

BUILT TO SURVIVE

K-1ST GRADE
LANGUAGE ARTS, SCIENCE, ART

Learning Goals: Students know what adaptations lemurs have and can describe how each helps lemurs survive in their natural environment.

Students will be able to:

- Describe a variety of adaptations found in humans, lemurs, and other animals
- Explain how an animal's particular adaptations relate to its survival in the environment it lives in
- Identify the adaptations of a mouse lemur as highlighted in a story about a mouse lemur
- Apply their understanding of adaptations to create a model animal

LESSON DESCRIPTION

Part I 1-hour: The teacher uses clothing, items or images to help students understand how people survive in different environments. Students then play a game to see how animals use physical adaptations to survive. **Part II 1-hour:** After hearing Bitika the Mouse Lemur read aloud, students review the character's environment and adaptations in the book and in the accompanying Ako posters. **The Final Project:** Students draw, paint or create a 3-dimensional creature designed to live in Bitika's forest habitat.

Materials needed:

- Pictures of animals in different environments
- Adaptation Game Cards, drawing paper and markers
- Pictures of the following environments: ocean, desert, arctic and rainforest
- Clothing and other items that people use to survive and stay comfortable, such as: sunglasses, sunscreen, water bottle, raincoat, boots, rain hat, skis or snowshoes, wool hat, scarf, snorkel, fins, swim mask
- Assorted art and building supplies (clay, construction paper, recycled materials, glue, paper tubes and cups, tape, etc. for making their animal at the end)

TWO 1 HOUR SESSIONS

INVESTIGATING LEMUR ADAPTATIONS

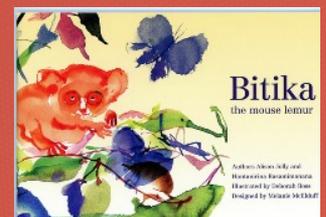
PART ONE

INTRODUCTORY ACTIVITY

1. Set up the classroom so there is a picture of one of the four environments (desert, rainforest, arctic, ocean) in each corner. Help students imagine they are taking a trip to these four environments and ask "What would you need to survive?"
2. Select volunteers one at a time to choose an item from a box or bag. As each item is selected they should match it to the correct environment. Discuss with the class how each item would help them survive and stay comfortable within that particular environment.

FOR BACKGROUND INFORMATION SEE:

INVESTIGATING LEMUR ADAPTATIONS



FEATURED BOOK:
BITIKA THE
MOUSE LEMUR

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3. When the items are given out, ask: What about the animals that live in these habitats? Do they have the same adaptations? What do they have instead? How is it similar/different from what people use?
4. Tell the class that they are now going to play a game about animal adaptations.

PLAYING THE ADAPTATION GAME

1. Stack the animal adaptation cards into two piles: one with the twelve animals and one with the six environments.
2. Divide students into small groups. Explain that each group will pick one card from the animal group and match it with a card from the environment group.
3. Demonstrate by picking up a card from each pile and showing it to the groups. Use an animal with which they are very familiar like a pig combined with an arctic environment. What would an “arctic pig” look like? Would it have thick fur? Big feet like snowshoes? Would it be white to blend into the snow?
4. Now have participants from each group randomly select a card from the animal group and a card from the environment group.
5. Ask the students to describe the features their animals might need to have and why. Do they have any features that already help them in this new environment? Any that would make it hard to survive in this environment?
6. Distribute paper and pencils or crayons. Tell the students to imagine that they have the power to redesign this animal for the environment.

ANALYTICAL WRITING

Imagine you were taking a trip to the rainforest. Think about what supplies you would need to keep yourself safe. Explain what changes you would need to make in order to be protected.

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Ask them to draw what it might look like. Remind them to keep in mind features like color, body covering, and movement.

PART TWO

1. Introduce the second section of the activity by explaining to the students that you will be reading a story about lemurs that live in a forest in Madagascar. Like the animals in the adaptation game, the lemurs in the story have adaptations that help them live in their environments. Can you tell what they are?
2. Read *Bitika the Mouse Lemur* to the class.
3. Review the environments, characteristics and their adaptations from the story. Review the animals pictured in the accompanying Ako posters and their adaptations. Bitika is featured in the Menabe Poster.
4. Complete **the Final Project** — Create a designer creature. Explain to the students that they are going to create a new “designer creature” to live in Bitika’s forest. Review the art materials with the students and their uses. You may want to have the students draw, paint or create a 3-dimensional creature from clay, paper, recycled products or other materials. Don’t forget to give your new forest species a name!

WRAP-UP

Have each student present their Designer Creature to the class.

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EVALUATION

Evaluate the student's final project to determine their understanding of key concepts.

THIS ACTIVITY MEETS THE FOLLOWING NATIONAL AND FLORIDA EDUCATION STANDARDS

FLORIDA STATE STANDARDS

Kindergarten Science

SC.K.L.14.3
SCK.N.1.4

1st Grade Science

SC.1.L.17.1

Kindergarten Language Arts

LAFS.K.RI.1.1
LAFS.K.L.3.6

1st Grade Language Arts

LAFS.1.SL.1.2
LAFS.1.RL.3.7

Kindergarten Visual Arts

VA.K.H.3.1
VA.K.O.2.1

1st Grade Visual Arts

VA.1.H.3.1
VA.1.S.3.1

NATIONAL SCIENCE STANDARDS

Kindergarten and 1st Grade

Characteristics of organisms
Organisms and environments

Characteristics and changes in populations

Form and Function

Changes in environments

Evolution and equilibrium (adapting to environmental changes)

NEXT GENERATION NATIONAL SCIENCE STANDARDS

Kindergarten: Interdependent Relationships in Ecosystems (K-ESS3-1, K-LS1-1)

1st Grade: Structure, Function and Information Processing (1-LS1-1, 1-LS1-2)

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cow

pig

dog

bird

horse

goldfish

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frog

deer

chicken

snake

cat

butterfly

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desert

rainforest

marine
(ocean)

savanna
(grassland)

Arctic

swamp