

# **Z**00

#### A simulation of caring for animals in a modern zoo

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ZOO OVERVIEW

Get ready for

some excitement!

ZOO is a simulation in which students try to save their local zoo, called Zooland, from destruction. The simulation begins when students learn that Zooland is about to be closed, the animals sold, and the land

leased to a frozen vegetable factory. The Mayor and the members of the city council say Zooland is a disgrace to the community. They say it is outdated, has low at-

tendance, and the animals are poorly treated. The only reason the zoo is still standing is because the zoo director organized the children and parents of the community and got them to complain to the Mayor. An agreement is worked out in which the Mayor and the members of the city council will keep the zoo open for one more year. During this time the animals must be given excellent care, and the zoo must be modernized at no expense to the city.

The only way for the zoo director to save the zoo is to enlist the help of your students. Once they are committed to saving Zooland, the real work begins.

First, they make a model of Zooland. The model may be a bulletin board, a display utilizing cardboard boxes and stuffed animals, or a combination of both. Using this model, students learn how to be zoo keepers. They get lessons from the head zoo keeper on how to feed and care for the animals. After passing a short test and earning a zoo keeper ID card, your students continue to care for animals while they receive further instruction from the zoo curator and the zoo director. These experts teach your students how to design cages without bars and how to display animals in their natural habitat. Using this information, students transform Zooland from and old run-down zoo into a modern attractive one.

Throughout the simulation students are challenged to outsmart the Mayor's spies that sabotage the animals' cages and pose problems for the young zoo keepers. Students also find sponsors to pay for Zooland's renovations and they can add more creatures to the zoo by identifying mystery animals. In addition to studying about animals, students build large cardboard creatures and create stories to go with each animal in the zoo.

The simulation ends with the grand reopening of Zooland. Your classroom becomes a zoo complete with habitat displays and large cardboard animals. Other classes come to visit and learn about the zoo from your students that role play the parts of animals and zoo keepers.

This simulation involves your students in the daily activities of a small city zoo called Zooland. When the Mayor and members of the

it improves, your students join in the battle to save it. They begin by making a classroom model of Zooland. Then, using this model, they learn how to be zoo keepers. First they learn the zoo rules and the zoo keeper's responsibilities. Next they learn how to care for animals. After passing a brief zoo keeper examination, they begin work on remodeling Zooland. They learn how to design modern barless cages and realistic animal displays. Finally, they use their knowledge to transform Zooland from an old run-down zoo into a modern new one with the latest innovations. Specifically, your students will learn the following:

city council decide to close Zooland in one year unless



- 1. the foods, habitats, bodies, and interesting facts about zoo animals
- 2. how zoo keepers take care of the zoo's animals
- 3. the differences between living and non-living things, plants and animals, as well as how animals are classified
- 4. how zoos get animals
- 5. endangered animal species
- 6. zoo careers

#### **Feelings**

- 1. appreciation of the animal kingdom
- 2. pride and confidence as they learn about animals
- 3. satisfaction as they create animal stories
- 4. uncertainty as they try to solve some of the zoo's problems
- 5. accomplishment as they successfully modernize the zoo and keep it open

#### **Skills**

- 1. how to carefully observe animals
- 2. how to classify animals
- 3. how to design barless cages and make habitat displays

This simulation is divided into three parts:

- the introduction to Zooland's problems,
- · the zoo lessons, and
- the Grand Reopening of Zooland.

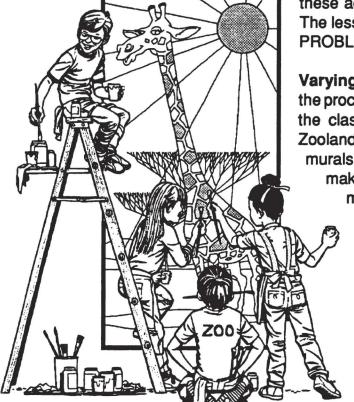
First two class periods The first part of this simulation takes two class periods. On the first day the students learn about the Mayor's plan to close Zooland. They are told what has to be done to improve it and how to keep it open. The next day the teacher, using overhead transparencies, takes the students on a tour of Zooland. After the tour the students are asked to bring in cardboard boxes and stuffed animals so a classroom model of Zooland can be made.

**Zoo lessons** The second part of the simulation is the ZOO LESSONS. This is the main part of the simulation, and the procedures are the same for each lesson. The lessons begin with GUESS THE ANIMAL. Once the animal is identified, the students try to name the MYSTERY ANIMAL that is on the map of Zooland. Next, the teacher role plays one of the zoo employees (the head zoo keeper, the zoo curator, or the zoo director) and gives the class a mini-lecture on some aspect of zoos. Following the lecture students work on a ZOO ACTIVITY in cooperative

groups or individually. By successfully completing these activities students raise money for the zoo. The lesson ends when students solve a daily ZOO PROBLEM.

Varying activities In the third part of the simulation the procedures vary from day to day as students get the classroom ready for a Grand Reopening of Zooland. They make their classroom into a zoo with murals that show different animal habitats. They make large cardboard models of Zooland's animals and students create zoo stories about

these animals. Finally parents and students from other classes come to visit the zoo.



# **DAILY ZOO INSPECTIONS - 1**

Your students should inspect the animals' cages each day before school and during recesses. They should look for anything that does

not belong in the cages, and they should check to see that the doors are locked and there is nothing in or near the cage that could harm the animal. If they find anything that they feel should not be in an animal's cage, they must show it to you immediately.

Once every two or three days you (the teacher playing the part of the mayor's spy) will put an object in one of the animal's cages. If your students do not find this object by the start of the daily ZOO LESSON, you show it to your students and say, "The mayor's spy found this object and said you are being careless zoo keepers. Because of this oversight, the mayor

will take the animal from the zoo." Go to the cage where

you hid the object and remove the animal from the map of Zooland and set it aside. This animal, or any other animal that was taken during a zoo activity, can be earned back the next time your students find an object hidden in one of the other cages. (Note: Extra animals cannot be earned from these daily inspections. The only way for your students to get additional animals for Zooland is by identifying the MYSTERY ANIMAL.) In addition to hiding objects, you can have animals missing and you can remove animals from cages. Keep your zoo keepers on their toes. They are responsible for inspecting everything.

"Keep our cages clean!"

Here are some suggestions for hiding objects and sabotaging the cages:

- Hide the objects every day for the first three or four days so your students get used to the procedure. Then hide them only every two or three days.
- 2. If your students get complacent and stop looking after the first recess, hide the objects during the second recess or lunch when the students are not around.
- 3. Hide the objects in the cages on the map of Zooland and in the cardboard box cages.

# **DAILY ZOO INSPECTIONS - 2**

- 4. Hide objects like paper clips, pencils, rubber bands, and food wrappers in the cages.
- 5. Remove one of the cage bars and hide it behind another bar.
- 6. Dress up one of the stuffed animals with a baseball cap and sun glasses. Remove it from the cage and hide it in the room. Your zoo keepers should know the animal is missing.
- 7. Hide a fine piece of wire in behind an animal that is on the map of Zooland. Have only a small part of it sticking out from the animal's face. If your students miss it you can dramatically pull the wire right out of the animal's mouth!



# **GUESS THE ANIMAL**

GUESS THE ANIMAL is an activity in which your students try to identify an animal based on a partial drawing and on information you give them from the ANIMAL FACT SHEET. For this activity you may choose one animal a day from any of the 20 Zooland animals. Since by the end of the simulation you will have used only ten of these animals, be sure to select the ones you feel your students would most enjoy.

'Hmmmmmm? Will they be able to guess who I am if I'm covered with paper?"

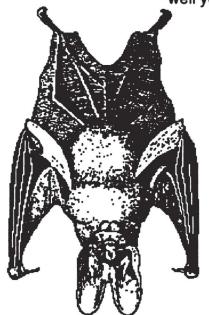
Don't allow any peeking!

 Begin this activity by placing one of the overhead transparencies of a Zooland animal on the overhead projector.

- Now cover it with black construction paper so that only a very small part of the animal is showing.
- 3. Next turn on the overhead projector and tell your students that a Zooland animal is now being projected on the screen.
- 4. Carefully select some of the information from the ANIMAL FACT SHEET to give to your students. This information should be enough to enable them to make a guess but not so much they will immediately know the animal's name.
- At this point choose a student to guess the animal or get a class consensus on the animal's identity. If the guess is correct, reveal the rest of the animal and give your students any information from the ANIMAL FACT SHEET that you omitted.
- If the guess is wrong, move the construction paper to reveal more of the animal. Once again call for guesses.
- Continue in this way until the animal is identified. After the animal has been identified, students try to name the MYS-TERY ANIMAL.

Be careful ... Children in front will try to see the name on the ANIMAL FACT SHEET. Now we come to another interesting part of this simulation. ZOO has five MYSTERY ANIMALS. Follow these directions while you lead this activity.

 Put one animal at a time on the Zooland map (see page 1:19) and cover the animal with 12 pieces of black construction paper that are individually numbered 1 through 12. (You and your students will remove one, two, or three of these black papers, depending on how well your students did on GUESS THE ANIMAL.)



- 2. If your students were able to GUESS THE ANIMAL in only one guess, they get to remove three papers that are covering the MYSTERY ANIMAL. If it took them two guesses, they remove two papers. If it took them three guesses, they may remove only one paper. Your students tell you the number(s) of the pieces of construction paper they want removed. No papers can be removed if your students took more than three guesses to GUESS THE ANIMAL.
- Each day following GUESS THE ANIMAL, your students may make one attempt to name the MYSTERY ANIMAL, even if none of the construction papers was removed. You may choose one student to make the guess, or you may get a class consensus.
- 4. At this time, read to the class the information about the animal from the ANIMAL FACT SHEET.
- 5. Next make a copy of the animal, have a student color it, and put it in one of the cages on the Zooland map.
- 6. You are now ready to put up a new MYSTERY ANIMAL for the students to identify.
- 7. If your students are able to name the MYSTERY ANIMAL in two days or less, you may do the following to make this activity more challenging:
  - a. Put the MYSTERY ANIMAL up sideways or upside down.
  - b. Say, "All papers with even numbers must be removed first."
  - c. Allow only one paper from each row to be removed at a time.

8. Sometimes, in spite of changes you make, students may quickly identify all the MYSTERY ANIMALS before the simulation ends. If this happens, you may use any of the other Zooland animals as a MYSTERY ANIMAL. Then, when the animal is identified, add it to the zoo, and Zooland will have two of the same kind of animal.

Myst	ery A	nimal
1	2	3
4	5	6
7	8	9
10	11	12

# **ZOO LESSONS**

ZOO LESSONS give your students information about animals and how to become zoo keepers. The lessons also teach your students how to design modern animal displays. In addition to these lessons, you

may give your students three optional lessons. The optional

lessons tell about trading animals, the purpose of zoos, and zoo careers. The optional lessons are designed to supplement the other lessons, or they may be used to

replace lessons. Special note: If Lesson 1 is too easy for your students, you may choose to replace it with Optional Lesson 9 or one of the other optional lessons.

For each lesson, you role play the part of a Zooland employee. In the first six lessons you will play the part of the head zoo keeper. In the next two lessons you will be the zoo curator. For any optional lessons you will be the zoo director. Of course, you may choose to give the lessons without role playing these two roles, but a little drama and costume on your part will enhance the simulation. Consider using these suggestions while role-playing the different parts.

# **Head Zoo Keeper**

- Clothes: baseball cap, plain-colored work shirt, and boots.
- Props: keys, bucket, mop, and broom.

