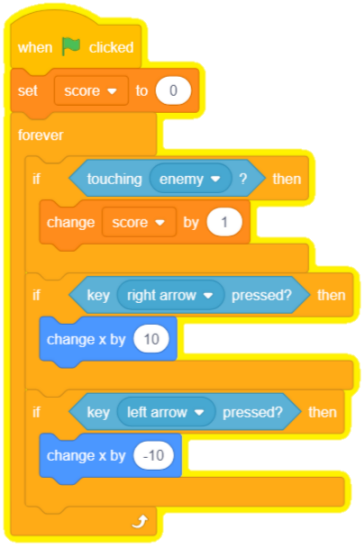
Year 6 – Computer Science

Sticky Knowledge:

- ✓ I can explain what a variable is.
- ✓ I can confidently use events, repeats, selection and variables.
- ✓ I can use a variable in a variety of programming software.
- ✓ I can confidently decompose a problem and methodically create a program to solve it, testing and adapting as I go.
- ✓ I can evaluate the effectiveness of my programming and suggest improvements.
- ✓ I confidently use the Blockly programming language.

Variables

We use variables to store information that might change and can be used later in our program.



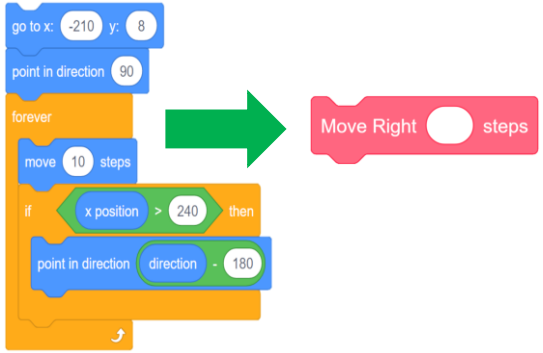
For example, in this game the variable would be the current score of the player; we would add 1 to the variable whenever the player gained a point.

Big Idea:

I can design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. I can use sequence, selection, and repetition in programs; work with variables and various forms of input and output. I can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

Abstraction

Sorting through a program to remove irrelevant information makes our program more efficient. We can use abstraction to create new blocks and hide the complexities.



Vocabulary

Computer Science:
Using computers to solve problems.

Computational Thinking:
Learning to solve problems, with or without a computer.

Conditional or selection:
A decision must be made for the program to continue (e.g. if dark, then turn the light on).

Variable:
Something that can be changed.

Abstraction:
Sorting through information to decide what is relevant and what is irrelevant.