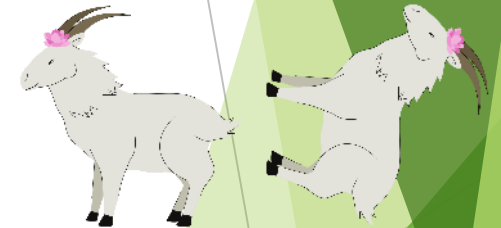
full turn



half turn



quarter
turn

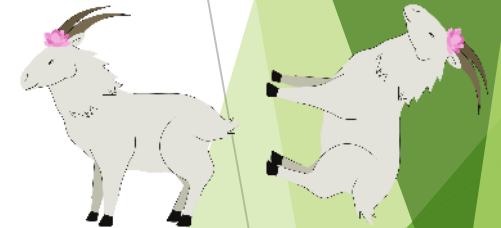
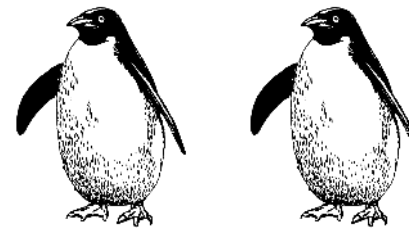
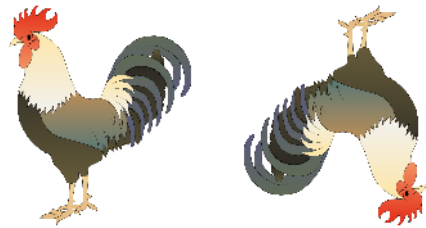


three-
quarter turn

To be able to describe full and part turns

Talking Time:

Match the description to the correct representation.



full turn

half turn

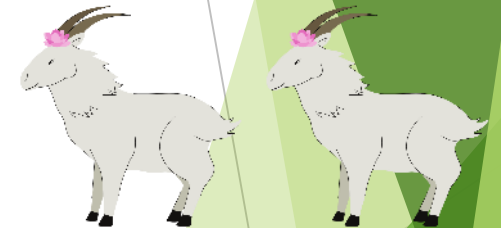
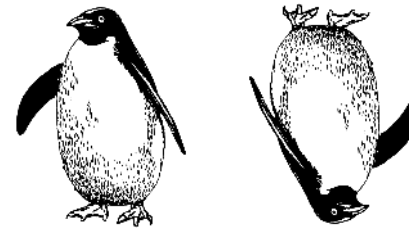
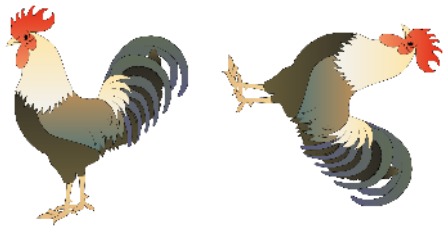
quarter
turn

three-
quarter turn

To be able to describe full and part turns

Activity 4:

Match the description to the correct representation.



full turn

half turn

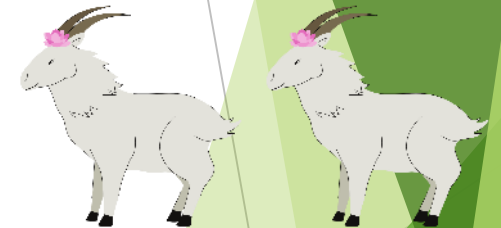
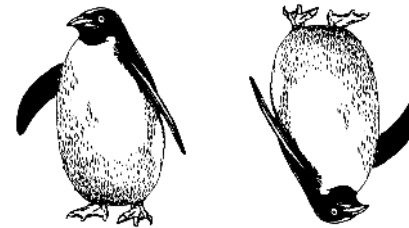
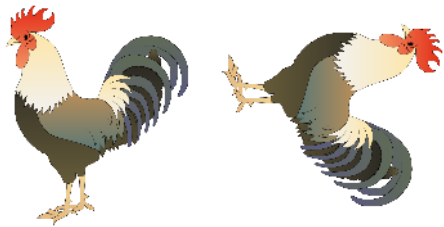
quarter
turn

three-
quarter turn

To be able to describe full and part turns

Activity 4:

Match the description to the correct representation.



full turn

half turn

quarter
turn

three-
quarter turn

To be able to describe full and part turns

Activity 5:

James says, “If two people start facing in the same direction, then turn in opposite directions, they will not be facing in the same direction after they have turned.”

Is James’s statement sometimes, always or never true?