### **Zoo Curator**

- Clothes: neatly dressed, but not as formal as the zoo director.
- Props: clipboard

### **Zoo Director**

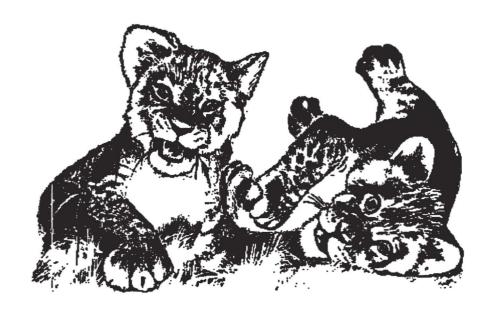
- Clothes: neatly dressed, slacks and shirt for a man, dress for a woman.
- Props: briefcase

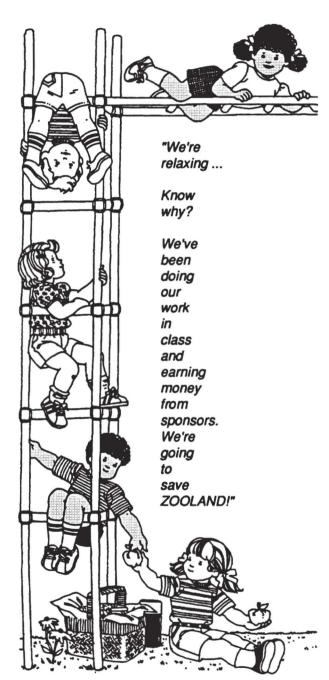
### **ZOO ACTIVITIES**

1. ZOO ACTIVITIES are assignments students work on following the lesson.



- Because students have different abilities, most activities are written at two levels. The letter A following the activity number means the activity is on the more advanced level. For example, ZOO KEEPER ACTIVITY 1A is more advanced than ZOO KEEPER ACTIVITY 1.
- 3. Before assigning an activity, look over the choices and select the one that is best suited for your students.
- 4. Some lessons have only one activity. In such cases all students will do this one activity.
- 5. Most activities take less than 10 minutes to complete, but some may require more than one period to finish.
- 6. You may have your students work on ZOO ACTIVITIES in cooperative groups or individually.
- These activities may be corrected together with your students or collected and corrected by you at another time.
- 8. By successfully completing the ZOO ACTIVITIES, students raise money from private and corporate sponsors to remodel Zooland. (See the SPONSORS section immediately following on page 1:13.)





Zooland needs \$5,000,000 to begin renovation. Since the city government will not give the money for such renovation, your students must raise it by getting donations from private and corporate sponsors.

Whenever your students complete a ZOO ACTIVITY, you announce to them that they have found another sponsor that wants to make a donation to the zoo. The sponsor will donate \$100,000, \$500,000, or \$1,000,000 to Zooland. The exact amount depends on how accurately the ZOO ACTIVITY was done, how cooperatively the students worked, and how well they behaved. Using these guidelines, or ones of your own choosing, you decide on the amount of money the sponsor will donate to the zoo.

Here is an example of how to do this: Imagine that during ZOO KEEPER ACTIVITY 1, your students did an excellent job on the assignment and that they worked very well together. You would announce to your students that they have found a sponsor that will give the zoo \$1,000,000. The next day, however, while working on ZOO KEEPER ACTIVITY 2, your students were noisy, uncooperative, and did a poor job on the activity. You would tell them the sponsor they found has given only \$100,000 to the zoo.

Each day you need to record on the map of Zooland the total amount of money raised. Encourage your students to surpass the \$5,000,000 figure so that special animal displays can be made. If your students have not raised the \$5,000,000 by the last week of the simulation,

you will have to announce to the class that a philanthropic sponsor has been found who is donating enough money so that Zooland can be remodeled and your students can take part in the grand reopening. At the end of each day, your students must solve a ZOO PROBLEM that is based on the experiences of real zoo keepers. You may read the problem aloud to your students, or you may duplicate copies for them to read. They may work on the problem individually or in small groups.

After reading and discussing the possible solutions, your class will choose the best answer. Then you will read aloud the explanation of the correct answer.

If your students made a wrong decision, the mayor's spies will tell the mayor. The mayor will say the animal is not safe in students' care and will then remove the animal from Zooland. (The drawing of the animal must be removed from the map of Zooland and set aside.) If their answer is correct, they may return an animal that was taken earlier, but they cannot earn extra animals by solving the problem. They can only maintain what is already in the zoo.

Your students will enjoy overcoming the obstacles the mayor's spies present ...

Most of the ZOO PROBLEMS can be solved by basing answers on material learned in previous lessons, but sometimes zoo keepers must deal with the unexpected. For this reason, sometimes your students will be asked to solve a problem for which they are not prepared.

## **ZOOLAND'S ANIMALS**

There are 25 different animals listed in this simulation. Each of these animals has a picture and an ANIMAL FACT SHEET. During the second part of the simulation, you will use these animals for GUESS THE ANIMAL and for the MYSTERY ANIMAL. In the final part of the simulation, Zooland's Grand Reopening, you will make cardboard enlargements of these animals and your students will study them and write stories about them. It is unlikely that you will use all 25 animals in this simulation. It does not matter which animals you use except as noted below.

"Don't forget to use me and my friends for ZOOLAND's





#### Animals for the Grand Reopening

The following animals must be part of the zoo because they have an important part in the Grand Reopening of Zooland:

- elephant
- giraffe
- gorilla
- monkey
- bear
- alligator
- crocodile
- polar bear
- penguins
- panda



# Mystery animals

The following five MYSTERY ANIMALS do not become part of the zoo unless they are identified by your students.

- Komodo dragon
- wild boar
- chimpanzee
- pelican
- · bats

# **INITIAL PREPARATION - 1**

Before you be you get yours

Before you begin, be sure you get yourself prepared!

- 1. Read through this notebook to familiarize yourself with the simulation.
- Make an overhead transparency of the Map of Zooland. Using an overhead projector, project the map onto butcher paper attached to your bulletin board. Have your students trace it.
- Make a photocopy of each of the 20 Zooland animals. Have your students color the animals and cut them out.
- Place one animal in each of the cages on the Map of Zooland. Five of the cages will be empty. These may or may not be filled, depending on how well your students identify the MYSTERY ANIMALS.
- Make a photocopy of each MYSTERY ANIMAL. Color the animals and cut them out but do not let the students see them. Set them aside for later use.
- 6. Make an overhead transparency of each Zooland animal, including the five MYSTERY ANIMALS. If your overhead projector has a roll of acetate film, you may trace the animals onto it rather than making transparencies. Students should not see these animals at this time.
- 7. Staple a 3' x 3' sheet of butcher paper to the Map of Zooland in the section labeled Mystery Animal. Then project the image of MYSTERY ANIMAL#1 onto this paper and trace it with a marking pen. Cover the picture with 12 pieces of black construction paper (9 x 12). Number the pieces 1-12. When you are done, the mystery animal should be completely hidden as shown in the boxed diagram at the top of page 1:17.

Use chalk or a white color crayon to number these 12 pieces.

# Mystery Animal

You may use black, gray, or some other dark construction paper to cover the MYSTERY ANIMAL.

1	2	3
4	5	6
7	8	9
10	11	12

Hint: Put up all 5
MYSTERY ANIMALS
at once. First put up
MYSTERY ANIMAL
#5. Then cover it with
#4, then cover #3
with #2 and finally
cover #2 with #1.

Thus, when students guess one animal, the next one is ready underneath.

- 8. Trace the other four MYSTERY ANIMALS onto separate sheets of 3' x 3' butcher paper and set them aside for use at a later time. Students must not see the MYSTERY ANIMALS.
- 9. If you plan to have your students read the ZOO PROBLEMS rather than listen to you read them aloud, you will need to make one copy for each student or cooperative learning group.
- 10. Following each lesson there is a ZOO ACTIVITY for your students to complete. You may duplicate these activities now or just prior to their use. The one exception to this is ZOO ACTIVITY 8 (8A). You need to gather materials and do some preliminary work a few days before beginning this activity.
- 11. Make overhead transparencies of Overlays 1-8.
- 12. Read the Setup Directions for Zooland's Grand Reopening (Part 5). You may want to get started on some of this work before you begin the final week of this simulation.

# **UNIT TIME CHART**



Intended as an example: alter as desired.

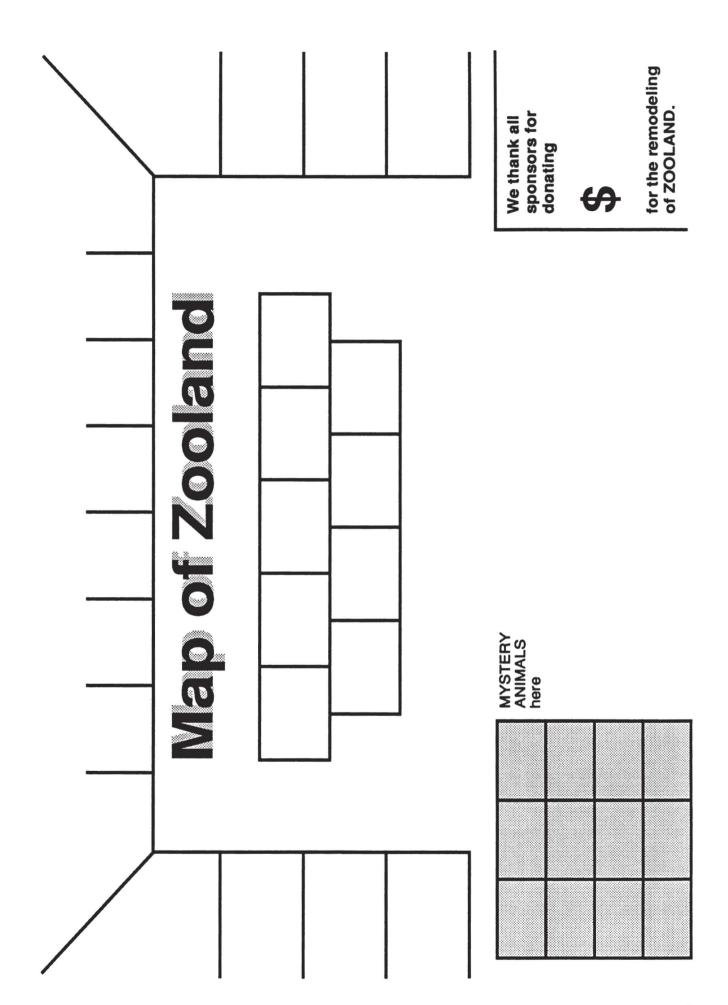


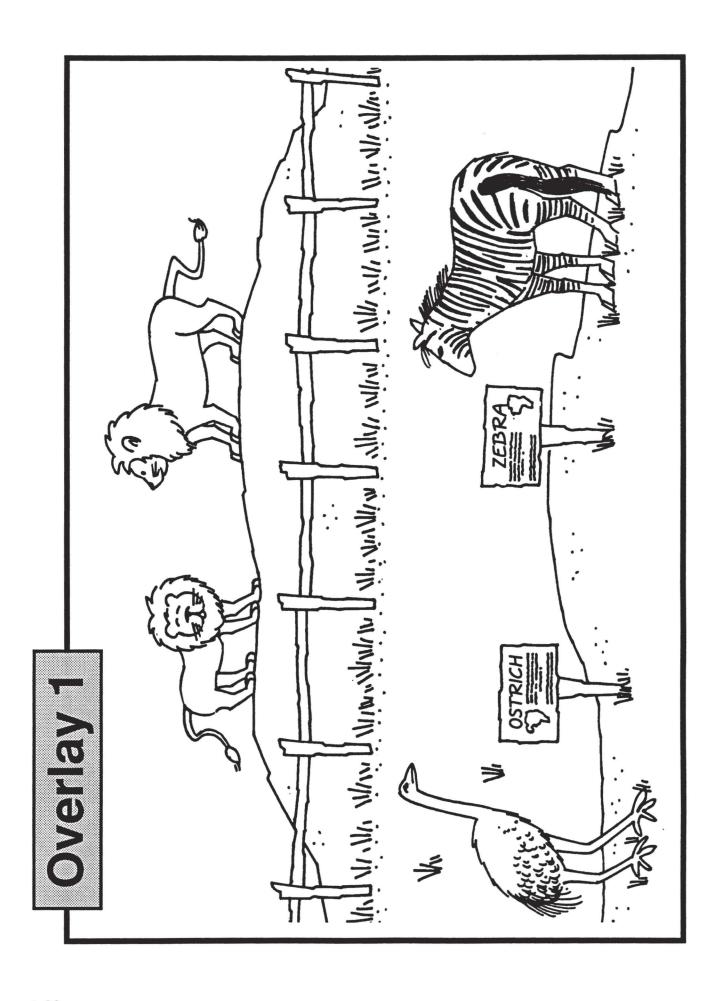
M	Tu	W	Th	F
Introduce Zooland's problem	Tour of Zooland	Lesson 1: Activity 1 or 1A	Lesson 2: Activity2 or 2A	Lesson 3: Activity 3 or 3A
		Zoo Problem 1	Zoo Problem 2	Zoo Problem 3
1	2	3	4	5
Lesson 4: Activity 4 or 4A Zoo Problem 4	Lesson 5: Activity 5 or 5A Zoo Problem 5	Lesson 6: Activity 6 or 6A Zoo Problem 6	Lesson 7: Activity 7 (Zoo Keeper Examination) Zoo Problem 7	Lesson 8: Activity 8 or 8A Zoo Problem 8
6	7	8	9	10
Write zoo stories Study zoo animals	Paint cardboard animals	Paint murals for displays	Practice Grand Reopening of Zooland	Zooland's Grand Reopening Debriefing
11	12	13	14	15

