| Coding Habitats | Grade 4 – Habitats and Communities |
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| Lesson Plan | Coding Tool | Scratch |
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|  | Cross-curricular | N/A |

### Big Ideas
Plants and animals are interdependent and are adapted to meet their needs from the resources available in their particular habitats.

### Specific Expectations
**2.4** use scientific inquiry/research skills to create a living habitat containing a community, and describe and record changes in the community over time

### Description
Students will use Scratch to create a diorama that includes two or more animals represented by sprites in a habitat where these creatures would co-habitat, and code their movement or behaviours using block coding.

### Materials
- https://scratch.mit.edu/
- Code Sheet

### Computational Thinking Skills
- Loops
- Animation

### Introduction
Talk to the students about animals in habitats and how several species can share the same habitat. For example, bugs, snakes and rodents can all share a garden in a backyard. Explain that in this activity students will have to choose a habitat and then code their own diorama using scratch. Their diorama will contain multiple animals in that habitat and be coded to move in their own special way.

### Action
- Use the included coding sheet handout to lead the class in coding examples of how to add sprites and have them move on their own, in their own interesting and unique ways. The sheet will also explain how to choose or create their own background.
- If you added the first sprite and movement together, you can encourage your students to create their second sprite by themselves. Students should choose an animal that can co-exist in their selected habitat.
- Have students present their diorama and explain why their animals are moving the way they do. Students can also show how they decided to code it, and describe how the creatures living in their habitat can coexist.
- Instead of a presentation, you could also have the students use the worksheet provided to explain their ideas.

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1

**Consolidation/Extension**

To extend this lesson, you could have the students adjust their habitats to different seasons.

For example, what happens to their animals during the winter as compared to the summer?

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