CANADA LEARNING CODE

Magic 8 Ball

By: Brooke Snow
Duration: 90 minutes

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 7-8	Art, Mathematics	Across Canada	Processing.py

Overview

Learn how to use Python and Processing.py to simulate an interactive Magic 8 Ball. A simple introduction to Python and programming, with a fun result!

Prep Work

- Familiarize yourself with Trinket: http://bit.ly/trinket-tutorial-video
- Go through the tutorial yourself
- Talk with the class about how a Magic 8 Ball works and produces *random* answers from a finite set of possible answers
- Optionally, students can log into Trinket using their Google, Clever or Edmodo accounts to save and access their programs easily
- Introduce Trinket to the class as in the video above

Lesson

Lesson available at: http://bit.ly/trinket-magic8

Key Coding Concepts

- Algorithms
- Functions
- Random

Terminology

Library

A bundle of code that a programmer can use to

Function

A set of instructions in our code that can be repeated over and over again. We *call* the function to execute the instructions inside.

Coordinates

A set of values (x, y) that represent a position on the

Assessment

Determine how you will access students' work in Trinket. Some options are: Sign up for Trinket Connect (https://trinket.io/schools), have students email links to their work or gather links in Google Docs.

Extensions

Students can 're-design' and personalize the Magic 8 Ball.

Try changing the possible answers, changing the colours and size of the Magic 8 Ball or try to make an answer print by pressing a key on the keyboard instead of with a click.

screen. X values represent a horizontal location, Y values represent a vertical location.

Variable

Stores some information we may want to use again. Ie: a list of possible answers.

RBG Colours

Colours represented in terms of how much red, green and blue are present. Ie: (R, G, B) where R, G & B are values from 0 - 255 inclusive.

Curricular Connections

Colour/Colour Models (RGB), Shape and form, Alignment, Measurement, Graphing, x, y coordinates, 2D Shapes, Geometry