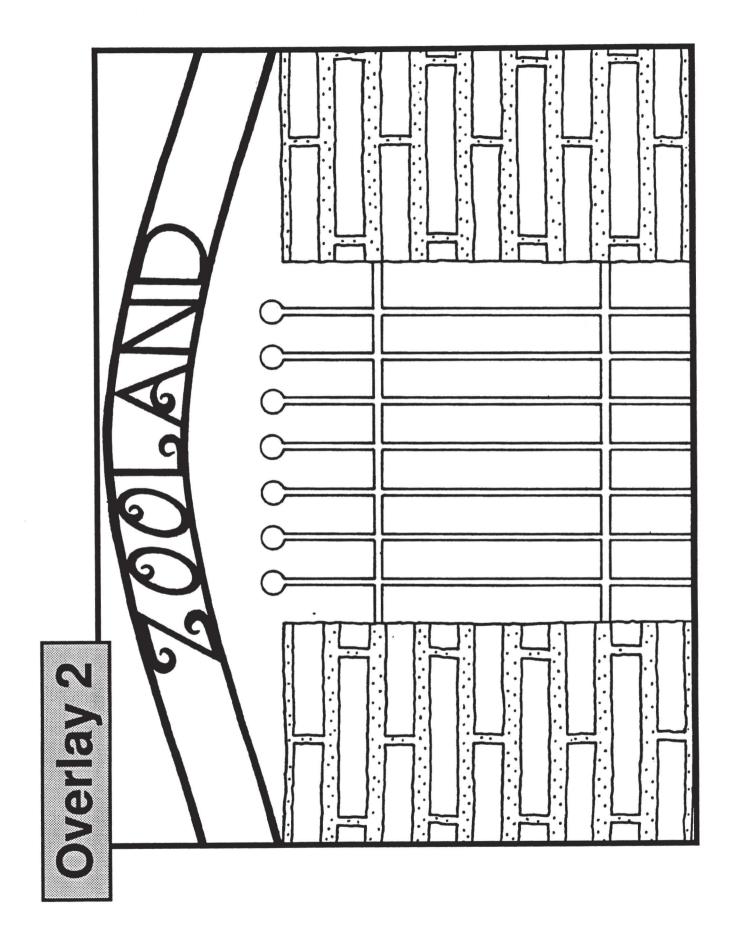


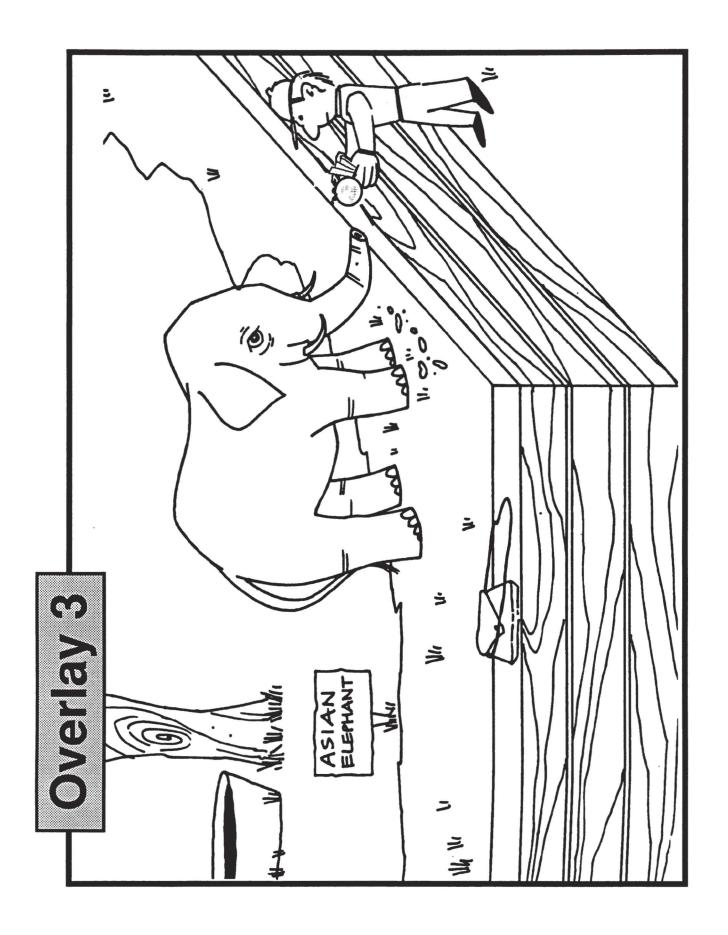
You and your students will roar with delight!

