



Critter Habitats

Next Generation State Standard(s):

ESS3.A: Natural Resources

Living things need water, air, and resources from the land, and they live in places that have the things they need.

K-ESS3-1: Use a model to represent the relationship between the needs of different plants or animals (including humans) and the place they live.

Preschool Standard(s):

- Communication and Collaboration. Children work together when using developmentally appropriate digital tools.
- Digital Citizenship. Children begin to understand how technology can be used appropriately or inappropriately.
- Knowledge about the Earth. Children show a beginning awareness of scientific knowledge related to the earth.
- Relationship in Place. Children begin to understand and interpret and place within their own environment.

ISTE Standard(s):

5.c. Break problems into component parts, extract key information, and develop models to understand complex systems or facilitate problem-solving.

5.d. Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Content Objective

Students will demonstrate their knowledge of sequence, coding, and teamwork by participating in a coding activity using Coding Critters™.

Language Objective

Students will follow the sequencing direction given to them by their teammate.

Stem Career

Algorithms Engineer- A job that focuses on computer algorithms (steps to solve a problem for data processing and calculations).

Materials

- Coding Critters™ for pairs or individual students (helps to have a variety of different critters)
- Coding Critters™ coding cards
- Coding Critters™ habitat pieces
- Coding Critters™ storybook
- Favorite books on habitats (may want to include books on habitats of dogs, cats, and dinosaurs)

Vocabulary

- Habitat-** The natural home of an animal or plant.
Sequence- A particular order in which things follow each other.
Teamwork- A group of people working together to complete an action.

Preparation

Have habitat books picked out.

Set up the habitat pieces that are included with the Coding Critter™ in areas in the classroom. You can also have students set these pieces up when they are ready to code.



Questions to Guide Students

What other animals have you seen in their habitat?

Teacher: Dolphins in the ocean, Squirrels in their backyard

How would you describe this habitat?

What is in the habitat that an animal needs to be healthy and happy?

Teacher: Water, Shelter, and Food

What other ways do we see things follow a particular order?

How many coding cards did the student use?

This can help student to practice their counting

Check for Understanding

While the teacher is walking around, check in on students as they are creating the sequence and students are completing the sequence.

Are students able to put cards in an order?

Are students able to code the critter to complete the order given to them?

Are students able to participate well within their team?

Lesson

Introduce the activity by looking out the classroom window and discussing the environment they see outside.

Teacher: "What does the environment look like? What animals do they see outside their window?"

Discuss what a habitat is.

Introduce habitats by reading a picked book of yours.

Discuss what other habitats students have seen or visited.

Share how the student's critter habitats are set up or have students set up their critter's habitat.

Read the specific Coding Critters™ storybook to reinforce their critter's habitat.

Share how each student will use their coding cards to create a sequence that their partner will complete in the critter's habitat.

Teacher: "What does it mean to sequence? What other ways do we see things follow a particular order?"

-Counting by 2's: 2,4,6,8...

-Your class may stand in line in a particular order

-Share how students will work with their partner.

-Discuss, "How should we work in our groups?"

-Discuss, "What does teamwork mean?"

-If a student fails, we help guide them.

-Being positive.

-Cheering each other on.

Students break into their pairs and the teacher will walk around the room to help guide.

One student will set the cards down on the table and create a sequence that will have the critter move among the habitat.

Once complete, the other student will code this sequence for their critter to complete.

Students can continue to challenge one another by creating new sequences.

