



**Computer Science Virtual Learning**

# **PLTW Computer Science Principles**

**May 6, 2020**

**Lesson: May 6, 2020**

**Using Iteration in Microsoft MakeCode: Option for The  
Create Performance Task**

**Learning Target:**

**Develop an algorithm for implementation in a program.  
Sequencing, selection, selection, and iteration are building blocks  
of algorithms.**

**Iteration is the repetition of part of an algorithm until a  
condition is met for a specific number of times.**

**Every algorithm can be constructed using only sequencing,  
structuring, and iteration.**

# Introduction

**Watch This Video, Reviewing the Concept of Iteration:**





# Practice: Iteration

Today, we're going to have a dance party! Sometimes, when you know that you will be doing something over and over, it is helpful to know how many times it needs to be done before you begin. That way, you can keep track of how many actions you have left as you go. Example:

If your mom wanted you to play her favorite song over and over, she wouldn't say:

*“Please play my song, play my song, play my song, play my song.”*

She would most likely say:

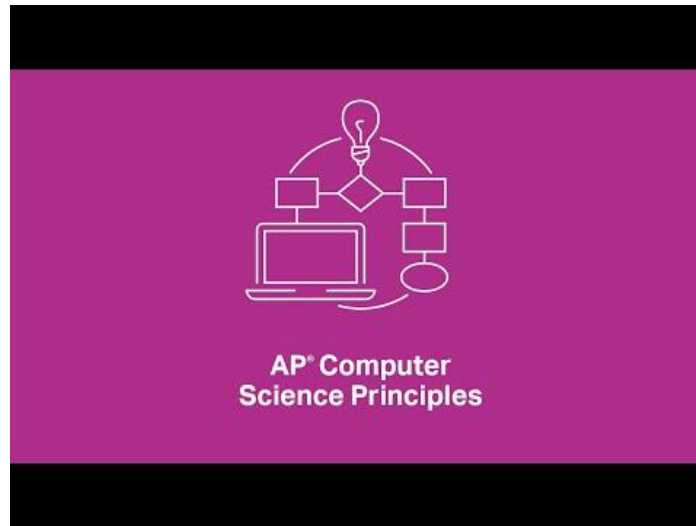
*“Please play my song four times.”*

# Practice: Iteration

- Choose a favorite song to dance to and open the [Get Loopy Worksheet](#)
- Run through the dance slowly, one instruction at a time.
- Can you find the loop in the instructions?
  - What would the dance look like if we only repeated the main part 2 times?
  - What if we repeated the main part 4 times?
- Can you find anything else in the dance that we could use a loop for?

# Practice: Makecode

Watch This Video over using Iteration in Microsoft MakeCode, which is an optional program that you can use for the Create Performance Task. You can easily link to the Makecode Arcade [here](#).





## Practice: Reflection

**Open a page in the Computer science Notebook, and revisit your reflection from the previous day.**

**What did you find useful about Microsoft Makecode?**

**Is this an application that you could use for your Create Performance Task? Why or Why not? Do you feel differently than you did yesterday?**