SCIENCE NORTH SCIENCE NORD
SUDBURY, ONTARIO, CANADA

Making Code Out Of Anthills	Grade 1

Lesson Plan

Coding Tool: Scratch Jr.

Big Ideas

- Living things have basic needs (air, water, food, and shelter) that are met from the environment.
- Different kinds of living things behave in different ways

Specific Expectations

2.2 investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth, and space, using a variety of methods and resources.
3.4 describe the characteristics of a healthy environment, including clean air and water and nutritious food, and explain why it is important for all living things to have a healthy environment
2.7 use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes (e.g., create a diorama to illustrate the basic needs of plants and animals, including humans)

Description

In this lesson, students will learn about the habitats used by ants while learning basic computational thinking. They will learn how to create their own assets using Scratch JR so that they can create fun dioramas that come to life using code!

Materials

- Teachers Coding Guide
- iPad/Tablet/Chromebook
- Scratch Jr.

Computational Thinking Skills

- Algorithms

Introduction

Anthills are made as a by-product of worker ants digging subterranean tunnels. As the worker ants dig out the colony's tunnels, they dispose of the displaced earth by carrying it back out of the colony and depositing it near the entrance. They also dispose of any garbage found in the colony in this way.

In this lesson, students will draw and code an ant who is doing his work. First we'll draw a tunnel system using Scratch JR, then we'll using movement coding blocks to direct an ant that we've created through the maze.

Action

- Discuss ants, and how they use their habitats. Every ant has a job, some look for food; some feed their queen, and other dig tunnels. When ants dig or removed garbage from their tunnels they pile it outside the hole, making an anthill.
- Explain to students that they will draw a path for their ant to follow and draw their very own ants using Scratch JR.
- Set students up with their available device.
- Follow the Teacher Coding Guide to lead the class on how to edit their background, create their sprite and code their new ant sprite to move through their very own ant tunnel.
- Have students show off their work!

Consolidation/Assessment

Taking photos or screenshots of the maze the student created along with their code can be used as an assessment.

Additional Resources

Great video resource about ants and anthills:
https://www.youtube.com/watch?v=HedZXw_hAbs
Video on habitats:
https://www.youtube.com/watch?v=BLHwymzpJeA