

RESOURCE LIBRARY  
ACTIVITY : 30 MINS

## Build a Meerkat

Students make a meerkat model while identifying unique body characteristics. Students learn how adaptations are crucial to a meerkat's survival.

### GRADES

Pre-K, K, 1 - 4

### SUBJECTS

*Experiential Learning*

### CONTENTS

2 PDFs, 34 Images

## OVERVIEW

Students make a meerkat model while identifying unique body characteristics. Students learn how adaptations are crucial to a meerkat's survival.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/build-meerkat/>

## Program



## DIRECTIONS

**1. Brainstorm different organisms' special body parts.**

Ask students to think of animals with unique or interesting body parts, such as a turtle's shell, an elephant's trunk, a whale's blow hole, and others. Project the provided Three-Column Chart on the board. List their ideas in the first two columns of the chart for the class to see. Ask: *What do you think are the purposes of these body parts?* (Turtles have a shell for protection; elephants use their trunks to smell, reach food, drink water, and interact with other elephants; a whale's blow hole lets it breathe out, or exhale, and make sounds to communicate.) Add students' ideas to the third column in the chart.

## **2. Discuss survival.**

Discuss what animals need to survive in different environments, listing students' ideas on the board. Guide students to identify food, water, shelter, and protection from danger.

## **3. Introduce meerkat adaptations.**

Project the Clan of the Meerkat image of the three meerkats standing. Ask students to describe the environment. Descriptions may include dry, rocky, sunny, broad, open, or tree-less. Reviewing what animals need to survive, ask students to imagine the needs of this small predator, the meerkat. Ask: *What would a meerkat need to ensure it has shelter, protection, food, and water?* Explain that the meerkat is well-adapted to survive in the harsh desert of the Kalahari. To understand the adaptations, or special body parts, that help it find food, safety, and shelter, students will build a meerkat.

## **4. Create the meerkat models.**

Divide students into pairs and provide materials for each pair. You can project the instructions in the media carousel for students to follow, give them the handout with instructions, or both. Refer back to the image of the three meerkats throughout the activity as needed.

## **5. Display the meerkat models, and play "take-away."**

Have students arrange their meerkat models on a table, representing a meerkat family or clan. Hold up one model meerkat and play “take-away” to assess student understanding of the six adaptations. Using the example meerkat, take away or cover the different body parts, asking what the consequence would be in losing that adaptation. For example:

- Take away the dark coloration on the stomach. The meerkat would be unable to warm up efficiently in the morning sun and consequently would lose energy or valuable hunting time.
- Take away the dark circles around the eyes. Meerkats would have difficulty seeing predators or rival meerkats approaching across the sunny desert. This could endanger the whole family.
- Take away the tail. The meerkat would not be able to stand tall on its hind legs to scare off snakes, look out for danger, and defend its habitat.
- Take away the claws. The meerkat would not be able to dig quickly and effectively, making it hard to create burrows and bolt-holes and dig for prey.
- Take away the closable ears. Sand could clog a digging meerkat’s ears. This could make it hard to hear the sentry meerkat’s important communications.
- Take away the beige color, and change to a bright color: Predators could more easily spot the meerkat in the desert environment.

## Modification

Demonstrate the activity for younger students, or if time and materials are limited.

## Tip

While playing take-away, refer back to the image of the three meerkats, where their physical adaptations are visible.

## Informal Assessment

Further assess understanding by having students make a t-chart. Have students list adaptations in the left column and how each helps the meerkat to survive in the right column.

## Extending the Learning

Have students model the Kalahari Desert environment using rocks, sticks, paper, and other materials. Display the clan of meerkats that students have created.

## OBJECTIVES

# Subjects & Disciplines

- Experiential Learning

# Learning Objectives

Students will:

- identify food, water, shelter, and protection from danger as necessary for the survival of a meerkat and other organisms
- build a model of a meerkat
- explain the importance of six meerkat adaptations

# Teaching Approach

- Learning-for-use

# Teaching Methods

- Brainstorming
- Cooperative learning
- Guided listening

# Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
  - Learning and Innovation Skills
  - Communication and Collaboration

- Critical Thinking Skills
  - Analyzing
  - Creating
  - Understanding

# National Standards, Principles, and Practices

## NATIONAL SCIENCE EDUCATION STANDARDS

- (K-4) Standard C-1:

The characteristics of organisms

- (K-4) Standard C-3:

Organisms and environments

### Preparation

### What You'll Need

## MATERIALS YOU PROVIDE

- Brown construction paper
- Craft eyes
- Fine-point black marker
- Glue
- Pipe cleaners
- Rubber bands
- Scissors
- Tan-colored felt, 8"x8" square
- Tan-colored sock
- Tape
- Tissue or paper towel
- Two plastic forks

## REQUIRED TECHNOLOGY

- Internet Access: Optional
- Tech Setup: 1 computer per classroom, Projector

## PHYSICAL SPACE

- Classroom

## GROUPING

- Large-group instruction

## BACKGROUND & VOCABULARY

### Background Information

Meerkats, members of the mongoose family, are about the size of squirrels and are famed for their upright posture. They often stand on their rear legs and gaze alertly over the southern African plains where they live. Mothers can even nurse their young while standing. Meerkats are often seen in groups, and several families may live together in a large community.

### Prior Knowledge

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### Recommended Prior Activities

- None

### Vocabulary

Term	Part of Speech	Definition
<b>adaptation</b>	<i>noun</i>	a modification of an organism or its parts that makes it more fit for existence. An adaptation is passed from generation to generation.
<b>burrow</b>	<i>verb</i>	to dig a small hole or tunnel.
<b>predator</b>	<i>noun</i>	animal that hunts other animals for food.
<b>prey</b>	<i>noun</i>	animal that is hunted and eaten by other animals.

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## For Further Exploration

### Articles & Profiles

- [National Geographic Education: Mob Mentality](#)

### Websites

- [National Geographic Animals: Meerkats](#)
- [Kalahari Meerkat Project](#)
- [San Diego Zoo: Meerkats](#)
- [National Geographic Kids: Animals—Meerkats](#)



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