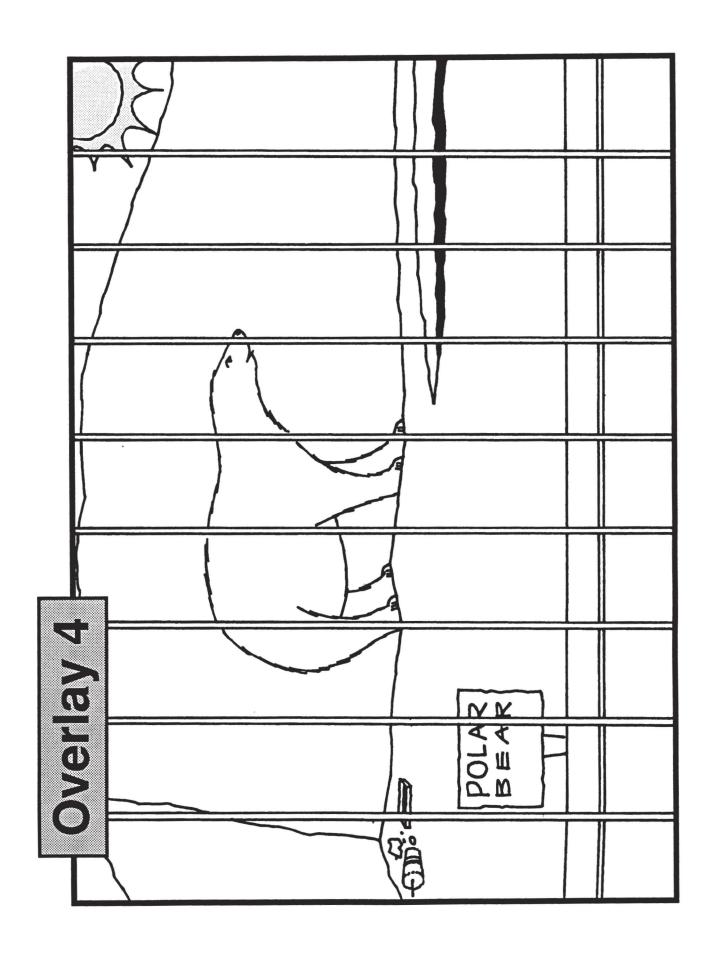


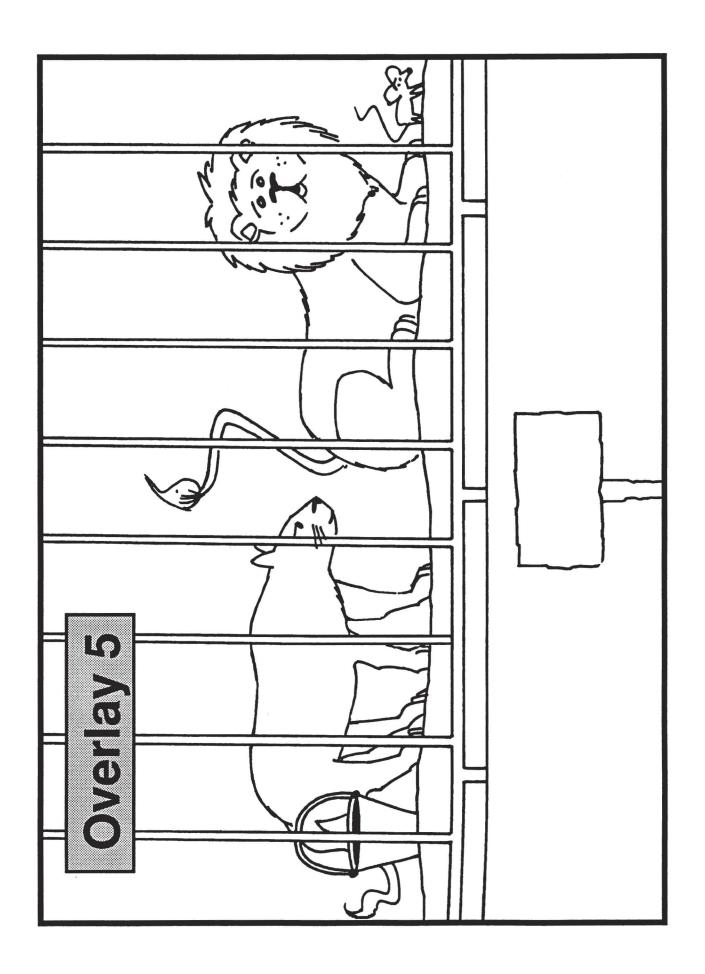


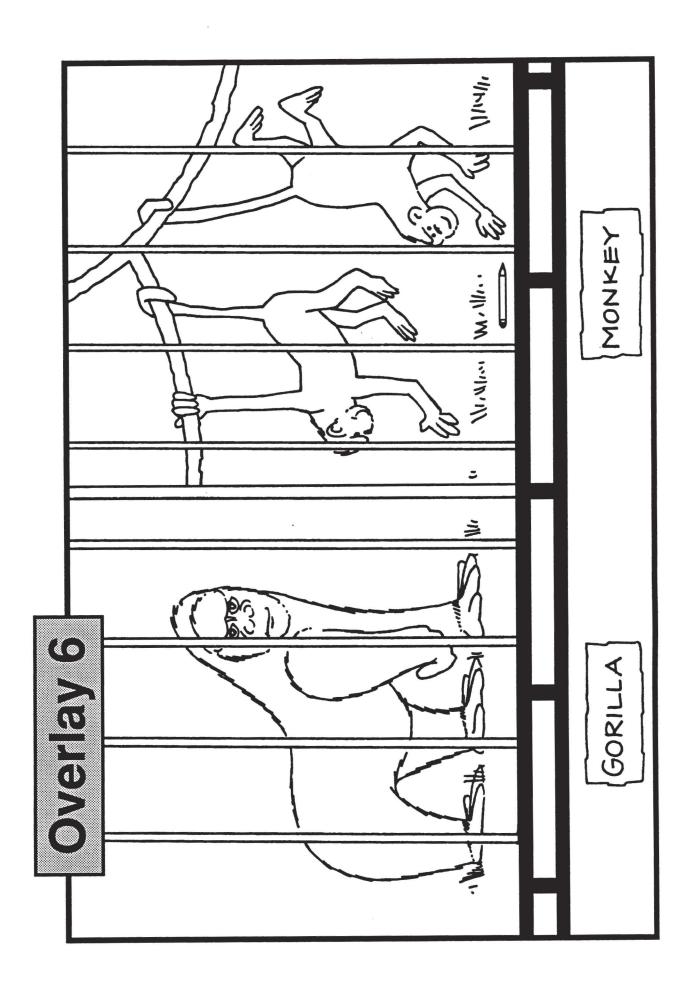


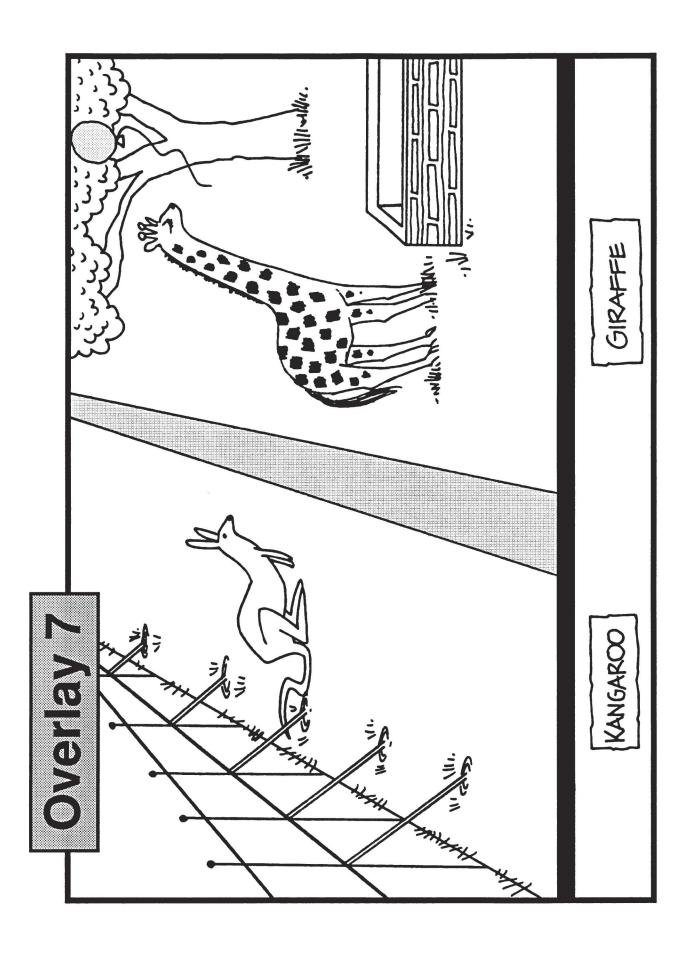


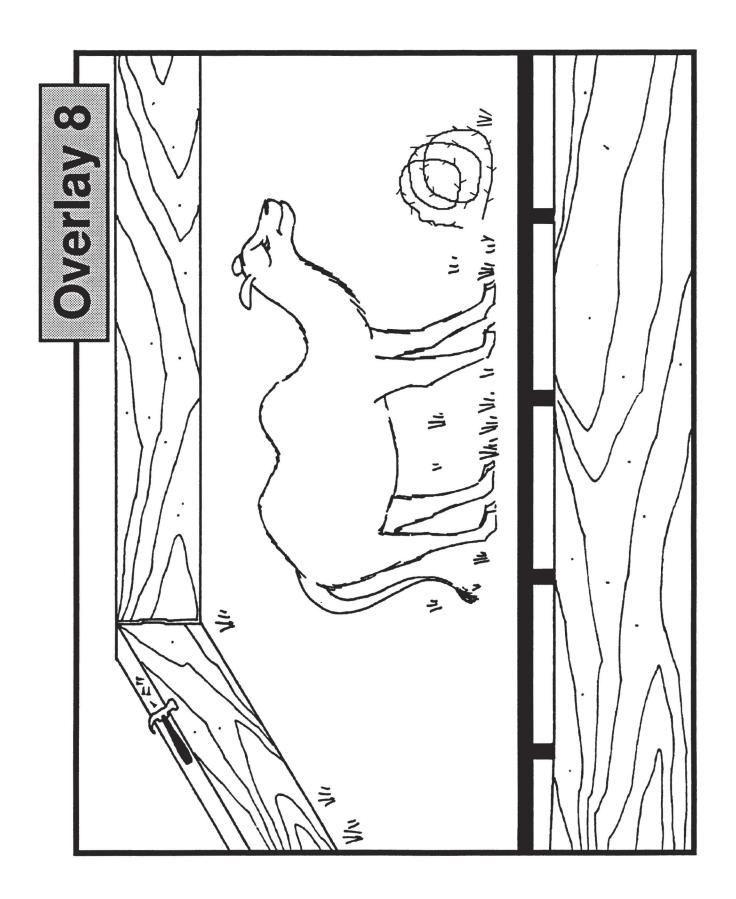












#### HOUR 1

#### **Materials:**

1. Overhead Transparency 1

#### **Procedures:**

- 1. Begin a brief class discussion on zoos. Use the following questions as a guide:
  - a. How many of you have ever been to a zoo? (Have students raise their hands.)
  - b. What animals do you like to see at the zoo?
  - c. Which animals are interesting? scary? friendly? loveable?
  - d. What else do you like to do at the zoo besides see the animals?
  - e. What makes a zoo very good? very bad?
  - f. What is a zoo?
- 2. Read or tell the following information to your students:



Either read the larger type verbatim or put these ideas into your own words ... A zoo is a park where animals are kept so people can see them. Some zoos are very large; others are quite small. However, the job of all zoos is to teach people about animals.

Good zoos display the animals the way they would look in the wild. Tigers would be displayed in a jungle setting, and lions would be seen in grasslands. The animals would look and act as if they were in their own homes and not in a zoo. There are also signs and pictures that tell you about the animals. In a good zoo the animals get nutritious food and good medical care. They are protected from people and other animals.



In this picture (project Overhead Transparency 1 on a screen), the animals look as if they were in their homes in the wilds of Africa. The animals can be easily seen, and signs tell you about the animals. You might think the lions would attack the zebra, and in the wild they would. However, in this display a large moat or ditch that you cannot see separates the lions from the zebra. In a good zoo, animals and people are kept away from each other by things besides bars. You will learn about these later. In fact, you are going to learn a great deal about zoos and animals because a zoo named Zooland needs your help.

Let's imagine that Zooland is just a few blocks away from our school. We would have lots of fun going on trips to the zoo and learning about the animals. Let's pretend that Zooland is in danger.

Here is the terrible problem Zooland is facing:

Zooland is a very old zoo that is owned by the city. The cages are old, and the animals are unhappy. Zooland is usually so dirty and smelly that visitors stay away.

One day the mayor and the members of the City Council went on a tour of the zoo. They looked at the animals. They looked at the old cages. They looked for people visiting the zoo, but they saw very few people.

"Why should we have a zoo if no one comes to see the animals?" asked the mayor.

"Why should we spend money on a zoo that no one goes to?" asked the members of the City Council.

While they were thinking about answers to these questions, a terrible thought filled the mayor's head. It was an awful, horrible thought that made him smile.



"Let's close the zoo," he said. "Let's sell all of the animals to other zoos. Let's tear down all the cages. Let's completely remove the zoo so that no one could tell we ever had one."

"A brilliant idea!" said the members of the City Council.

"And," continued the mayor, "we can sell the land to a frozen vegetable factory. With all of the money we make we can remodel the Opera House."

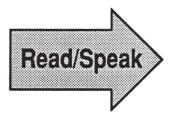
"Bravo, bravo!" cheered the members of the City Council.

The mayor and the members of the City Council left the zoo feeling very happy and very proud of their decision.

The next day they sent a letter to the zoo director telling him the zoo would soon be closed.

A newspaper ad and free ice cream saved the San Diego Zoo over 60 years ago. When the zoo director received the letter, he tore up the letter into tiny pieces and jumped up and down on its pieces. He screamed, "They won't close my zoo. I'll show them a thing or two." The zoo director knew that the children of the city loved the zoo, so he made up a plan to save it. He put an advertisement in the local newspaper asking all children that wanted to save Zooland to come to the zoo on Saturday afternoon and sign a petition to save the zoo. He promised all the children free ice cream whether they signed the petition or not.

On Saturday afternoon the zoo was packed with shouting children that wanted ice cream and angry parents that wanted to know why the zoo was going to be sold. All the parents and all of children signed the petition to keep Zooland open.



You may make a wall chart of this contract.

The mayor and the members of the City Council were also at the zoo. They saw hundreds of furious voters and knew they had to act quickly. They huddled together. When they emerged, a sickly smile was on each City Councilperson's face. The City Council swiftly drew up a contract. It said:

- a. Zooland can stay open for one more year. At the end of this time, the zoo will be sold if it has not been modernized and if the number of visitors has not increased.
- b. The mayor may sell any animal that is not given proper care.
- c. All monies for zoo improvements must come from private sponsors and not from city funds.

The zoo director promptly signed the contract. He waved it in the air to the cheering crowds of ice cream-covered children and smiling parents. While everyone celebrated, the mayor and members of the City Council quietly returned to their downtown offices.

Be sure your students understand that the mayor and his spies are secretly trying to destroy the zoo. They met again. This time they worked out the rest of their evil plan. First, they fired all zoo employees that did not have contracts with the city. Then they passed two laws. The first law required all zoo keepers to pass a City Zoo Keeper Examination within 10 days of being hired. The second law proclaimed that \$5,000,000 must be raised before improvements on the zoo could be made. Afterward, the mayor hired several spies. These spies would report anything that went wrong at the zoo. They would also hide dangerous objects in the animals' cages and they would leave doors open and let animals escape. If a dangerous object were found in an animal's cage or if an animal escaped, the mayor would be able to sell the animal because he could claim it was not being given the proper care. When they finished, the mayor and the



members of the City Council began laughing. They laughed and laughed and laughed.

The zoo director did not laugh when he found out what the mayor and members of the City Council had done. But their dirty deeds made him all the more determined to save the zoo. He had a secret plan of his own. He decided to teach the boys and girls of the community how to be zoo keepers, how to pass the City Zoo Keeper Examination, and how to raise money for Zooland. He smiled happily and said, "The children and I will work together to save our zoo!"

3. Tell your students that they have been selected to help the zoo director save Zooland. Ask them to bring stuffed animals (lions, tigers, bears, etc.) and cardboard boxes to school. Explain to them that these items will be used to teach them how to be zoo keepers.

#### **HOUR 2**

#### Materials:

- 1. Overlay Transparencies 2-8.
- 2. Cardboard boxes (brought in by students)
- 3. Strips of gray or black construction about a half inch wide and long enough to cover the openings of the cardboard boxes

#### Procedure:

1. Explain to your students that they will be helping the zoo director save Zooland. Have your students imagine that they are at the entrance to Zooland. Introduce them to the zoo director:

"Boys and girls I want	t you to meet the director of
Zooland,	·
(Use a name of your choic	e. Female teachers might use
Dr. Ellen Benchley; male to	eachers might use Dr. Charles
Waygo.)	•

2. Tell your students that you are going to play the role of the zoo director. Then say to your students:

"I want to thank all of you for coming here. Without your help it would be impossible to keep Zooland open. The mayor and members of the City Council are doing everything possible to see that we fail. They have fired most of my zoo keepers and won't let me hire more unless they pass the City Zoo Keeper Examination. They want the zoo remodeled, but won't let us start unless we raise \$5,000,000. Also, I have just learned that the mayor is sending spies to watch us and to sabotage the animals' cages.

Even with all these obstacles against us, I believe we can still save Zooland. First I am going to have my head zoo keeper teach you everything you need to know about being a zoo keeper. A week from now you will all pass the zoo keeper Test. In the meantime, you will be able to work as zoo keepers. The main thing I want you to do is inspect the cages. *Remember:* Nothing should be in a cage that will harm an animal. If you find something, immediately report it to the head zoo keeper (me, your teacher). If one of the mayor's spies hides something in a cage and you don't see it, the mayor will say we are careless and will take an animal from the zoo.

I have also devised plans for getting more animals and for finding sponsors so we can raise the \$5,000,000 we need to remodel Zooland. You will find out more about these plans when you return to your classroom.

Right now I want to take you on a tour of Zooland. I will show you some of the problems we are having here and I want you to find something wrong at each cage we visit. So let's begin our tour."





The illustration above is to remind you that you may wish to dress for the various parts you get to play in ZOO. See page 1:11.

Read/Speak

Consider coloring the transparencies for added flair if you have the time. 3. Put up Overlay Transparency 2 (the entrance to Zooland). Say:

"Zooland has been a part of our city for more than 60 years. When it was first built, it was a good zoo. The animals were kept healthy, and they were treated with kindness. The cages were the best we could buy. Unfortunately, Zooland hasn't changed much in 60 years. Most people who know anything about zoos will tell you that Zooland is a bad zoo. And you know they are right. Let me show you what I mean."

4. Put up Overlay Transparency 3 (the elephant). Say:

"A zoo's main job is to teach people about animals, but what does this teach you about an elephant? All you know is what it looks like. In a good zoo, you would see an elephant in an area that looks just like its home in Africa or India. You would see grass and trees and dirt and maybe even other animals. You would also see a display that would tell you about the elephant. Do any of you know what else is wrong with this elephant's cage?"