Provide a sketch to help explain your answer.

To be able to describe full and part turns

Activity 5:

James says, “If two people start facing in the same direction, then turn in opposite directions, they will not be facing in the same direction after they have turned.”

Teacher / peer assessment

James’s statement is only sometimes true. It depends how far they turn. If they both make a half turn they will face in the same direction. If one person makes a quarter turn clockwise and the other makes a three-quarter anti-clockwise turn...

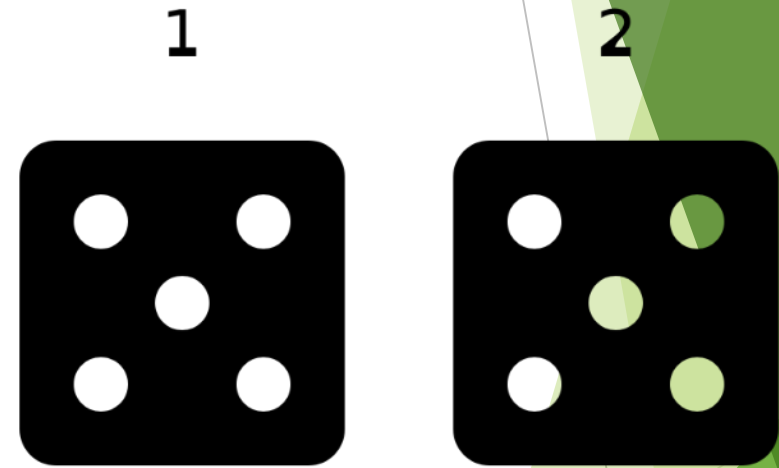
To be able to describe full and part turns

Activity 6:

Look at the dice shown.

Which possible turns might have been made between Step 1 and Step 2?

Explain your answer.

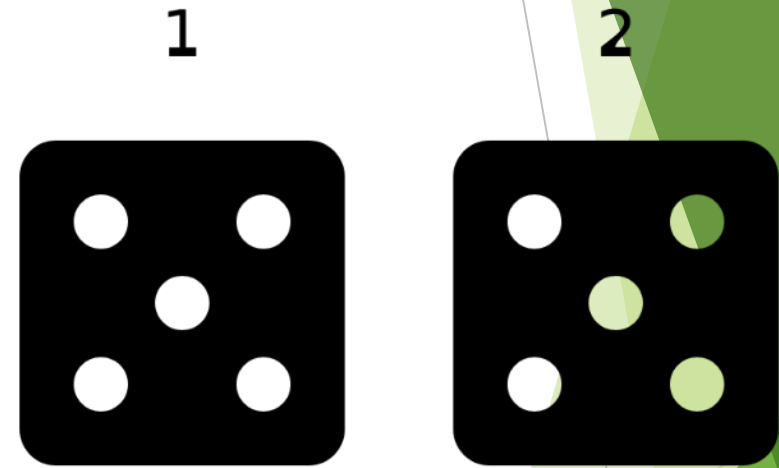


To be able to describe full and part turns

Activity 6:

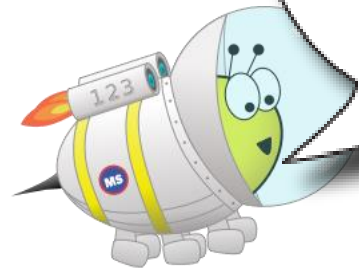
Look at the dice shown.

The dice might have made a quarter turn (either clockwise or anti-clockwise), a half turn (either way), or a three-quarter turn (clockwise or anti-clockwise) as the five face of the dice look the same each time a quarter, half or three-quarter turn is made!

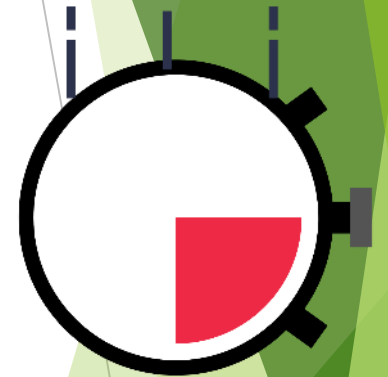
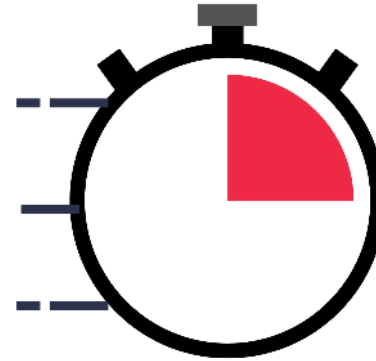


To be able to describe full and part turns

Evaluation:



I have rotated the
watch a quarter
turn anti-
clockwise.

