SUPPLEMENTARY NOTES GRADE 6

UNIT 1, TOPIC 1.1

PLANNING FLOWCHARTS

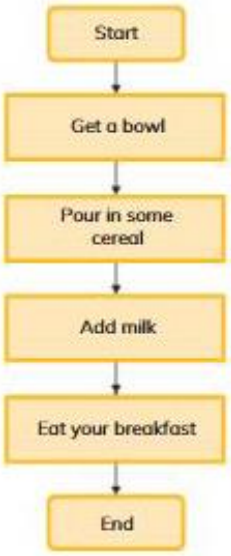
Flowcharts

Flowcharts

There are many ways to represent algorithms. In Scratch, you use blocks to represent an algorithm. In the Getting started activity, you used speech. You could have also written it down as text.

A flowchart is another way to represent an algorithm.
A flowchart is a diagram that shows each step of an algorithm.

This is an example of a simple flowchart:

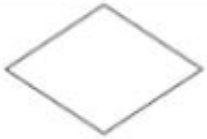


To follow a flowchart, you begin at the start shape at the top and then follow the arrow to the next step in the sequence.

We can use flowcharts to show a process that follows steps in the same order. Engineers use flowcharts to show how to make things, and businesses use flowcharts to explain how to do things.

Flowchart shapes

The shapes we use in a flowchart are important.
They provide more information about what is happening in the algorithm. Look at the table and read the descriptions with a partner.

Shapes	Name	Description
	Start or end	This shape appears at the beginning and end of the flowchart.
	Connectors	These arrows show the order the flowchart should be followed in.
	Input or output	We use this shape when the flowchart needs to get an **input** (information from the user), or when it needs to produce an **output** (give information to the user).
	Process	This shape shows actions that will be done.
	Decision	A **decision** is a choice you make after thinking about the options. We use this shape when we want to decide which path to follow next. A flowchart decision shape asks a question that can only have a 'yes' or 'no' answer. It is very similar to a conditional statement.

Predicting the outcomes of flowcharts

We can use flowcharts to make predictions. When someone says what they think will happen in the future, they are making a prediction. Imagine a robot that was programmed to play chess using a flowchart. If you understood the flowchart, you would be able to predict where the robot might make its next move!

People use more complex flowcharts and algorithms to predict things in real life, such as who might be more likely to need certain types of healthcare or how the value of gold might go up or down.

To predict the outcome of a flowchart, you need to follow the steps of the flowchart to the end.