Lesson 8: Creating Functions with Parameters

Adapted from code.org curriculum

Objectives: You will be able to…

- Write functions with parameters to generalize a solution instead of duplicating code
- Identify appropriate situations for creating a function with parameters
- Use random numbers as inputs to function calls for the purpose of testing
- Add parameters to a function in an existing piece of code to generalize its behavior

What is a parameter again?

- Definition – an extra piece of information that you pass the function to customize it for a specific need

Getting Started: Recall the Purpose of Parameters

- In the previous lesson, we learned to use a lot of new turtle commands.
- Some of these commands accept a parameter, or even many parameters, which allow us to pass values to the function
  - Example: without a parameter, we would need 360 different functions to turn each number of degrees
- Parameters allow us to use a single function as a general solution to a whole group of problems
- Today we will learn how to create functions with parameters

Activity: Writing Functions with Parameters – Under the Sea

- First: Watch the Video “Functions with Parameters”
- Use Code Studio Stage 8 – complete it

Wrap-up: When do you need a function with a parameter?

- In your notes respond to the following prompt:
  - Develop a rule for deciding when to create a function with a parameter rather than a normal function. Below your rule write a couple sentences justifying your rule

Wrap-up: When do you need a function with a parameter?

- Let's share responses:
  - Parameters allow the creation of a **generalized solution to a whole class of problems**, rather than individually solving many specific problems
  - Parameters remove the need to create repetitive functions, making code easier to write, read, and change