

RESOURCE LIBRARY  
ACTIVITY : 45 MINS

## Meerkat Survival Game

Students view images of meerkat predators and prey in the Kalahari and investigate how meerkat families work together. They apply their learning in a card game.

### GRADES

2 - 5

### SUBJECTS

*Biology, Experiential Learning*

### CONTENTS

2 Videos, 11 Images, 1 PDF

## OVERVIEW

Students view images of meerkat predators and prey in the Kalahari and investigate how meerkat families work together. They apply their learning in a card game.

For the complete activity with media resources, visit:

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

## Program



## DIRECTIONS

1. Discuss interdependence within the meerkat family.

Tell students they will explore ways that meerkats are connected to their families and to the ecosystem of the desert environment. Show the two provided video clips: "Meerkat Survival Tactics" and "Meerkat Communication." Have students look for ways that meerkats help each other survive. Ask: *What roles or jobs do meerkats have?* (Meerkats dig burrows and hunt for prey; the sentry meerkat stands guard and calls out to the others while they feed.) Explain that meerkats also have roles as babysitters and teachers for the younger pups, and the mother, or matriarch, is the leader of the whole family. The meerkat family is interdependent, meaning the members rely on each other to help them survive.

## 2. Introduce the concepts of predator and prey.

Discuss how these tiny meerkats are also part of the Kalahari Desert ecosystem, made up of sand, trees, plants, rocks, and animals. This wild place is challenging for the meerkats, partly because they are both the hunter and the hunted, or predator and prey. Ask: *What did you see the meerkat hunt and eat?* (a millipede) *What do you think might want to hunt for a meerkat as food?* Listen to students' ideas, and then view the Kalahari Desert Animals photo gallery in the media carousel above. Read the captions together.

## 3. Prepare the game materials.

Arrange students in groups of 2-4. Place in the middle of the group one Meerkats Survive! handout for each student, scissors, and 25 counters. Have students cut out their cards, shuffle them all together, and place the stack in the middle next to the counters. These are the "survival cards."

## 4. Play the Meerkats Survive! game.

Explain that to better understand the challenges of protecting the members of the meerkat family, students will play Meerkats Survive! The goal is to grow as large a meerkat family as possible. To play the game:

- Each student starts with three pups, represented by buttons, beans, or other counters.
- Each player takes turns drawing a survival card. The survival card is either saved or played.
- A card marked "Predator" must be played, and the player may lose a pup.

- “Prey” cards allow the player to gain a pup.
- A card marked “Save” may be used later in the game to rescue the pups from a predator.
- After all the cards are played, the player with the most pups has best survived the challenging desert environment!

## Modification

Read and discuss the descriptions on each animal card to build understanding and make the game more meaningful. If time is short, just discuss any unfamiliar ones.

## Tip

The save cards have a "double meaning." They are to be *saved* to play later in the game and they are also the cards that *save* the pups from a predator.

## Tip

This activity would be ideal for a science center, perhaps used during "free choice" time.

## Modification

To lessen the game's win/lose aspects with younger groups, monitor the play. Reward "bonus" pups when needed. For example, if a student is losing all pups, say "Your pups are having a very rainy season with lots of rain. You get a bonus pup!"

## Informal Assessment

Call on players who ended the game with the most pups. Have students take turns explaining why they were able to gain pups. For example, a student might explain that he or she had a sentry meerkat and a ground squirrel burrow that saved them from a predator; they caught lots of prey; or a springbok card helped them because the lion ate the springbok instead. Repeat this type of questioning with the players who ended up with the least pups. For example, they might say their pup was eaten by a Cape cobra; they had no springbok card, and a lion got them; the jackal got them and they had no sentry for protection; they didn't catch any prey. Ask students to imagine picking up all “predator” cards without having any “save” cards.

## Extending the Learning

Help students construct a food chain or web based on the relationships described on the cards.

## OBJECTIVES

# Subjects & Disciplines

### **Biology**

- Experiential Learning

# Learning Objectives

Students will:

- cite examples of how meerkats work together and help the young pups and the clan survive
- identify predators and prey in the meerkats' desert environment
- explain predator-prey relationships for the meerkat and what helps the meerkat to survive in the desert

# Teaching Approach

- Learning-for-use

# Teaching Methods

- Cooperative learning
- Experiential learning

# Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
  - Learning and Innovation Skills

- Communication and Collaboration
- Critical Thinking Skills
  - Analyzing
  - Understanding

# National Standards, Principles, and Practices

## NATIONAL GEOGRAPHY STANDARDS

- Standard 8:

The characteristics and spatial distribution of ecosystems and biomes on Earth's surface

## NATIONAL SCIENCE EDUCATION STANDARDS

- (K-4) Standard C-1:

The characteristics of organisms

- (K-4) Standard C-3:

Organisms and environments

- (K-4) Standard F-2:

Characteristics and changes in populations

### Preparation

### What You'll Need

## MATERIALS YOU PROVIDE

- 25 buttons, beans, or other counters per group
- Card stock to print cards (optional)
- Cup or bowl
- Scissors

## REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector, Speakers
- Plug-Ins: Flash

## PHYSICAL SPACE

- Classroom

## GROUPING

- Large-group instruction
- Small-group instruction

## BACKGROUND & VOCABULARY

### Background Information

Meerkats live in groups or families ranging in size from small groups of six or eight up to large groups of thirty or forty. The dominant female or matriarch generally leads the group. This female and the dominant male are the only members to breed. Each breeding season, the entire group works cooperatively to feed successfully, defend the group, and protect and teach the litter of pups.

During the first few weeks of life, one adult meerkat stays at the burrow with the newborn pups each day, while the other adults feed. This *babysitter* role changes from day to day.

While feeding, meerkats rely on the *sentry meerkat*, an adult meerkat who seeks high ground, such as stumps and termite mounds, to search for danger. The sentry lets out high-pitched noises at regular intervals to let the feeding meerkats know all is safe, or calls out an alarm to let them know of danger. Scientists have identified 30 different calls meerkats make to one another.

The *digger meerkats* take time out of hunting to deepen existing burrows, creating bolt holes throughout the feeding territory.

When the pups are large enough, most group members take turns being a *teacher meerkat*, helping the pups to locate, capture, and safely kill their prey. Also, the pups make a persistent begging sound, and the adult meerkats respond by providing prey for them.

## Prior Knowledge

["meanings of <em>predator</em> and <em>prey</em>"]

## Recommended Prior Activities

- [Build a Meerkat](#)

## Vocabulary

Term	Part of Speech	Definition
ecosystem	<i>noun</i>	community and interactions of living and nonliving things in an area.
interdependence	<i>noun</i>	people relying on each other for goods, services, and ideas.
matriarch	<i>noun</i>	female leader of a family.
organism	<i>noun</i>	living or once-living thing.
predator	<i>noun</i>	animal that hunts other animals for food.
prey	<i>noun</i>	animal that is hunted and eaten by other animals.

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### For Further Exploration

#### Websites

- [San Diego Zoo: Meerkats](#)
- [Kalahari Meerkat Project](#)
- [National Geographic Magazine: Meerkats Stand Tall](#)

