CANADA LEARNING CODE

Pixel Programming

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Duration:

LEVEL	SUBJECTS	PROVINCES / TERRITORIES	TOOL
Grades 1- 3	Mathematics	Across Canada	Unplugged

Overview

Students will use post-its to program pixel art. Then they will be able to write their very own pixel programs.

Prep Work

- Post-its
- Pixel programming hand out

Lesson

Activity

1. Distribute 2 colour post-its
2. Have students work in groups through one of the programs
3. Students will program their post-its left to right from top to bottom
4. Each row will have a pattern
5. The pattern is always colour-1 then colour-2
6. Have students fill in the legend at the top of their sheets so are clear on which post-it is colour-1 and which is colour-2
7. The pattern is always number of colour-1

Key Coding Concepts

- Algorithms
- Debugging
- Sequencing

Terminology

Debugging

Finding problems or 'bugs' in code and solving them

Pixels

A pixel is a teeny-tiny square of colour. The computer uses lots and lots of pixels together to display anything you see on a computer screen. Pixel stands for picture element.

Sequences

Identifying a series of steps for a task. Computers and Scratch

then number of colour-2 and so on

8. Encourage students to check each others work to see if they have any bugs in their program

read and perform commands in order from top to bottom

Assessment

Answer key to handout:
Program 1: Arrow
Program 2: The letter A
Program 3: The letter Z

Extension

Have students make their own pixels art then write programs to have other people try out their pixel art