in partnership with

and

Getting Comfortable with Coding in Math

Teacher's Guide

Part of the *Getting Comfortable with Coding in Math* Webinar Series

Emily Crawford, Grant Hutchison

About This Guide

This guide was prepared for all educators seeking to introduce Python coding activities into their mathematics classroom. These activities were prepared with the new Ontario Grade 9 De-Streamed Mathematics curriculum (*MTH1W*) in mind, but may be used by any educator in any province or territory.

Grade Level

These activities are best suited for Grades 7-9 students.

Learning Goals

- Use Python to define and use variables in simple mathematical expressions.
- Understand how Python may be used to simplify and evaluate more complex mathematical expressions.

Success Criteria

(Students will) know they are successful when:

- They can define and use Python variables in simple mathematical expressions
- They can test and evaluate mathematical expressions using Python

Ontario Curriculum Expectations

Activities 1 and 2 meet the following expectations outlined in the MTH1W curriculum:

- **C1.2** create algebraic expressions to generalize relationships expressed in words, numbers, and visual representations, in various contexts
- **C1.4** simplify algebraic expressions by applying properties of operations of numbers, using various representations and tools, in different contexts
- **C2.1** use coding to demonstrate an understanding of algebraic concepts including variables, parameters, equations, and inequalities
- **C2.2** create code by decomposing situations into computational steps in order to represent mathematical concepts and relationships, and to solve problems

Getting Started

Students will need to have access to either a Google Colab or Callysto Hub (Google or Microsoft) account to make a copy of the activities, which are stored in a **digital notebook**.

While these activities can be run on any device, a **Chromebook** or **laptop computer** is recommended.

Students may also wish to have a pencil, paper, and/or calculator.

Students will need to make a copy of the activities found on Github. They will be able to choose between opening in Google Colab or Callysto.

Further Resources

A video demonstration of the two activities may be found on the CS Integration website.