

Matatalab Edu Activity/Lesson Plan:

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Classroom Key Information

Content-Related:

Computer Science Math Art Music
Science ELA Social Study Other _____

Time: 1 Hour Student Age: Grades K-2

Complexity: ★ ★★ ★★★ ★★★★ ★★★★★
(★ stands for the easiest)

Activity/Lesson Key Information

Project Name: Traveling Robots

Big Idea: It is important for children to learn and define the different habitats. Using the Matatalab Robot, the students will operate the robot to get to three different habitat locations. They must describe what each habitat is like as their robot gets to the habitat.

Concepts: Matatalab tangible coding language, habitats

Main Objectives:

- Learn about habitats and help Matatalab Robot move from the starting point to the target point to collect three different habitats (grassland, desert, and forest)

Learning Outcomes:

- recognize certain habitats (grassland, desert, forest)
- control Matatalab Robot to move to the target point by using motion coding blocks

Key Vocabulary:

MatataBot: One of the important components of Matatalab Coding Set, which is connected to the

Command Tower via Bluetooth: It receives the Command Tower signals, and displays the results of the program.

Map: An area with 16 10cm*10cm squares, which Matatalab Robot can move on.

Command: It is the instruction to direct the work of the Matatalab Robot. A program is a series of commands arranged in a certain order. The process of executing a program is the working process of a computer.

Move forward: the Matatalab Robot move forward 10cm

Move backward: the Matatalab Robot move backward 10cm

Turn right 90° : turn to the robot's right side

Turn left 90°: turn to the robot's left side

Habitat: the natural home or environment of an animal, plant, or other organism.

Forest: a large area covered chiefly with trees and undergrowth.

Grassland: a large open area of country covered with grass, especially one used for grazing.

Desert: places that don't get much rain, and are very dry. They can be either hot places, or cold places.

Prior Knowledge:

Know the habitats (Desert, Forest, and Grasslands) and have basic knowledge of using motion coding blocks to program.

Standards(ISTE, CSTA, CCSS, NGSS, etc.):

CCSS, NGSS, ISTE, Arkansas Computer Science Standards

Matatalab Products & Supplementary Materials

Coding Set Music Add-On Artist Add-On Pro Set
Animation Add-On Sensor Add-On Lite MATATA Map

Supplementary Materials

Play Doh, Small Animals, Computer with PowerPoint and Smartboard to project presentation

Detailed Activity/Lesson Plans

Matatalab Edu classic lesson

	Instructions step by step	Time
Lead in & Guided Activity	We start by looking at pictures of different habitats for animals. We discuss what types of animals might live in these habitats. We then watch a video about how to use the Matatalab Robots.	10 minutes
Independent Activity	Then, I give each student a tub of Play-Doh and a miniature animal. They have to create a habitat that would be best suitable for the animal I gave them using their Play-Doh.	15 minutes
	After they share their animal habitats, they will then use get into groups of two and control their Matatalab Robot to move to each of the habitats we just learned about (forest, grasslands, and desert).	30 minutes
Feedback & Extension	Share their reflection on this activity	5 minutes

Essential Questions:

- What are habitats?
- What kinds of animals live in forests, grasslands, and/or deserts?
- How do we use the Matatalab Robot to move from one location to another?