Here are things they should see and some comments you may make:

- a. "Peanut shells and other foods are being fed to the elephant. An elephants gets sick and could die from eating food fed to them by visitors.
- b. The elephant is able to reach the wall and get things like purses. Elephants have been known to take purses and eat them."
- 5. Put up Overlay Transparency 4 (polar bear). Say:

"I have been trying to get money from the city to change this polar bear's cage. I think it is the worst display in the zoo. Can any of you tell me what's wrong



with this cage? (Wait and see if students will first give answers such as those below before you tell them what is wrong.)

## Here is what's wrong:

- a. The polar bear has to stay in a cage that has no shade and not enough deep water for it to swim in. Polar bears need a place to escape the hot sun and they like to have a place to swim.
- b. There is trash in the corner of the cage.
- c. The sign does not tell anything about polar bears."
- 6. Put up Overlay Transparency 5 (lions). Say:

"You can't learn too much about lions from this cage, can you? One thing you should notice is that the cage is too small for two lions. What else is wrong with the lion cage?

# Here is what's wrong:

- a. There is nothing that tells about the lions.
- b. A zoo keeper left a bucket in the cage. Last year we had a lion cut itself when it started chewing on a metal bucket.
- c. There is a mouse in the cage. Mice and other rodents carry diseases and must be kept away from all zoo animals."

7. Put up Overlay Transparency 6 (gorilla and monkeys). Say:



"The monkey and gorilla are both popular animals in Zooland, but they need better cages. The gorilla hates to be stared at, but it has nowhere to hide from people's gazes. The monkeys need a larger cage. What else is wrong? (Wait and see if students will first give answers such as those below before you tell them what is wrong.)

Here is what is wrong:

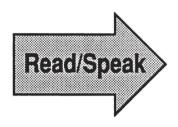
- a. No signs tell about the animals.
- b. There is a pen or pencil in the monkey cage. The first gorilla we had at this zoo died when it choked on a pen that was given to it by a visitor."
- 8. Put up Overlay Transparency 7 (kangaroo and giraffe). Say:

"These cages have some very dangerous things in them. Can you see what they are? (Wait and see if students will first give answers such as those below before you tell them what is wrong.)

Here are the dangerous objects:

- a. The fence supports in the kangaroo's pen are inside the enclosure. If the animal got excited, it could injure itself by running into these supports.
- b. The water trough has sharp corners that could injure an animal.
- c. There is a balloon stuck in the tree. It should be removed before the giraffe eats it."

9. Put up Overlay 8 (camel). Say:



"Oh no. Look at this. The sign is missing. Do any of you know what animal this is? (It's a camel.) This enclosure doesn't even have a sign to tell you what animal it is. What else is wrong here? (Wait and see if students will first give answers such as those below before you tell them what is wrong.)

# Here is what is wrong:

- a. There is a hammer and some nails on the fence and some barbed wire on the ground. Camels will eat these. Once we had a camel that died from eating a sharp piece of wire that was left in its pen by some workers."
- 10. Put up Overlay Transparency 2 (the entrance to Zooland). Say:

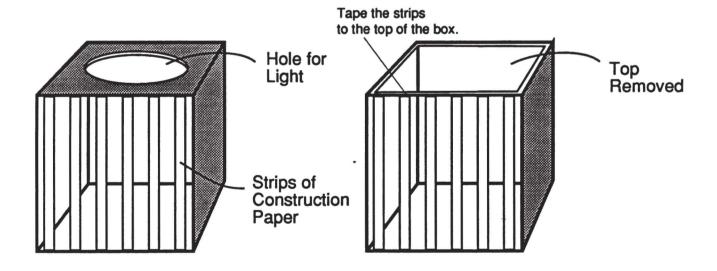
"This ends our tour. As you can tell, Zooland needs lots of improvements. What are some of the problems here at Zooland?" Let your students share what they know. You may even make a wall chart to list these problems. Be sure this list includes the following ideas:)

- a. "People that work in the zoo have been careless in leaving tools and equipment in the cages.
- b. The animals are poorly displayed in cages.
- Not enough information is given about the animals.
- d. Trash and food gets into the animal cages.

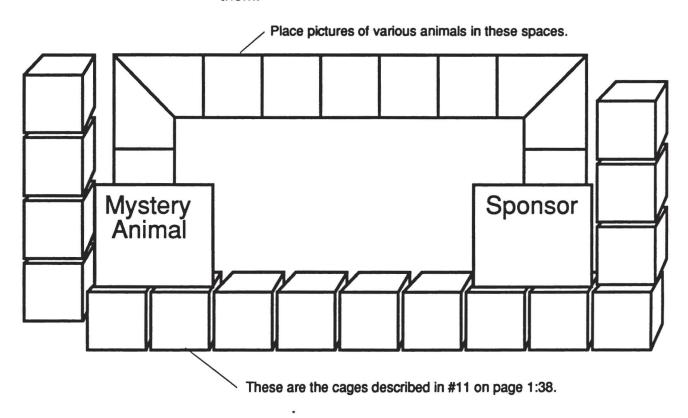


I have been trying for years to improve this zoo. Every time I suggest some changes, the mayor and members of the City Council vote it down. They give us enough money to keep the zoo open and that's all. Now they are trying to take it away, but with your help they will never succeed."

11. Have your students build cages out of the cardboard boxes they brought to school. Each cage must have a door in the back (for the zoo keeper) and bars in the front. The bars are strips of construction paper evenly spaced and taped to the top of the box. The boxes may be painted, but keep the cages simple. Remember, one of the reasons Zooland is a bad zoo is because most of the animals are displayed in the same way. Here are some examples of cages you may have your students make.



12. When the 25 cages are finished, they should be stacked around the map of Zooland. They should be arranged in a way that gives your students easy access to them and to the map of Zooland. Once the cages are in place, you may put the stuffed animals inside them.



#### HOUR 3

# **ZOO KEEPER LESSON 1:**Living and Non-Living Things

#### **Materials:**

- 1. GUESS THE ANIMAL transparency
- 2. A plant, insect, or small animal
- 3. ZOO KEEPER ACTIVITY 1 or 1A
- 4. ZOO PROBLEM 1

#### Procedure:

- 1. Before class starts, hide a small object in the cage of one of the animals. If your students find this object before starting this lesson, lavish them with praise. Tell them how they are becoming excellent zoo keepers. If your students did not find the object, show it to them, reminding them that zoo keepers must be observant. Remove the animal from the cage where the object was hidden. Tell your students they may earn the animal back if they find another object hidden by the mayor's spies.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the head zoo keeper, hold up a textbook and ask your students:
  - "Is this alive?"
  - "How do we know it is not alive?"

Next, hold up a plant or insect and ask:

- "Is this alive?"
- "How do we know it is alive?"
- "What are the differences between something living like this plant (or the insect) and something nonliving like the book?"



## 5. Read or tell the following:



## Living and non-living things

I want my zoo keepers to know the difference between a living thing and something that is non-living. I don't want you trying to feed a rock or trying to make friends with a bench. Therefore, here are five ways you can tell the difference between living and non-living things:

- a. Living things reproduce. They make more of their own kind. Elephants make elephants, trees make trees and birds make birds. Books don't make books.
- b. Living things grow. Animals get bigger by eating food and plants get bigger by making their own food.
- c. Living things move. Animals move from one place to another and plants bend toward light.
- d. Living things react to changes in their surroundings. If it is too hot, animals will move to shade. If there is too little water, plants will send their roots deeper.
- e. Living things need water.

There are a few more differences, but we won't worry about them. Instead I have a little job for all of you to help me with at the zoo. You will receive a list of some things that are in our zoo. I want you to put them in two groups. I want one group to be all of the things that are living, and the second group to be things that are non-living. I have to get back to the zoo so your teacher will send them over to me when you have finished.

5. Tell your students that following each presentation they will have a ZOO KEEPER ACTIVITY to complete. Explain to them that this activity is used to simulate their efforts in getting sponsors for Zooland, and that they can raise \$100,000 or \$500,000 or even \$1,000,000, depending on how accurately they work and how well they cooperate with each other. The SPONSOR section of the map is in the bottom right corner (from the students' perspective as they walk up to the map). See the MAP OF ZOOLAND on page 1:19.

6. Hand out ZOO KEEPER ACTIVITY 1 (or 1A). Explain the directions to your students. When they have finished, you may correct the assignment together or collect the papers and correct them at a later time. After the papers have been corrected, announce to your students the amount of money they earned. Post this amount on the Sponsor Section of the map of Zooland. Remind your students that they need to reach \$5,000,000 before they can remodel Zooland.

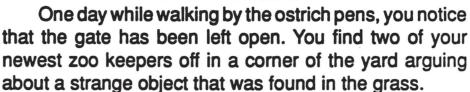
## Here are the answers for today's activity:

**ZOO KEEPER ACTIVITY 1:** Circles should be drawn around the tree, mother/child, eagle, mime, turkey, rabbit, and cow.

ZOO KEEPER ACTIVITY 1A: The *living* things are the flower, turtle, mushroom, tree, monkey, giraffe, bird, grass, lizard, and zoo keeper. The non-living things are the nail, bench, cage, dirt, wind, window, water, shoe, string, balloon, cement, fence, island, and bricks.

- 7. Explain to your students that while they are working as zoo keepers they will have many problems to solve and that the mayor's spies are just waiting for them to make a mistake so the mayor can take an animal from the zoo. Encourage them to try their best not to be discouraged by some wrong answers. Remind them that if an animal is taken by the mayor, it can be returned by correctly solving a problem on another day.
- 8. Give your students a copy of ZOO PROBLEM 1. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem get a class consensus on the answer.

# **ZOO PROBLEM 1**



One keeper says, "I know this thing is alive."

The other keeper says, "It is not. It's just a rock. That's all it is. Just a rock."

"It's alive," yells the first keeper.





"It's a rock," screams the second.

You close the gate and walk up to the zoo keepers. You carefully examine the object and notice that it moves ever so slightly. You do the following:

- a. tell the keepers it is a living thing.
- b. tell the keepers it is a non-living thing.
- c. tell the keepers they are both wrong.
- d. tell the keepers it was once a living thing but is now non-living.

#### **ANSWER TO ZOO PROBLEM**

The only acceptable answer has to be c. Two zoo keepers are arguing while the gate to the ostrich pen is left open! They are both wrong because they did not close the gate.

9. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove the ostrich from the zoo.

#### **HOUR 4**

# **ZOO KEEPER LESSON 2:**Plants and Animals

#### **Materials:**

- 1. GUESS THE ANIMAL transparency
- 2. ZOO KEEPER ACTIVITY 2 or 2A
- 3. ZOO PROBLEM 2
- 4. a sponge

#### Procedure:

- 1. If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden. Remove one of the animals from the zoo. If they found the object, students get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the head zoo keeper, hold up a sponge and tell your students that many sponges are living things harvested from the ocean. Ask your students if they think the sponge is a plant or an animal. Some students might know that it is an animal; others will insist it is a plant. Tell your students that zoologists (scientists that study animals) had a hard time deciding if it was a plant or an animal, but they finally decided it was an animal. You might also mention that most sponges used in homes today are not living things. Instead they are made from various fibers so they look and work like real sponges.
- 5. Read or tell the following:



# The differences between plants and animals

The zoo keepers that work for me must know the differences between plants and animals. I certainly wouldn't want a keeper to tell visitors to the zoo that an alligator is a plant they can sit on. Zoo keepers need to know what is



You would be helping your students if you make a wall chart in advance to show students the differences between plants and animals.

a plant and what is an animal. Here are six ways you can tell the difference between a plant and an animal:

- a. Plants make their own food from water, air, and sunshine.
- b. Plants do not have mouths.
- c. Plants stay in one place. They are anchored to the ground by their roots.
- d. Animals cannot make their own food. They must eat plants or animals or both.
- e. Most animals have mouths.
- f. Animals move around.

It is usually easy to tell the difference between plants and animals, but sometimes you can get fooled especially with animals and plants from the sea. Your teacher has a list of living things that arrived at the zoo this morning. I want you to divide these things into two groups: plants and animals. Your teacher can send your list of the two groups over to the zoo when you have finished.

6. Hand out ZOO KEEPER ACTIVITY 2 (or 2A). Explain the directions to your students. When they have finished, you may correct the assignment together or collect the papers and correct them at a later time. After papers have been corrected, announce to the class the amount of money it earned. Post this amount on the Sponsor Section of the map of Zooland.

