

### ***Planning to Code***

Programming can help perform some cool digital tasks. It can get robots moving, create a game, an entertaining animation or build a website. Planning out your code is an essential step to programming.

We plan before we write (a narrative, a debate, an explanation) you need to know what you are going to write before you write, right? The same approach and planning applies to programming. Like our writing, if we go straight to the code, we may miss steps, forget code or add the wrong code in. If one thing is missing from our code, it means our program may not function at all or may not perform the task we wanted. Trying to find the mistakes can be a hard task, especially if we don't know what the actual error is because we never planned out the code.

If we do not plan before we code, we end up focusing only on the coding not the logic steps we need to make our program complete the task. A flowchart helps plan out the code needed to create a program. We write out the code in English – not the code we are working with. Using written English allows you to focus on the functions of your program.

### ***Flowcharts***

Flowcharts visually show the steps and commands your program will take. Flowcharts are important to order your commands. Having a flowchart makes sure all the commands and options are ready to code. You can go back, follow the commands and make sure it flows. Flowcharts will help you track your progress when programming and before you code – they help you understand all the different functions that will be needed to create your program.

As you learn to create complex programs it means your code will become complex too. Before we start coding we can look back over the flowchart, we use it to pick up any mistakes before we get programming.

### ***Flowchart - Using a Chatterbox***

After you have made a Chatterbox, think about the different commands and instructions we need to play the chatterbox game. Those commands have been displayed in a flowchart for you to look at and follow. The colours in the boxes show different commands. When a person makes the decision (user input) that's in blue. When there's multiple options (branching) that's in red. This was done to highlight the difference in the commands and you can see where branching and user input is in the code. It might look complicated when you first look at it but follow the instructions one at a time, you'll be able to follow the instructions in the flowchart.

# USING A CHATTERBOX

