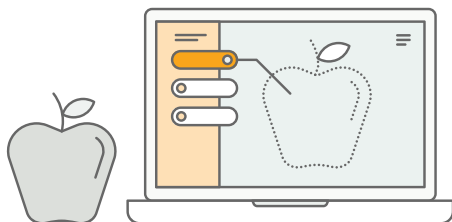


Programming Concepts



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Algorithm: a step-by-step set of operations to be performed to help solve a problem

Array: a special variable that can store more than one value at a time; items are ordered by a number so that we can access them later (ie. an array called 'dogs' might have items: chihuahua, pug, and retriever)

Boolean Logic: 'and', 'or', 'not' are examples of boolean operators; the values you are working with must be either true or false (ie. if I am warm AND dry, then I am comfortable)

Conditionals: making decisions based on conditions (ie. if it is raining, then open your umbrella)

Debugging: finding problems in code and solving them

Events: one thing causing another thing to happen (ie. 'when green flag is clicked' block in Scratch)

Function: a type of procedure or routine that performs a distinct operation; there are often canned functions that exist already like the 'If on edge, bounce' block in Scratch

Loops: running the same sequence multiple times (ie. 'repeat' or 'forever' blocks in Scratch)

Modularizing: exploring connections between the whole and the parts

Operators: mathematical and logical expressions (ie. 'X + X' block in Scratch)

Parallelism: making things happen at the same time

Remixing: taking an existing project or idea and making it new by changing or adding to it

Sequence: identifying a series of steps necessary to complete a task; computers read and perform commands in order from top to bottom

State: 'state' in a programming sense is just the same as 'state' in a non-programming sense (ie. the TV is on or off). Variables have states, values don't. For example, 42 is 42 and there's nothing you can change about it.

Syntax: the spelling or grammar of a programming language; the blockly structure in languages like Scratch removes the need for syntax

Variable: stores a piece of information that changes over time (ie. the score variable in a game may record the number of points a player has at any given time)