CANADA LEARNING CODE

Turtle Art: Spirograph

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Duration: 1hr

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 7-8	Art	Across Canada	Python Turtle

Overview

A spirograph is a toy that uses gears and geometry to create beautiful spiralling designs. In this lessons, students will learn how to use Turtle, a Python module.

Prep Work

- Familiarize yourself with Trinket: http://bit.ly/trinket-tutorial-video
- Go through the tutorial yourself
- Have students use Spirographs to draw on paper and get an idea of what they will create digitally in this lesson
- 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-spirograph

Assessment

Determine how you will access students' work in

Key Coding Concepts

- Algorithms
- Lists
- Loops
- Random

Terminology

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.

Loop

A block of code that repeats itself a certain number of times

Variable

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

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

Have students add more instructions to the looping code to make a more complex design.

Instruct students to try and draw a particular shape with their Turtles

Have students create a design with a Spirograph and then try to recreate that design using Turtle.

of possible answers.

Curricular Connections

Colour, Shape and form, Alignment, Measurement, Graphing, x, y coordinates, 2D Shapes, Geometry