



Year 6 Kodu

You have already learnt...

In Year 5, you looked at how to debug your programs and use sequencing to make sure things happened in the correct order. You considered how we use variables to impact our projects and make differences to how they run. You looked at repetition and how you can add loops and repetition to your projects to make the same actions repeat several times.

Key Skills

- Effectively design, write and debug programs for a clear purpose using Scratch and Kodu
- Use sequence, selection and repetition in programs
- Work with variables effectively to enhance their programs
- Use logical reasoning to locate and explain errors in programs they have designed

Key Knowledge

The Kodu programming environment is very similar to Scratch in concept, but you use different methods to create the algorithms. Kodu commands create algorithms. Tools can be used to change the size of the ground and raise or lower the landscape. Software is made up of algorithms. Algorithms are sets of instructions that tell the computer's hardware what to do.

Key Vocabulary	
acceleration	An increase in speed or rate.
character	An object or 3D model that takes on a role in a computer game.
node	An angle point that connects two paths.
object	A character or an element that can be added to a world and programmed.
obstacle	Something blocking a pathway.
path	A trail that an object can be programmed to follow.
program	A set of instructions that a computer uses to perform a specific function.
world	An animated, 3D environment created with computer graphics where a user can interact with characters, objects or other game users.

Tool Palette (Some tools may have been renamed in newer versions of the Kodu software - these alternative names are shown below.)

Home Menu	Play Game	Move Camera	Object Tool	Path Tool	Ground Brush	Raise Up/Down	Smooth/Flatten Flatten	Roughen	Water Tool	Delete Tool	World Change World Settings

Worlds

From the start up menu, you can choose to load a **world** designed by someone else or create a new **world**.

You can also use the **RESUME** option to go back to a **world** you were working on before.

Choose **NEW WORLD** and use the tools in the **Tool Palette** to design your own landscape. Use the **Ground Brush** to add more land to your world. Explore the tools to build hills and valleys and even add areas of water.

Adding Objects

Select the **Object Tool** on the **Tool Palette** and choose the **object** or **character** you want to add.

Click somewhere on the **world** and the **object** will appear.

Right click on the **object** to open a new menu. Here, you can choose to **Change Settings** or **Program** the **object**.

Explore the **Change Settings** menu to find out how to control different aspects of how an **object** behaves, such as its rate of **acceleration**.

Programming

Once you have added an **object** to your world, you can **program** it. All programming in Kodu is based on the two simple ideas of **when** and **do**.

When this happens... **do** this action.

When

Do

To access the programming tiles, make sure that the **Object Tool** is selected. Right click on the **object** and select **Program** from the menu that appears.

What is Kodu?

Kodu is a simple visual programming language that uses picture tiles which can be added together to create a set of instructions. In coding, a set of sequenced instructions or rules for solving a problem or completing a task in a logical order is called an algorithm.

Kodu teaches coding in a fun way.

Next you will learn...

You will use a variety of coding platforms during your time at school, including Scratch, Turtle Logo and Microsoft Code.