What a program is.
A mini lesson before diving into Lightbot.

What is a program? a sequence of instructions written to perform a specified task.

Before students start on Lightbot, explain the important notion that **computers do what they are told, and only what they are told, in the order they are told.**

The objective in Lightbot is to get a robot to light up the blue square(s). You have to give the robot a set of instructions to get it to the blue square and light it up. Just like a computer, the robot will only perform the instructions, in the order that you gave them. You want to do this in the most ‘efficient’ way.

The Basics

Think of these instruction icons as a language.

A language that the robot can understand.

This is a list of available instructions, when you put them together in the main folder, they are now a sequence of instructions. Just like any other sequence, the robot follows these instructions and performs them in the order you gave them.

So, you are essentially writing a computer program for the robot, to get it to light up the blue squares in the most efficient way.

Procedures

The students now have a procedure folder (PROC1) along with a main folder.

To help students understand how to use procedures successfully, have them look for patterns. Or a sequence of instructions the robot can take more than once. Have them put that reusable sequence into the PROC1 folder.

Overloading

Overloading means that there is more than one function for an instruction.

Relate this to the lightbulb instruction being able to not only light up a blue square, but to operate the elevators