2-3rd GRADE Science, math

Learning Goals: Students understand the types of activities that ring-tailed lemurs participate in during a typical day and learn how to make an activity budget.

Students will be able to:

- Compare a day in their life to a day in the life of a ring-tailed lemur
- Define an activity cycle and use a picture graph
 to analyze the activity cycle of a lemur

LESSON DESCRIPTION

Students compare their daily activities to the daily activities of a ring-tailed lemur. They create an activity budget and graph it on a pie chart to show the differences.

- Describe how scientists use activity cycles to study animals
- Determine how behavioral adaptations and activities help lemurs survive in the wild

Materials needed:

- Day in the Life of a Lemur Activity Sheet (one per student)
- Pens/pencils or markers for each student to complete their activity cycle

LEARNING ABOUT LEMUR LIFE

READ AND DISCUSS

- **1.** Read *Tik-Tik the Ring-Tailed Lemur* to the class or instruct students to read the book independently.
- 2. Once the students have read the book, introduce the activity by asking students to describe the types of activities the ring-tailed lemurs participated in during the story. Use the following questions to guide the discussion:
 - How did Tik-Tik and the other ring-tailed lemurs in the story spend their day? Activities described include feeding, sleeping, traveling in a group

FOR BACKGROUND INFORMATION SEE:

1 HOUF

Learning About Lemur Life



FEATURED BOOK: TIK-TIK THE RING-TAILED LEMUR



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and alone, interacting with other troops and family members, vocalizing, exploring their environment, defending their home range and seeking a mate.

- Based on the story how do you think real ring-tailed lemurs in the wild spend their day? Do you think the
 activities are the same or different from the story? Which activity do you think they spend the most time
 doing?
- Who do you think lemurs spend the most time with? Do these animals live alone or in groups? Ringtailed lemurs are considered the most social of all of the lemur species. Their troop provides them with protection from predators, companionship, and even warmth at night. For this reason they spend both their days and nights with their troop-mates.
- Write their answers on the board. Tell students that they will now participate in an activity to learn how lemurs spend their day.

ACTIVITY

- Distribute and review the A Day in the Life of a Lemur activity sheet. Review the pie chart at the top of the worksheet. It visually describes a ring-tailed lemur's daily activities and the amount of time spent at each activity. This "activity cycle" is a way for scientists to organize and communicate how an animal spends its day. Ask students the following questions:
 - Based on the pie chart, what activity does a lemur participate in the most?
 - What activity does it participate in the least?
 - How did the activity cycle compare with the students predictions?
 - How do these activities help them survive?

ANALYTICAL WRITING

Lemurs participate in a variety of activities during their day. Describe how their daily activities are similar to yours and how they are different.

LEARNING ABOUT LEMUR LIFE



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- 2. After reviewing the lemur activity cycle, introduce students to the second part of the activity. It is now their turn to create and graph their own activity cycle. You may want to show them an example by graphing out your own daily activities.
- 3. Have students calculate how much time they spend doing the following things in a day:
 - Resting/sleeping. Any time a student is sitting quietly or sleeping.
 - Traveling. Any time a student is moving from one place to another in a car, on a bike or other form of transportation or on foot.
 - Eating.
 - Playing. This could include unstructured play or time spent participating in hobbies, clubs, sports or games.
 - Schoolwork.
 - Other. This includes anything else that doesn't fit into one of the other categories.

4. Instruct students to complete their activity cycle by filling in the blank pie chart on the activity sheet.

WRAP-UP

After students have completed their activity cycle, ask them to compare their daily activity cycle to the ring-tailed lemur's activity cycle. Which activities are the same? Which are different?

AYE-AYE EXTENSION

Read *Ako the Aye-Aye*. Discuss the similarities and differences between the daily activities of the ring-tailed lemur and the aye-aye.

• When do these activities take place? Aye-aye are nocturnal (active at night). Ring-tailed lemurs are





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primarily diurnal (active during the day). Do they participate in their daily activities with other lemurs? The aye-aye is a solitary species. Ring-tailed lemurs are social and live in large groups called troops. How would these different activities help them survive? The social ring-tailed lemur uses scent glands, vocalizations and strength in numbers to defend themselves and their home range. The solitary and secretive aye-aye has camouflage coloration that helps it hide as it travels through the forest at night.

• Discuss the risks and benefits of these very different survival strategies. Students may want to research the ayes-ayes activities and create a third activity graph comparing them to the ring-tailed lemur.

ZOO EXTENSION

Before a zoo visit, review the ring-tailed lemur activities from the stories and activity sheets. Have the students predict whether or not lemur activities would appear the same in a zoo setting as they would in the wild.

During a zoo visit, observe lemurs, or another animal substitute, to see if their activities are similar. Which activities were they able to observe? Which activities occurred most often? Were there any activities that were not observed at the zoo that lemurs would perform in the wild? Why do you think that was/was not the case? Back in the classroom create an additional pie chart comparing the activities observed at the zoo. Why is it important for keepers to understand the normal activity cycle for an animal? How might they use this information? Why is it important for visitors to understand an animal's activity cycle?

LEARNING ABOUT LEMUR LIFE

LEMUR CONSERVATION FOUNDATION



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EVALUATION

Examine the pie chart to see if the hours per day for each activity matches the number of pieces on the pie. Review Wrap-Up questions about differences and similarities.

THIS ACTIVITY MEETS THE FOLLOWING NATIONAL AND FLORIDA EDUCATION STANDARDS

FLORIDA STATE STANDARDS

2nd Grade Science

SC.2.L.17.1

SC.3.N.1.3 SC.3.L.17.1 SC.35.CS.2.3

2nd Grade Math MAFS.2.OA.1.1

> 3rd Grade Math MAFS.3.MD.2.3

3rd Grade Science

NATIONAL SCIENCE STANDARDS

2nd and 3rd Grade Characteristics of organisms Organisms and environments Abilities necessary to do scientific inquiry Understandings about scientific inquiry Form and Function

NEXT GENERATION NATIONAL SCIENCE STANDARDS

2nd Grade: Interdependent Relationships in Ecosystems (2-LS4-1) 3rd Grade: Interdependent Relationships in Ecosystems (3-LS2-1)

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My Activity Cycle Each piece of the pie represents 1 hour in a 24 hour day Eating Resting / Sleeping Moving / Playing Traveling School Work Other



