CANADA LEARNING CODE

CodeMoji in Python

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Duration: 1.5 hours

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 4-6, 7-8, 9-12	Art, Math	Across Canada	Python, Trinket.io

Overview

Learn how to use Python and ProcessingPy to make pretty pictures. A good first class on programming and Python.

Can be done in one or two sessions, depending on time available.

Prep Work

- Familiarize yourself with Trinket:
  - https://vimeo.com/107443021
- Go through the tutorial yourself
- Talk with the class about Emojis and different ways that one might create them: with paint programs, by scanning a drawing, or in this case, by writing code for the shapes
- Optionally: Let the students log into Trinket using Google Accounts, Clever or Edmodo to save their programs easily
- Introduce Trinket to the class as is done in the video above

Key Coding Concepts

- Algorithms
- Conditional statements
- Functions
- Sequence

Terminology

Library
A bundle of reusable code that allows a programmer to achieve something that would otherwise be difficult or impossible. In this case, easy graphics programming.

Function
A list of statements that can be invoked repeatedly in a program, perhaps changing its behaviour on the basis of “parameters” that are passed

Lesson

Lesson available at: http://bit.ly/codemoji-processingpy

Assessment

Make a plan for how to access students' work in Trinket. You could sign up for Trinket Connect (https://trinket.io/schools) to collect projects, have students email you class links, or gather project links in a shared Google doc or blog.

Extension

Kids can draw any emoji or shape that interests them!

Have learners pair up and write a short story about their emojis using the plot mountain structure.

in.

Coordinates
Numbers which represent where on the screen to draw something. X represents horizontal location, Y represents vertical location.

Variable
Stores a piece of information i.e. the key that the user just pressed.

RGB Colours
Numbers representing the amount of red, green and blue that a shape should exhibit.

Curricular Connections

Colour, Colour models (RGB), Colour theory, Shape and form, Symbols, Alignment, Measurement, Area, Graphing, x,y coordinates, Geometry, 2D shapes

References

ProcessingPy Documentation
https://py.processing.org/reference/