



HAWTHORN PARK COMMUNITY PRIMARY SCHOOL

Where Care and Learning Count



Headteacher: Mrs Jeni Houghton

Computing Knowledge Organiser

Area: Algorithms

Year Group: 2

By the end of this unit pupils will be able to:

- Give commands (physically to each other) including: straight; forwards; backwards; turn; right-angle; left; right; clockwise; anticlockwise; one at a time.
- Articulate an algorithm to achieve a purpose.
- Plan and enter a sequence of instructions to achieve an algorithm, with a robot, specifying distance and turn and drawing a trail.
- Predict what will happen & test results.
- Control the nature of events: repeat, loops, single events and add and delete features.

Using LOGO

- Explore outcomes when giving instructions in a simple Logo program.
- Watch a Logo program execute and debug any problems.
- Predict what will happen & test results.
- Control the nature of events: repeat, loops, single events and add and delete features.
- Talk about similarities and differences between floor robots and logo on screen.
- Recognises that all software executed on digital devices is programmed.

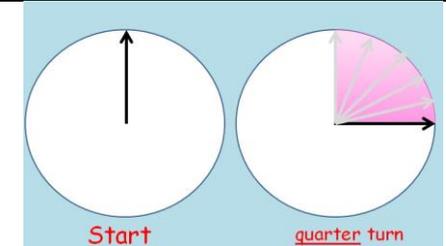
Prior Learning:

- understand that an algorithm is a set of step-by-step instructions, beginning to check work for mistakes and understand that this is known as 'debugging', direct and program a Bee-Bot or other programmable toy, using different end blocks on Scratch JR such as repeat forever, change the size of character, add characters and backgrounds.

Key Facts and vocabulary

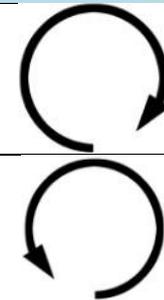
What are quarter turns?

- Quarter turns describe the direction an object will move in.
- They can either be clockwise, or anticlockwise.
- The image below shows a quarter turn clockwise.
- We can also call quarter turns 90 degree turns.



What are clockwise and anti-clockwise?

- When something moves in a clockwise direction, it is moving in the same direction as the hands on a clock.
- When something moves in an anti-clockwise direction, it is moving in the opposite direction to as the hands on a clock.



Link to maths

- The red hand is where the minute hand on the clock started, it started on 6.
- After moving a quarter turn clockwise it will end up on the 9, where the green minute hand is pointing. This is also a 90 degree turn.

