

Computing

Knowledge Organiser – Scratch

In Key Stage 2, children build on skills and extend their mastery of computers, as both user and creator. The computing curriculum aims to make children computationally aware, teaching them concepts (how to predict and analyse results, how to break a problem down into parts, how to spot and use similarities and how to evaluate) and approaches to help them problem solve.

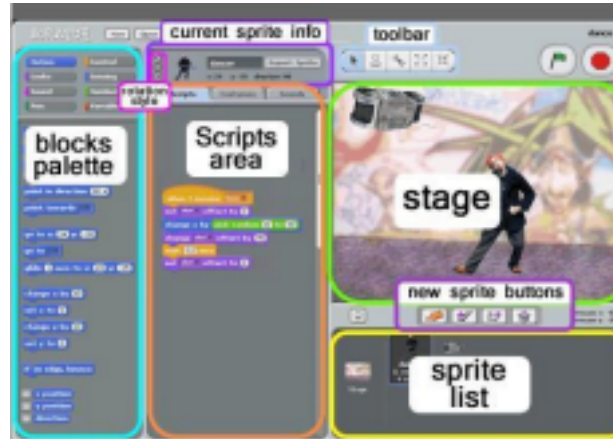
Computing projects might include developing a simple computer game using a visual, interactive programming language such as Scratch. Scratch provides access to over 100 code blocks. These code blocks are organized into eight categories and are made available on the blocks palette. Each of these categories of code blocks is described in the following list:



- **Motion.** Code blocks that control sprite placement, direction, rotation, and movement.
 - **Looks.** Code blocks that affect sprite and background appearance and provide the ability to display text.
 - **Sound.** Code blocks that control the playback and volume of musical notes and audio files.
 - **Pen.** Code blocks that can be used to draw using different colours and pen sizes.
 - **Control.** Code blocks that trigger script execution based on predefined events, repeatedly execute programming logic using loops, and perform conditional logic.
 - **Sensing.** Code blocks that can be used to determine the location of the mouse-pointer, its distance from other sprites, and whether a sprite is touching another sprite.
 - **Operators.** Code blocks that perform logical comparisons, rounding, and other arithmetic operations.
 - **Variables.** Code blocks that can be used to store data used by applications when they execute.
- You can view the code blocks belonging to a given

category by clicking on one of the eight labelled button controls at the top of the blocks palette. Note that each category of code block is colour coded, making it easy to distinguish between code blocks from different categories.

A typical Scratch interface:



Other useful terms include:

| | | |
|--------------------|---|--|
| Sprite | An object in Scratch which performs functions controlled by scripts | |
| Stage | The background of a project, performs functions through scripting | |
| Scratch Cat | Scratch's mascot and default sprite | |

| | | |
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| Green Flag | Sometimes simply called the 'flag,' this is what starts most projects' scripts running | |
| Costumes | Images that are used to represent a sprite on the stage | |
| Script | A collection of code blocks that outlines the programming logic that influences the operation of a sprite | |
| Red Stop Sign | The button that usually stops a project | |
| X__Y__ | The coordinates on the stage where you want the | |

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| | sprite to move to | |
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Did you know that Scratch is freely available and can be accessed from <https://scratch.mit.edu/> where you will find lots of ideas and support ... do take a look