## Here are the answers for today's activity:

ZOO KEEPER ACTIVITY 2: 1. animal; 2. animal; 3. plant; 4. plant; 5. animal.

ZOO KEEPER ACTIVITY 2A: 1. A; 2. P; 3. A; 4. P; 5. P; 6. P (Even though it moves, it makes its own food and is a plant.); 7. A; 8. A.

7. Give your students a copy of ZOO PROBLEM 2. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem, get a class consensus on the answer.



It's all right to have your students use reference books to solve this problem.

## **ZOO PROBLEM 2**

You are working with the head zoo keeper when a special shipment of plants and animals arrives. You eagerly open the box and find two smaller boxes. One is labeled "Butterworts"; the other is labeled "Gecko." You tell the head keeper that you want to open the box with the animal. You go to the Gecko box and just as you reach inside the head keeper yells, "Stop!" He yells at you to stop because:

- a. You were about to reach into the box containing plants.
- b. You should never reach into a box without first checking to make sure the animal is harmless.
- c. The Gecko will fly away unless you take it out of the box with a net.

#### **ANSWER TO ZOO PROBLEM 2**

The correct answer is b. When animals are shipped to zoos, their boxes are sometimes mislabeled. Everyone that handles these boxes must be very careful. At one zoo the keepers were expecting to get a harmless lizard. Instead they received the deadly black mamba, a very poisonous snake.

8. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

### **HOUR 5**

# **ZOO KEEPER LESSON 3:** Classification of Animal

#### **Materials:**

- 1. Guess the Animal transparency
- 2. ZOO KEEPER ACTIVITY 3 or 3A
- 3. ZOO PROBLEM 3
- 4. One stuffed animal (or picture of an animal) from each of the six classes of animals.

#### **Procedures:**

- If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden. Remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the head zoo keeper, take six stuffed animals (or pictures or a combination of both) to the front of the classroom.
- 5. Read or tell the following:



## Classification of animals

I brought some of my friends from the zoo to share with you today. Raise your hand if you know what animal this is. (Hold up one of the animals. Continue in this way until all six animals have been identified.)

Scientists that study animals like these are called zoologists. Zoologists have found it easier to study animals when they are put into groups called classes. These classes aren't like classes at school. Zoologists don't put camels in chairs behind desks and make them stay inside all day. The classes I am talking about are groups of



Hint: Use a wall chart to help your students compare the six classes of animals.

animals that share the same important characteristics. All animals that have feathers, for example, are put into a class called birds. Today I want to share with you six different classes, or groups, of animals. The animals that I brought come from these classes.

The first animal I brought is a \_\_\_\_\_\_. (Hold up the stuffed animal that belongs to the mammal class.) It is a mammal. Mammals have bodies that are covered with fur or hair. They are the only animals that drink milk from their mother's body when they are babies. Cows, bears, lions, and people are mammals. There are about 5,000 different kinds of animals in this class

This animal (hold up the stuffed animal that belongs to the fish class) is a \_\_\_\_\_\_. It is a member of the fish class.

A fish is an animal that lives in water. It usually has fins on its top and sides. It also has gills and scales. Gills are slits on the side of a fish's body behind its head. A fish breathes with its gills. Scales are thin bony coverings that cover the body. An animal is a fish if it has fins, gills and scales.

The next animal I brought is a \_\_\_\_\_. (Hold up the stuffed animal that belongs to the bird class.) It belongs to the bird class.

Birds are the only animals that have feathers. An animal with feathers is a bird.

Here is a member of the reptile class. (Hold up the stuffed animal that belongs to the reptile class.)

Reptiles are the only animals that have scaly skin and lay eggs on land. They are also cold-blooded. This means



their bodies get as hot as the air or water around them. If they get too cold, they crawl into the warm sunlight. If they get too hot, they find a cool shady spot. Crocodiles, snakes, turtles, and lizards are reptiles.

Many of you have seen animals like this one. (Hold up the stuffed animal that belongs to the amphibians.) It is an amphibian.

Amphibians are born in water. They breathe through gills. When they grow up, their gills disappear and they live on land. Frogs, toads, and salamanders are amphibians.

This animal belongs to the largest class. (Hold up the stuffed animal that belongs to the arthropods.) It is an arthropod. Animals with a hard covering over their body and more than four legs are called anthropods. This class includes: six-legged animals, called insects; eight-legged animals, called spiders; and 10-legged animals, like the crab, shrimp, and lobster.

All of the animals in Zooland can be put into one of these six classes.

Now that you know about the six classes of animals you can help with some special problems.

6. Hand out ZOO ACTIVITY 3 or 3A. Explain the directions to your students. When they have finished the activity, you may correct the assignment together or collect the papers and correct them at a later time. After the papers have been corrected, announce to the class the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

Here are the answers for today's activity:

ZOO ACTIVITY 3:1. R; 2. M; 3. R; 4. F; 5. B; 6. M

ZOO ACTIVITY 3A: Mammals: bat, whale, beaver, bear; fish: trout, oyster; birds: penguin, pelican, robin; reptiles: crocodile, turtle; amphibians: frog, salamander; arthropods: spider, crayfish

7. Give your students a copy of ZOO PROBLEM 3 and have them read it, or you may read it aloud to them. After giving them time to discuss the problem get a class consensus on the answer.



### **ZOO PROBLEM 3**

You and four keepers have just finished putting the zoo's newest animal into its new home. It took the five of you most of the afternoon to move this animal. All of you stare at it. One of the keepers says, "I hope we don't have to move that bird again. I'm exhausted!"

"You won't," said another keeper," because it is not a bird. Most people think it's a bird because it has feathers, but it's really a mammal. It can't fly, and everyone knows that birds fly. And I just happen to know that this animal is the fastest creature on two legs. It's a mammal, not a bird."

All of the other keepers think it's a bird. Based on what you have heard, is it a bird or a mammal?

#### **ANSWER TO ZOO PROBLEM 3**

The animal is a bird because it has feathers. The bird in this problem is an ostrich. It can't fly, but it is the fastest two-legged creature on earth. It can run up to 44 mph.

8. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

## HOUR 6

# ZOO KEEPER LESSON 4: The Zoo Keeper's Job

#### **Materials:**

- 1. GUESS THE ANIMAL transparency
- 2. ZOO KEEPER ACTIVITY 4 or 4A
- 3. ZOO PROBLEM 4

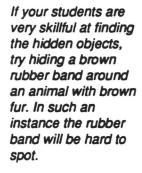
#### **Procedures:**

- If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden and remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the head zoo keeper read or tell the following:

# The zoo keeper's job

The last time you visited a zoo you may have noticed workers cleaning the cages and feeding the animals. Those people are called zoo keepers. They are responsible for the daily care of the animals: they feed them, bathe them, and clean their cages. You may think anyone can be a zoo keeper or that it's an easy job, but that's simply not true. Zoo keepers have to be hard working, observant, and clever. They have to understand animals and sometimes think like animals, but, most important of all, they must love animals.

Zoo keepers get to the zoo very early in the morning. They greet the animals, saying things like: "Good morning, how are you today? ... Hi, big girl. It's good to see you today. I bet you're hungry ... Hello big fella. It's time to get up."







After the morning greeting, the keepers clean the cages and feed the animals breakfast. Then the keepers observe the animals. They carefully watch them to see how they are acting. If an animal looks sick, appears injured, or is acting strange, the keepers report it. Next, the keepers examine the cages and anything around the cages that might be a danger to an animal or to people visiting the zoo.

Zoo keepers usually work with one group of animals at a time. They might start working with the elephants. Then after a few months they might work with the lions. Each time they change animals they must learn how to take care the new animal, but regardless of the animal there are eight rules that all zoo keepers in Zooland must follow.

- a. Follow all directions.
- b. Keep the feeding and drinking dishes very clean.
- c. Close all doors and locks and check to see they are closed.
- d. Handle the animals calmly. Do not get excited.
- e. When working in cages, always check for small things like nails, screws, and pieces of wire that might be lying around and remove them.
- f. Always keep the cages, food, and water clean, and never leave a cage without saying something friendly to the animals.
- g. Don't make hissing or clicking noises. Animals like deep low sounds.
- h. Report any problems to the head zoo keeper immediately.

When not caring for animals, keepers help the other zoo workers. They help the zoo doctor catch animals that are sick and need medicine. They help move animals and they help build cages. In addition to caring for animals, zoo keepers are expected to keep the zoo clean and to enforce the zoo rules. If they see a visitor breaking one of rules at



Ask your students why a zoo would have these rules and whether there are other rules they feel should be added.

the zoo, they must show that person their Zooland ID card and tell the visitor to stop.

Here are the rules:

- a. No dogs are allowed in the zoo.
- b. Visitors do not tease the animals.
- visitors do not feed the animals.
- d. Visitors do not climb over fences.
- e. Visitors do not pick plants or flowers.
- f. No balls, skates, saucers (Frisbees), balloons, or flags are allowed near the animals.
- 5. Hand out ZOO KEEPER ACTIVITY 4. Explain the directions to your students. When they have finished the activity, you may correct the assignment together or collect the papers and correct them at a later time. After papers have been corrected, announce to the class the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

Here are the answers for today's activity:

**ZOO KEEPER ACTIVITY 4:** 1. t; 2. f; 3. f (report immediately); 4. f; 5. t; 6. f; 7. f; 8. t; 9. t; 10. t. In the picture circle, a woman with a dog, a boy feeding an elephant, a girl with a balloon near the animals, a boy hanging from a tree branch, and two girls throwing a Frisbee should all be circled.

**ZOO KEEPER ACTIVITY 4A:** Numbers 1, 2, 9, and 15 are true. All others are false. Number 6 is false because animals like snakes are fed once or twice a week.

6. Give your students a copy of ZOO PROBLEM 4 and have them read it, or you may read it aloud to them. After giving them time to discuss the problem get a class consensus on the answer.

## **ZOO PROBLEM 4**

You have been given the messy task of cleaning the duck pond. It is the dirtiest job in the zoo. The pond is drained, and you must shovel out the black muck that is sticking to the bottom. You want to finish this job, get cleaned up, and leave. Halfway through the job you see a woman picking flowers in the garden across from the



gorillas. Since no one else from the zoo is around, which of the following should you do?

- a. Finish your job. Then you find the woman, show her your ID card and tell her that picking flowers is not allowed in Zooland.
- b. Leave the duck pond and politely tell her to stop picking the flowers.
- c. Yell at the woman to stop and then walk over to her. Show her your ID card and politely explain to her that picking flowers is not allowed in Zooland.
- d. Leave the duck pond and walk over to the woman. Show her your ID card and politely tell her to stop picking the flowers.

#### **ANSWER TO ZOO PROBLEM 4**

The best answer is choice d. The keeper identifies himself/ herself and calmly explains the rules. Choice a is not correct because the keeper should not have waited until the job was finished. In choice b, the keeper did not show an ID card, and in choice c the keeper yelled. Keepers should be quiet around the animals.

7. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

### **HOUR 7**

# **ZOO KEEPER LESSON 5:**Animal Care

#### Materials:

- 1. GUESS THE ANIMAL transparency
- 2. ZOO KEEPER ACTIVITY 5 or 5A
- 3. ZOO PROBLEM 5

#### **Procedures:**

- If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden and remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Write the following topics on the board:
  - a. How to bathe an elephant
  - b. How to be friends with a gorilla
  - c. How to make a hyena laugh
  - d. How to tell if an animal is sick or injured
  - e. How to keep animals from escaping
  - f. How to give medicine to the animals
- 5. While role playing the part of the head zoo keeper read or tell the following:



Of course, you may

prefer to put these 6

topics on an over-

head transparency.

## **Animal care**

Yesterday I told you about the jobs and responsibilities of the zoo keepers here in Zooland. Let's take a few minutes to review what you learned. Raise your hand if you can tell me one of the eight rules zoo keepers must follow. (Continue in this manner until all eight rules have been named.)



Here are the rules:

- a. Follow all directions.
- b. Keep the feeding and drinking dishes very clean.
- c. Close all doors and locks and check to see they are closed.
- d. Handle the animals calmly. Do not get excited.
- e. When working in cages, always check for small things like nails, screws, and pieces of wire that might be lying around and remove them.
- f. Always keep the cages, food, and water clean, and never leave a cage without saying something friendly to the animals.
- g. Don't make hissing or clicking noises. Animals like deep low sounds.
- h. Report any problems to the head keeper immediately.