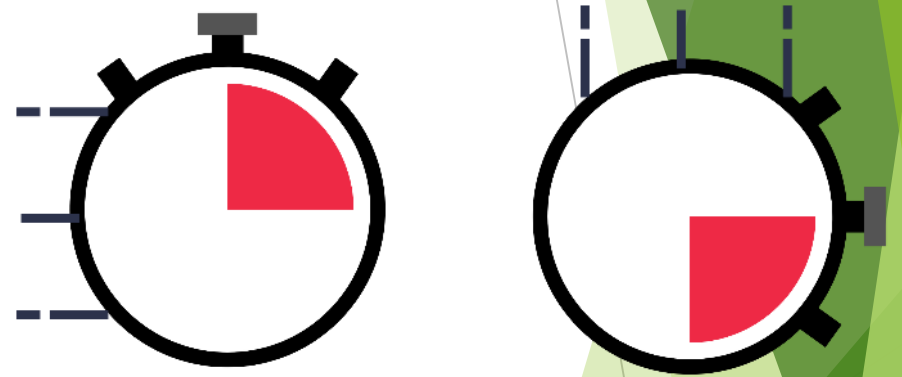
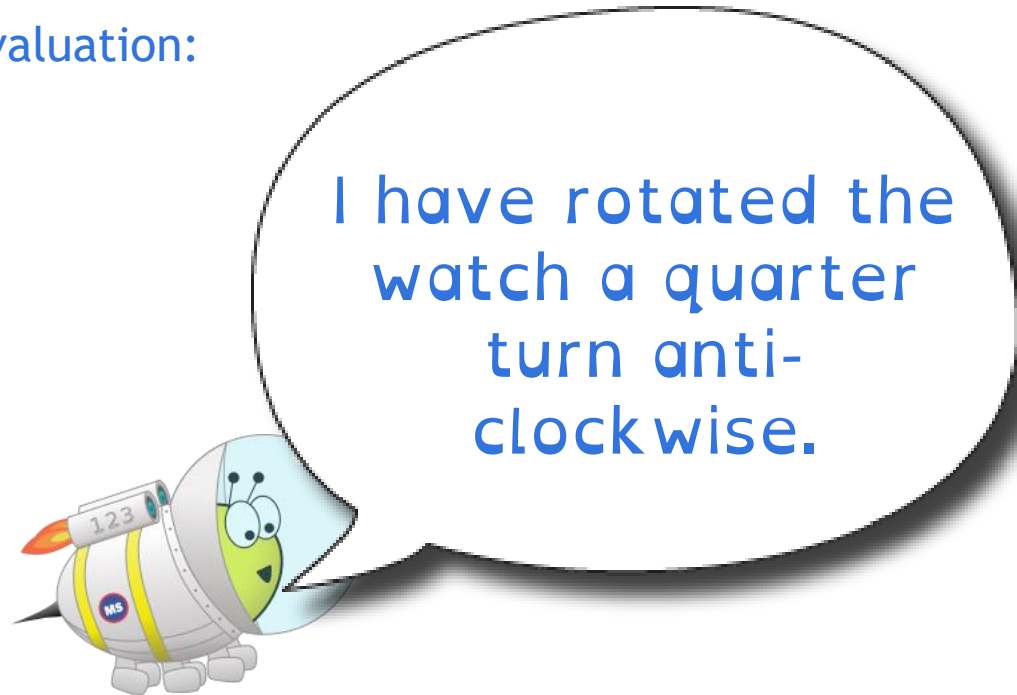


Do you agree with Astrobee's directions?

Explain your answer in as many ways as you can.

To be able to describe full and part turns

Evaluation:



No, I do not agree with Astrobee. Although the watch has made a quarter turn, it has turned clockwise. The red quarter would be in the bottom left-hand part of the watch face if it had been turned anti-clockwise. (It has made a three-quarter turn anti-clockwise).

To be able to describe full and part turns

Success criteria:

- ✓ I can use terms like “full turn”, “half turn”, “quarter turn”, “three-quarter turn”, “clockwise” and “anti-clockwise” to describe a person’s rotation or an object’s rotation
- ✓ I can explain my reasoning when using terms like “full turn”, “half turn”, “quarter turn”, “three-quarter turn”, “clockwise” and “anti-clockwise” to describe a person’s rotation or an object’s rotation