



education



WeDo 2.0 Projects

Teacher Guide





Published by LKD Educational Resources

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13	Grabbing Objects (Computational Thinking)	WeDo 2.0
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Climbing Monkey

WeDo 2.0 Project



Project at a Glance

In this project Students will imagine like if they are visiting the Zoo and they saw a monkey! They will learn fun facts about them, then design and program a model of a monkey.

Key Words:

Mammals, characteristics of living things, features of mammals.

Learning Objectives

By the end of this project, students should be able to:

- Differentiate between living things and non- living things.
- Describe the features of mammals.
- Explain how monkeys are adapted to climb trees.

Introduction

A mammal is an animal that breathes air, has a backbone, and grows hair at some point during its life. In addition, all female mammals have glands that can produce milk. Mammals are among the most intelligent of all living creatures.

Fun facts about monkeys:

- Monkeys are primates. A primate is a group of animals that include humans, apes and monkeys.
- Monkeys are mammals.
- There are 264 species of monkeys.
- Monkeys are divided into two groups: Old World Monkeys and New World Monkeys. Old World Monkeys are monkeys that live in Africa and Asia. New World Monkeys are monkeys that live in South America.
- Old World Monkeys have 32 teeth and New World Monkeys have 36 teeth.
- Apes are not a species of monkey.

- One main difference between apes and monkeys are that monkeys usually have tails and apes have no tails. Although monkeys are smart animals, apes are smarter than monkeys.
- The smallest species of monkey is the pygmy marmoset. They are between 4-6 inches long and weigh less than 1 pound.
- The largest species of monkey is the mandrill. They can be 3 ½ feet tall and weigh up to 77 pounds.
- More species of monkey live in Brazil than any other country.
- Monkeys live in forest, grassland, high plains and mountain habitats.
- Most monkeys are arboreal meaning they spend most of their time in trees. However, some monkeys live on the ground.
- Monkeys are very social animals.
- A group of monkeys is called a troop, tribe or a mission.
- Monkeys communicate with each other through a variety of sounds, facial expressions and body language.
- Spider Monkeys are monkeys that swing from tree branch to tree branch like they are playing on monkey bars. All other species of monkey run across the branches.
- Monkeys like to play and cuddle with other monkeys.
- They are very loving to their babies, and often carry their young on their backs or around their necks.

- Monkeys are considered adults at the age of 5.
- Monkeys eat fruits, flowers, seeds, leaves, nuts, small insects, eggs and some species even eat small animals.
- Like humans, monkeys have fingers and their own set of fingerprints. Monkeys can grab objects with their toes and fingers. Some monkeys can even grab things with their tails.
- Monkeys can carry diseases such as hepatitis, tuberculosis, and simian herpes.
- A major threat to monkeys is loss of habitat. Many habitats are getting smaller and smaller because of all the trees getting cut down.

Connection

- 1) Show your students the connection photo / video.
- 2) Ask your students these question for discussion:
 - What can you see in this picture?
 - Is it a living thing or non- living thing?
 - Can you describe this animal?
 - How does it move?
 - What does it eat?
 - Where does it live?

Create

Hands-On, Minds-ON: (learn by doing)

Students will build Monkey model using LEGO bricks in the WeDo 2.0 kit, and observe its characteristics. After that, let them program it as suggested and observe how it's functioning.

Note:

You must hang out a thin rope between 2 stable objects and place your model from its hands on the rope.

Share

Ask the students to share, present, and discuss their ideas, models, results of the mission and the engineering based design with the colleagues.

Continue Phase

It's time to take the project to the next level, you can choose a way to enhance the model by changing the code or model structure.

Investigate More

Ask your students to add a motion sensor to control the movement of the monkey to the front or to the back.