Today we are going to take a closer look at some of the jobs and things you may be asked to do while working with animals. I have chosen some jobs that I think you will really like, and I have chosen some jobs that are very important for you to learn if you want to become good zoo keepers. We will start with the elephant.

# How to bathe an elephant

Elephants love to take baths. When giving an elephant a bath, a keeper should always be talking to the elephant and giving it plenty of praise. First, you have to get the elephant to lie down. If it doesn't obey your command, you can prod it with a special tool called an ankus. It has a blunt point, and the elephant will move when you poke it with the ankus. Once the elephant is lying down, use a hose to get the animal wet. Then use a scrub brush and soap to wash off the dirt and dead skin. After you have scrubbed the elephant, you need to work on its feet. You should spend a half an hour a day cutting the callouses off. It doesn't hurt the elephant, and each day you should do a different foot.



Remember, elephants like to bathe so you might get squirted or even pulled into the water.

# How to be friends with a gorilla

Gorillas are shy creatures. They don't like to be stared at because staring is a threat to them. They don't like noises like yelling and banging. Nor do they like sudden movements or running. To be friends with a gorilla, you need to sit quietly with your back slightly facing him. Instead of looking at the gorilla, take a small toy or gadget out of your pocket and begin playing with it. The gorilla will watch and maybe even come closer. If it looks sad and has pouting lips, you can be sure it is relaxed. The best time to be friends with a gorilla is in the morning. They like to take naps in the afternoon.

# How to make a hyena laugh

Hyenas don't laugh. They make a howling cry that people say sounds like a laugh. They make this laugh when they get excited about food. One keeper I know would show the hyena some food and then take it away. The sight of this food would make it cry. This didn't always work, but it was the best way this one keeper found to make a hyena laugh.

# How to tell if an animal is sick or injured

Pretend you are a doctor and a patient comes to you that cannot tell you what is wrong and will try to hide any injury or illness. This is the problem zoo keepers and veterinarians have with animals. Animals know how to hide their injuries and illnesses because in the wild sick or injured animals are usually attacked and killed by predators. The best way to know if animals are sick or injured is to watch them when they are healthy. Then later if something about one animal's behavior is different, you can safely conclude that this animal just might be sick or injured.



Here are some questions you can ask while observing an animal:

- a. Does an active animal suddenly slow down? Does a gentle creature that is usually calm and playful suddenly attack its keeper?
- b. Is the animal eating less than usual? Has it lost interest in food?
- c. Does the animal move differently? Could a foot, leg, or wing be injured? Is there a limp? Does an animal walk when it usually runs?
- d. Do you notice any blood on the animal or in the cage?
- e. Does any part of the body appear swollen?
- f. Do the bodily wastes look normal?

If you notice any changes in an animal you should report it to the head keeper immediately.

# How to keep animals from escaping

Before I tell you how to keep animals from escaping, you must understand why they want to escape. There are three reasons why animals try to escape from zoos. First, animals that come from the wild try to escape because they want to flee from a deadly enemy: man! Usually this fear goes away when the animals learn that the people in zoos will not hurt them. The second reason animals try to escape is because they may be in cages too close to animals they fear. The third reason animals try to get out of their cages is to get away from bad living conditions. The cages might be neat and clean, but something else could be disturbing the animal. The surroundings might be too noisy or there might be something missing from the cage like a place to hide or a tree to climb. If an animal keeps trying to escape, it is the zoo keeper's job to find out what the animal needs.



The main way to stop an animal from escaping is to give it good living conditions, to make sure it is not close to animals it fears, and to give it time to get used to people.

During the zoo keepers' daily rounds, he/she should check for any signs that an animal may be trying to escape. Any breaks in wire nets, any small holes in the floor of a cage, or any damage to locks and bars should be reported immediately.

# How to give medicine to animals

Many of the animals in the zoo need medicine every day. It may be vitamins to keep them healthy or special drugs to cure an illness. The zoo keeper is the person that has to give the medicine to the animals, and it is not an easy job. The animals don't want to take it, so the zoo keeper has to be sneaky and clever to get the medicine into an animal. The best way they do it is to hide the medicine inside the animal's favorite food. Zoo keepers have been known to put medicine in grapes, bananas, meat, and even orange juice.

That's all we'll talk about for today, but I left some work with your teacher that I want you to work on while I'm gone.

 Hand out ZOO KEEPER ACTIVITY 5 or 5A. Explain the directions to your students. When they have finished their presentations, announce to the class the amount of money it has earned (based on their presentations). Record this on the Sponsor Section of the map of Zooland.

Here are the answers to these activities:

**ZOO KEEPER ACTIVITY 5:** 1. t; 2. f; 3. f; 4. t; 5. t; 6. t; 7. f; 8. t; 9. t; 10. f; 11. t; 12. t.

**ZOO KEEPER ACTIVITY 5A:** 1. t; 2. t; 3. t; 4. t; 5. t; 6. t; 7. f; 8. t; 9. f; 10. f (check daily); 11. f; 12. t; 13. f (report immediately); 14. f; 15. f.

7. Give your students a copy of ZOO PROBLEM 5. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem, get a class consensus on the answer.



## **ZOO PROBLEM 5**

One of your favorite jobs is giving Elmo the elephant a bath. Elmo is calm and playful, but today Elmo is acting strange. He pushes you aside with his trunk and backs away from you as you approach him. You walk slowly toward him, but before you can touch him he swings his trunk and slams you into a wall. You get up, thankful you are not hurt. You do the following:

- a. decide to leave the cage and report what has happened.
- b. remember that you forgot to talk to him when you entered his cage, so you walk slowly toward Elmo, speaking softly and offering him a lump of sugar.
- c. decide to show the elephant you are in command. You poke him with an elephant prod and make him follow your orders.

### **ANSWER TO ZOO PROBLEM 5**

The correct answer is a. When an animal behaves in a way that is different than usual, it is a sign that the animal is sick. You were lucky the elephant didn't hurt you when you were knocked down. If you approached the elephant again, as in choices b and c, you could be seriously injured.

8. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

## **HOUR 8**

# **ZOO KEEPER LESSON 6**Feeding the Animals

#### **Materials:**

- 1. GUESS THE ANIMAL transparency
- 2. ZOO KEEPER ACTIVITY 6 or 6A
- 3. ZOO PROBLEM 6

#### **Procedures:**

- If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden and remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Write the names of the following six animals on the board: snakes, bats, birds, lions, aardvarks, apes and monkeys
- 5. Playing the role of the head zoo keeper read or tell your students the following:



# Feeding the animals

One of the main rules at all zoos is: Do not feed the animals. This rule is simple enough, but you would be surprised to learn that some zoo visitors still think it is okay to feed the animals. They give them peanuts, popcorn, candy, and even wrappers. At one time, one quarter of all animal deaths in zoos were caused by visitors feeding the animals. Fortunately, this is changing because most visitors do not feed the animals at all except in special areas set aside for this purpose.



The feeding of the animals is left to the zoo keepers, but even the zoo keepers must follow special directions given to them by the zoo curator. The zoo curator and the zoo's veterinarian plan the menu for the animals based on their nutritional needs. The menus are written down and posted in the zoo's kitchen. It then becomes the responsibility of the zoo keepers to feed the animals exactly what is written.

There is great variety in the amounts and kinds of food the animals eat. Today I will share with you the foods eaten by six different animals we have here at Zooland.

## How to feed a snake

In Zooland, our large snakes are fed dead rats. We put the rats in a container about the size of a garbage can. Then we take one snake at a time out of its cage and put it in the container with the rats. We use a special stick with a hook on the end to move the snake. Not only is it easier to get the snake with this hook, it is also safer. You might wonder why the snakes eat alone and why the rats are dead. This is done for the snake's protection. If we used live rats, the snake could be injured from a rat bite. If snakes are fed together, there is a chance they could bite each other. Therefore, each snake is fed alone. The medium-sized snakes are fed mice and sometimes baby chickens. We feed our snakes once or twice a week.

### How to feed bats

Bats eat a wide variety of foods. The ones from North America eat a mixture of milk, cream cheese, hard-boiled eggs, chopped raw meat, vegetables, bananas, and finely chopped nuts. The fruit bats eat skinless bananas, apples, and a special mixture called bat food.



The keepers put this food on a tray and set it on the floor inside the bats' cage. When the keepers leave, the bats fly down and grab the food with their mouths. Then they fly to the top of their cage where they hang upside down and eat.

The vampire bat has a different style of eating. Vampire bats eat blood. Some of you may think that it sucks blood out of its victims, but it really doesn't. Instead it first uses its teeth to cut the skin; next it uses its tongue to lick up the blood. In the zoo since we don't want the vampire bats to feed on the living animals, we give them each one ounce of fresh blood every day. We put the blood in a small dish and the vampire bat will come down to feed.

## What do we feed the birds?

The birds we have are very picky eaters, and there is great variety food that is fed to them. Owls and marabou storks eat mice. The kiwi eats only live worms, and for the exotic birds we have 150 different menus for our keepers to follow. The menus tell what to feed, how much to feed, and if the food is to be sliced, chopped, or diced. Once the food is ready it is taken to the birds on trays.

Here is part of what we feed one of our birds: 2 string beans, 1 piece of coconut, 2 grapes, 4 carrots, 2 pieces of corn, 3/4 cup of sunflower seeds, and 2 small peanut butter sandwiches

## What do lions eat?

Lions eat red meat, but every now and then we'll give them chickens or whale meat. Sometimes they will refuse to eat because they don't like the food. The foods they really dislike are kidneys and liver.



Whenever the lions are fed, the keepers ring a bell. The lion are trained to come whenever they hear a bell because they think they will get some food. If the keepers want the lions to come back to an inside cage, they ring a bell and the lion will come to the bell, thinking there will be food. Isn't that a good way to get the lions to move where you want them?

## What does an aardvark eat?

In the wild an aardvark eats ants and termites. In the zoo we have had trouble feeding them these foods. So instead of ants and termites, the aardvarks get to have soup two times a day. This is a special soup made with eggs, milk, cereal, and lots of vitamins. In this soup we put chopped horse meat or dry dog food. The aardvarks love to lick up this delicious soup!

# What do the apes and monkeys eat?

The monkeys and apes eat all kinds of fruit and vegetables, but the main part of their diet is "Monkey Cake." This is a mixture of cereals, vitamins, and foods to give them energy all mixed together into a stiff dough. At first the monkeys didn't like it and wouldn't eat, so we stopped giving them fruit and vegetables until the monkey cake was eaten. Now they like it and we give them all of the food at the same time.

As you can see, these six animals eat a wide variety of foods. Since in a zoo with hundreds of animals there is no way a keeper can keep all the menus straight, the menus are written down. Once they are written down, it is up to the keeper to make sure the animals get the right foods.

I need to get back to Zooland, but I left some work for you to finish while I am gone. I will be back tomorrow with a special surprise for you. 6. Hand out ZOO KEEPER ACTIVITY 6. Explain the directions to your students. When they have finished you may correct the assignment together or collect the papers and correct them at a later time. After papers have been corrected, announce to the class the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

Here are the answers for today's activity:

**ZOO KEEPER ACTIVITY 6:** Snake: rats and mice; bat: bat food, fruit, vegetables; lions: red meat, whale meat; monkeys: monkey cake, fruit, vegetables; aardvarks: ants and termites

**ZOO KEEPER ACTIVITY 6A:** The answers are all true except for numbers 1, 2, 9, and 11.

7. Give your students a copy of ZOO PROBLEM 6. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem, get a class consensus on the answer.



## **ZOO PROBLEM 6**

You have been given the job of caring for the birds, bats, and snakes. One day a poisonous snake got loose in the kitchen. It was found later that day and returned to its cage, but in all of the confusion the menus for the bats and snakes got mixed up. You aren't sure which animals get what food. You can't decide if you should feed the animals the food on Menu 1 or the food on Menu 2.

**Menu 1:** The bats are fed bat food and the snakes are fed mice.

Menu 2: The snakes are fed rats, and the bats get a special mixture of milk, cream cheese, hardboiled eggs, chopped raw meat, vegetables, bananas, and finely chopped nuts.

After looking at these menus you know exactly what you will do. You will... (Note: For this problem you may put the students in small groups and have each group choose the solution, or solve it with a class discussion.)



