

Year 2 Computing – Introduction to Quizzes

What I should already know

- **Programming** is when we make a set of instructions for computers to follow.
- We use **programs** in order to code our own stories and animations. Scratch Jr 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.

What I will learn by the end of this unit

- **Programming** is when we make a set of instructions for computers to follow.
- Programs can be used to code programs using a series of command blocks. Scratch Jr can be used to **design quizzes**.
- We use **algorithms** (a set of instructions to perform a task) to program the sprite to do different things.

Disciplinary Skills

- Understand what algorithms are.
- Understand programs execute by following precise and unambiguous instructions.
- Create and debug simple programs.

Creating Quizzes

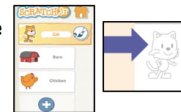
-Outcomes: An outcome is something that happens as a result of us doing something. E.g. in cookery, we can mix and cook ingredients to make an outcome of food! In Scratch Jr. a sequence of commands is **followed** and this results in an outcome.



-Quizzes in Scratch: We can create simple quizzes in Scratch jr. where the user can select an answer by clicking on a sprite. An outcome occurs when the sprite is clicked.



-Adding and Programming Sprites: We need multiple sprites for the user to select from. To add new sprites, we choose the + option (see right). We can program multiple sprites. The sprite we are programming is the picture in the programming area.



-Programming Sequences: Consider what question to ask your users, e.g. Who lives here? Program each sprite with a command sequence, so that they know if they are right or not when clicking on the sprite.



Algorithms and Programming

-An **algorithm** is a set of instructions for performing a task. Designing an algorithm can help us to make the quiz work in the way that we want it to.

Question	Background	Sprite	Character	A Yes/No	1 Tap/Click	2 Tap/Click
Is it a cat?			Yes/No	Yes/No	Yes/No	Yes/No

-Programming is when we move the blocks into the position (based on our algorithm design). Programming uses a code that the computer can understand. In Scratch jr. this makes our quiz animation do the things we want it to.



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.

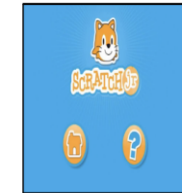


-If the animation does not work correctly the first time, remember to **debug** it. This means finding and fixing the problems.



The Basics of Scratch Jr.

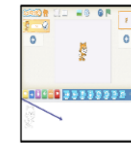
-What is Scratch Jr? Scratch is a website/ app that lets us code our own stories, games and animations.



-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.

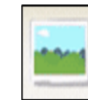
-These (right) are the **programming blocks**. We drag them into the **programming area** (right). Clicking the block in the area makes the sprite perform on the **stage**.



-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 sequences. We can change the number at the bottom of some blocks to alter distance or size.



-Background: Backgrounds are added by clicking this icon (right).



-Running the Code: Run your animation by tapping the full screen icon, and then the green flag.



-Start Blocks: Start blocks are yellow & are used to start/ run programs. The second block on the right starts the program when the sprite is clicked on.



-End Blocks: End blocks are red. These are used to end your program.



Key Vocabulary

- | | | | | |
|--------|---------|---------|---------|----------|
| start | outcome | predict | blocks | actions |
| change | build | match | compare | evaluate |