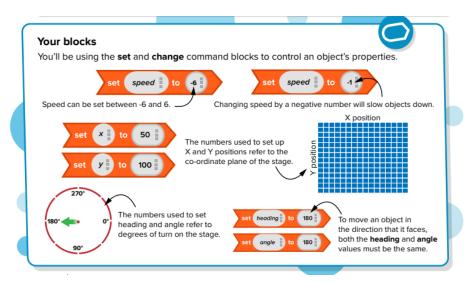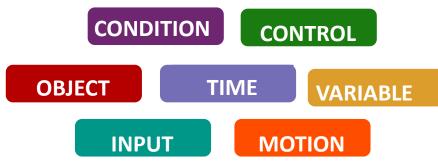# Knowledge Organisers - Block Coding

Block Coding

Block Coding is a way of programming where computer commands are grouped together in blocks. The blocks can be dragged and dropped into place to create a computer program.

Your blocks

You'll be using the **set** and **change** command blocks to control an object's properties.

set speed to -6   set speed to -1

Speed can be set between -6 and 6.   Changing speed by a negative number will slow objects down.

set x to 50
set y to 100

The numbers used to set up X and Y positions refer to the co-ordinate plane of the stage.

X position

Y position

270°   180°   0°   90°

The numbers used to set heading and angle refer to degrees of turn on the stage.

set heading to 180
set angle to 180

To move an object in the direction that it faces, both the **heading** and **angle** values must be the same.

Block Code - Code blocks colour key.

CONDITION   CONTROL

OBJECT   TIME   VARIABLE

INPUT   MOTION

Vocabulary

Action - Something that an object does - such as move or hide.

Boolean - A value that has only two possible options: true or false.

Condition - A condition is a thing that decides if it is true or false– IF... THEN STATEMENT

Debug - Correcting mistakes in computer code.

Event - Something that can happen when a program is running - mouse click, key press or amount of time passing.

Loop - a repeating set of instructions

Parameter - A value given with an action. For example, when programming an object to move, the object's speed is set as a parameter.

Pixel - A tiny square or dot on a computer screen used to build up images and text

Sequence - To place a programming instructions in order, each executed one after the other.

Simulation - A computer program which represents or models something from real life.

Variable - an object used to store a simple piece of information such as a score.