

Programming — Programming quizzes — KNOWLEDGE ORGANISER



What I should already know?:

I will be have been introduced to on-screen programming through ScratchJr. I have explored the way a project looks by investigating sprites and backgrounds. I have used programming blocks to use, modify, and create programs. I have been introduced to the early stages of program design through the introduction of algorithms.

What I will know by the end of the unit:

I will recap what I already know about the ScratchJr app. I will begin to identify the start of sequences in real-world scenarios, and learn that sequences need to be started in ScratchJr. I will create programs and run them in full-screen mode using the Green flag.



I will discover that a sequence of commands has an 'outcome'. I will predict the outcomes of real-life scenarios and a range of small programs in ScratchJr. I will match programs that produce the same outcome when run, and use a set of blocks to create programs that produce different outcomes when run.

I will be taught how to use the Start on tap and Go to page (Change background) blocks. I will use a pre-defined design to create an animation based on the seasons. I will be introduced to the task for the next lesson and predict what a given algorithm might mean.

I will look at an existing quiz design and think about how this can be realised within the ScratchJr app. I will choose backgrounds and characters for their own quiz projects. I will modify a given design sheet and create my own quiz questions in ScratchJr.

I will create my own quiz question designs including my own choices of question, artwork, and algorithms. I will increase the number of blocks used within my sequences to create more complex programs.

I will compare my projects to my designs. I will think about how I could improve my designs by adding additional features. I will modify my designs and implement the changes on my devices. I will find and correct errors in programs (debug) and discuss whether I debugged errors in my own projects.

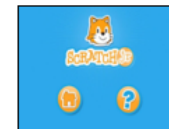


The Basics of Scratch Jr.

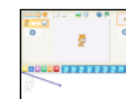
-**What is Scratch Jr?** Scratch is a website/ app that lets us code our own stories, games and animations.

-**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**.



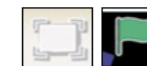
-**Sequences:** -A sequence is a pattern or process in which one thing follows another. In Scratch Jr. we can stack blocks together side by side in order to create sequences. We can change the number at the bottom of some blocks to alter distance or size.



-**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.

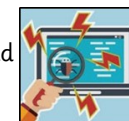


-**End Blocks:** End blocks are red. These are used to end your program.



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.

VOCABULARY	
Start blocks	Start blocks are yellow & are used to start/ run programs.
Outcome	An outcome is something that happens as a result of us doing something
Predict	To think in advance about something will happen.
Blocks	Control and manage the programme
Actions	The activities that the blocks need to complete.