

1.6 Programming B - Programming animations – Knowledge Organiser

Key prior learning is highlighted in green, but must be revisited and reinforced during this teaching sequence.

Overview

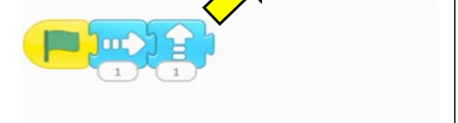
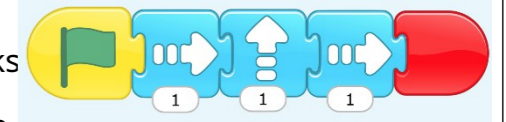
Animations in Scratch Jr.



- **Programming** is when we make a set of instructions for computers to follow.
- **Scratch Jr.** is a program that we can use in order to code our own stories and animations. It involves sprites (characters on the screen).
- We use **algorithms** (a set of instructions to perform a task) to program the sprite to do different things.

Sequencing

- **Sequences:** -A sequence is a pattern or process in which one thing follows another. In Scratch Jr. we can stack blocks together side by side in order to create programs made up of sequences.
- **Deleting Blocks:** Blocks can be removed from programs by dragging them from the programming area back into the blocks palette.
- **Repeating Blocks:** For something to happen more than once, we can change the number underneath the block.
- **Running the Code:** Run your animation by tapping the full



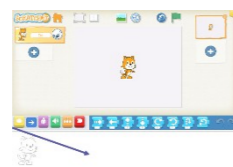
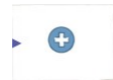
The Basics of Scratch Jr.

- **What is Scratch Jr?** Scratch is a website/ app that lets us code our own stories, games and animations.
- **Sprites:** Scratch Jr. uses characters called sprites. The main sprite is a cat called Scratch.
- **Home:** Clicking on the house takes you 'home' to your project screen.



Getting Started

- The + starts a new project.
- These are programming blocks. We drag them into the programming area (right). Clicking the block in the area makes the sprite perform on the stage.



- **Moving Blocks:** These make the Sprite move in different ways.



- **Background:** Backgrounds are added by clicking this icon (right).
- **Start Blocks:** Start blocks are yellow. These are used to start/ run programs.

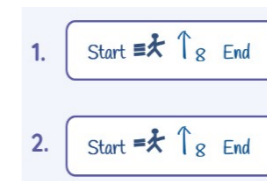


- **End Blocks:** End blocks are red. These show what happens at the end of your program.



Algorithms and Programming

- An **algorithm** is a set of instructions for performing a task. Designing an algorithm can help us to make the sprite do the things that we want it to do.
- **Programming** is when we move the blocks into the position (based on our algorithm design). Our programming codes the sprite to perform the actions.



Debugging

- **Sometimes, things don't work exactly how we want them to the first time.** This may be a problem with our algorithm, or we could have made a mistake in our programming.
- If the animation does not work correctly the first time, remember to **debug** it. This means finding and fixing the problems.

