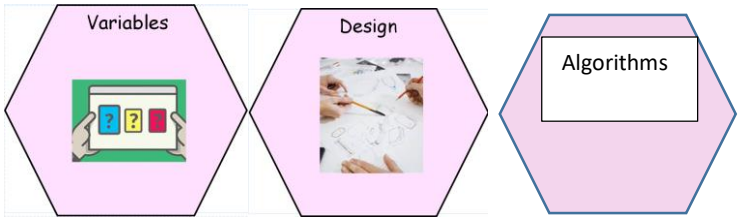
Computing- Year 6- Summer Term- Programming

Prior Learning: We will build on learning from the previous years, where we have explored scratch and scratch junior. In which we have looked at using a variety of features and functions to help create quizzes and games.

Theme: Programming a variable in games
Concept: Programming
Hardware: Laptops
Software: Scratch

Words we will know!



1. Introducing variables

We will be introduced to variables by seeing what real-world examples of these are. We will explore variables in Scratch. We will create our own project that includes variables and identify that variables are named and that they can be letters as well as numbers

A variable can be set and changed throughout the running of a program.

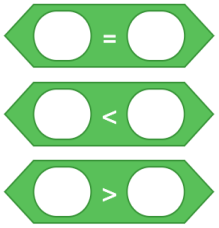
2. Variables in programming

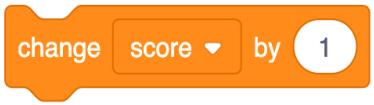
We will understand that variables are used in programs, and that they can only hold a single value at a time. We will explore why it is important to name variables and apply our learning in a Scratch project in which we will make, name, and update variables.

A variable can only hold one value at a time.

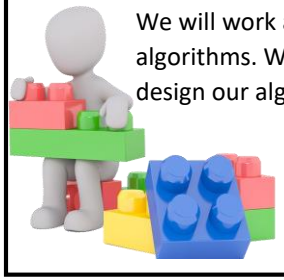
3. Improving a game

We will apply the concept of variables to enhance an existing game in Scratch. We will predict the outcome of changing the same change score block in different parts of a program, then test predictions in Scratch. We will experiment with using different values in variables, and with using a variable elsewhere in a program. We will comment on our project to explain how we have met the objectives of the lesson.





4. Designing a game



We will work at the 'design' level, where we will create our artwork and algorithms. We will design the sprites and backgrounds for our project, then design our algorithms to create our program flow.

5. Design to code

We will implement the algorithms that we have created in Lesson 4. We will identify variables in an unfamiliar project and learn the importance of naming variables. We will also have the opportunity to add another variable to enhance our project.

6. Improving and sharing

We build on the project that they created in Lesson 5. We will consider how we could improve our own projects and make small changes to achieve this. We will then have the opportunity to add a variable. We will evaluate each other's projects; identify features that we liked and features that could be improved.