#### **ANSWER TO ZOO PROBLEM 6**

Since you are not sure what to feed the animals, you should check with the veterinarian or with the head zoo keeper before feeding the animals any food. A zoo keeper should always check with a superior if there is any doubt about what to feed an animal.

8. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

#### **HOUR 9**

# ZOO LESSON 7 What is a Zoo Curator?

#### **Materials:**

- 1. Guess the Animal transparency
- 2. ZOO KEEPER ACTIVITY 7 (Zoo Keeper Examination)
- 3. ZOO PROBLEM 7

#### **Procedures:**

- 1. If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden. Remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the zoo curator, read or tell the following:

#### Remember:

Consider dressing up for the parts you get to play. You could have a particularly good time dressing for this role.

#### The Zoo Curator's Job

Good afternoon, boy and girls. My name is (make up a name). I am the curator of animals at Zooland. Curators are trained scientists that have studied about animals in college. They are the zoo's animal experts. A small zoo like Zooland will have one curator that is in charge of all of the animals. In large zoos there may be several curators: a curator for mammals, a curator for birds, and a curator for reptiles.

Most of you have probably never heard of a zoo curator, so I would like to tell you about my job and some of the things I do at Zooland. I thought I would begin by describing for you a typical day's work from last week.



I started work at eight o'clock in the morning. First I walked through the zoo and looked for anything wrong with the animals or the cages. I noticed that the latch on the exotic birds' cage was weak. I made a note that this should be repaired immediately. Next I checked the elephants. Helga, the oldest elephant in our zoo, was very sick because one of the visitors fed her some candy. The keeper said she was better. I decided to remind all of the keepers to watch the visitors more carefully to make sure they do not feed the animals.

As I approached the ape and monkey display, I could see the keeper looked worried. He told me that Mona, the large gorilla, wasn't eating. He thought Mona might have an infected tooth. I told him I would get the vet out here by the afternoon. Next I looked at the construction of the new bison pen. Something was wrong about it. I would have to look over the plans again and see if the workers are following the directions correctly. On the way back to my office, I stopped at the zoo's kitchen. A worker told me the refrigerator was not working properly. I made a note to call a repair man.

As soon as I got back to my office, there was a phone call. The caller had a turtle that wouldn't eat and wanted to know what to do. After helping this caller, I answered another call. This time it was from a man that wanted to know if we could take his pet alligator. Normally we don't take pets, but I knew Zooland needed another alligator, so I made plans to meet with this man. The phone calls kept coming. I ate my lunch and answered the phone at the same time. Then at 1:30, I received a call from the airport. The new monitor lizard we bought just arrived, and I was needed to sign the papers to get it out of the airport and on the way to the zoo. By 4:30 the lizard was in quarantine, and I was back in my office preparing for a speech I would give next week to the local zoological society.



Not every day is like this. In fact, there isn't really a typical day for a curator because so many different things happen. One day could be spent in the office and another helping move an animal.

Here is a list of the jobs I do at Zooland:

- a. I make inspections of the zoo to see that it is clean and orderly.
- b. I plan the work of the keepers and other workers.
- c. I help plan the foods the animals eat and the care animals receive.
- d. I make sure that the orders of the veterinarian and the zoo director are followed.
- e. I make sure animals are handled correctly when they are moved from their cages.
- f. I answer letters and phone calls about animals.
- g. I plan new ways to display animals.
- h. I buy the supplies needed to run the zoo.

As you can see, the zoo curator has many important jobs. Another one of my jobs is to hire new zoo keepers. My head zoo keeper has told me that you have been doing an excellent job as zoo keepers, and it is now time for you to take the Zoo Keeper Examination.

5. Hand out ZOO KEEPER ACTIVITY 7 (Zoo Keeper Examination). Explain the directions to your students. You may read this test aloud to younger students. When they have finished, collect the tests and correct them at a later time. After the papers have been corrected, announce to the class the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

Here are the **answers to the Zoo Keeper Examination**: 1. c; 2. b; 3. c; 4. c; 5. a; 6. a; 7. c; 8. b; 9. b; 10. a; 11. t; 12. f; 13. f; 14. t; 15. t; 16. t; 17. t; 18. t; 19. t; 20. f.

6. Give your students a copy of ZOO PROBLEM 7. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem, get a class consensus on the answer.



#### **ZOO PROBLEM 7**

One of your jobs at the zoo is to play with the young gorillas. You and the gorillas always have a good time. The gorillas have so much fun they have started blocking the doorway and won't let you out. You can't move them out of the way because they are stronger than you, so you have started tricking them. Last week you tricked them by moving to a far corner of the cage and pretended to play. When the gorillas came over to play, you quickly ran to the door and escaped. This worked for a few days, but now the gorillas carefully watch you and quickly race you to the door. You know that you won't be able to fool them tomorrow. What is the best solution to this problem?

- a. You decide to stop playing with the young gorillas.
- b. You bring in some toys they can play with by themselves
- c. You ask another zoo keeper to stand outside the cage and distract the gorillas with a new toy while you escape.

#### **ANSWER TO ZOO PROBLEM 7**

A young zoo keeper actually had this problem. She didn't stop playing with the gorillas, since they weren't hurting her. She didn't bring them toys because if this failed she would be stuck in the cage. Instead she asked another zoo keeper to help distract the gorillas while she escaped. If this didn't work, the other zoo keeper would be able to get help for her. The best answer is letter c.

7. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

#### HOUR 10

# ZOO LESSON 8 Displaying Animals

#### Materials:

- 1. GUESS THE ANIMAL transparency
- 2. Materials for ZOO KEEPER ACTIVITY 8
- 3. Model of Monkey Island
- 4. ZOO PROBLEM 8
- 5. Corrected Zoo Keeper Examinations
- 6. One Zoo Keeper ID card for each student

#### **Procedures:**

- 1. If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden and remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Return the corrected Zoo Keeper Examination (ZOO KEEPER ACTIVITY 7) to your students. Discuss the answers. Tell your students that everyone passed. (Note: Students that miss more than eight of the questions should take the test a second time.)
- 5. Hand out a Zooland Identification Card to each student. Tell them that they are now official employees of Zooland. Have them fill in all of the information and color in the bear. ID numbers may be made up. Students that cannot write in cursive may print their names where it says signature. When they have finished, collect the cards. Encourage students to bring in a photograph that you can attach to the ID card. For students that do not bring in pictures, you may photocopy the group picture of your class or your class composite and cut out the individual pictures you need. After attaching the pictures, you may laminate the ID cards or cover them with clear contact paper. Once this is done, set them aside until you have the grand opening of Zooland.

6. Playing the role of the zoo curator, go to the Zooland display and have the children look at the cages. Then read or tell the following:



### **Making Cages Without Bars**

Bars are a kind of barrier. They keep people a safe distance from the animals, and they keep the animals a safe distance from the people. Unfortunately, the bars also make it more difficult to see the animals. Therefore, modern zoos have come up with ways to remove the bars but still keep the animals and visitors safe. One way they do this is with glass barriers. Instead of bars, strong sheets of glass or plastic are used to separate the public from the animals. Even powerful animals like gorillas are not strong enough to break this glass. At first zoos used to put small reptiles like snakes behind glass barriers, but now more and more zoos are putting larger animals like tigers and crocodiles behind these barriers. Wouldn't it be fun to get nose to nose with a tiger? You could do it with a glass barrier, but don't try it on a cage with bars.

Another kind of barrier used by most zoos is the moat. A moat is a large trench that goes around part or all of an animal's enclosure. Some moats have water and some are dry. The visitor's side has a steep wall. The animal cannot get over this wall. The size of the wall and the moat all depend on the animal. An elephant will not cross a moat that is more than six feet wide, but a lion would. A moat for a lion needs to be at least 21 feet across. The animals and the visitors are all at the same level. All that separates them is the moat.

Electrical barriers are also used to keep animals in their enclosures. The animals quickly learn how far they can move around without getting shocked. Electrical barriers are best used with small animals like porcupines.



The fourth way zoos keep animals enclosed is with a thermal barrier. Freezer coils, like the ones that keep your refrigerators cold, are placed across the cage. Reptiles, like snakes, stay away from cold places. To the visitors, it looks like the snakes can crawl right out, but to the snakes it's just like a wall.

All of these barriers have a second barrier to keep people back. This is usually a short wall with a hand rail. Sometimes there is a hedge or plant added to beautify the display.

Walk back to the model of Zooland. Remove the bars from some of the cages. Then read or tell the following:

### **Creating Animal Displays**

Even with the bars removed the cages all look the same. The lion's cage is just like the monkey's cage. When people come to the zoo they want to see the way an animal would look in the wild. They want to see the way its colors blend in with the trees or grass. They want to see the way the animals act in their natural environment.

One way to improve Zooland is to create interesting animal displays. First, I will show you how to make model animal displays. Then using these models and the money we have raised from sponsors, we will transform Zooland from a boring zoo into an exciting and interesting place that people won't want to leave.

Before we begin there are seven basic rules we must follow when designing cages and displays for animals:

- a. Always think of the animals, the visitors, and the zoo keepers when making a new exhibit.
- b. The animals' needs are more important than the needs of the keeper or visitors.



- c. The larger the exhibit the better.
- d. Avoid making corners where animals might feel trapped.
- e. The largest side of the exhibit should face the visitors, and visitors should be as close as is safe.
- f. Animals should be displayed at eye level.
- g. Make the exhibit as close to the animals natural habitat as possible.

This cage (point to the monkey cage) does not tell us anything about the monkey or how it lives, so let's create a new monkey exhibit. We will call it "Monkey Island." (Note: While you talk you will be making the "Monkey Island" model shown in ZOO LESSON ACTIVITY 8.) First, we will make an island and surround it with a large water-filled moat so the monkeys cannot escape. Second, we create the habitat which depends on the kind of monkeys we are showing. In Zooland we have Spider Monkeys. They live in the jungles of Central America and South America. So to create an exhibit for our monkeys, we need to make it look like a jungle and give the monkeys trees and vines to climb on. Then when visitors come to our zoo they will see how the monkeys live and act in their natural habitat. (Note: add the trees and vines or show a "Monkey Island" model you have made earlier.) Here we have an attractive way to display our monkeys. Now I want you to create similar displays for all of the Zooland animals. Your teacher has the plans and you need to get started soon. Once these models are built, we will begin to remodel Zooland.

Display these models on book-shelves or counters. Or you may wish to staple them onto bulletin boards.

8. Hand out ZOO KEEPER ACTIVITY 8. Explain the directions to your students. This project, depending on the abilities of your students, may take more than one class period to complete. When the displays are finished, announce to the class the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

9. Give your students a copy of ZOO PROBLEM 8. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem, get a class consensus on the answer.



#### **ZOO PROBLEM 8**

You have just finished putting up an Antarctica sign for the new polar bear/penguin exhibit that has just opened. You are amazed by how good the display looks. There is a large pool of water and a sheet of ice kept frozen by special refrigerator coils. The fake snow looks real, and the penguins are safely protected by an invisible glass barrier. You laugh at the penguins as they waddle across the ice. Suddenly you realize someone has made a foolish mistake. What is this foolish mistake?

#### **ANSWER TO ZOO PROBLEM 8**

Polar bears do not live in Antarctica, so the sign should be removed and changed to Polar Regions. Any answers close to this explanation are acceptable.

10. If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

# **ZOO LESSON 9** (optional) How Zoos Get Animals

#### Materials:

- 1. Guess the Animal transparency
- 2. ZOO KEEPER ACTIVITY 9 or 9A
- 3. ZOO PROBLEM 9

#### **Procedures:**

- 1. If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden and remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the zoo director, tell your students that zoo animals come from all over the world. The elephant comes from Africa and India. The kangaroo comes from Australia. Then ask if they know some places other animals come from. Point out these places on a map of the world. Then read or tell the following:



#### **How Zoos Get Animals**

Fifty or 60 years ago zoos would send people all over the world to collect animals. Very few zoos do this now. It is too expensive, and each year there are fewer and fewer animals in the wild.

Today, zoos get animals in other ways. Here are five ways zoos get animals:

a. Trade: Zoo directors get lists of animals that other zoo want to trade. A zoo with too many lions might trade a lion for a leopard that it wants. The zoo director has to decide what an animal is worth. How many monkeys are worth a tiger? What animals

# **OPTIONAL ZOO LESSONS** (Lesson 9)



- would one elephant be worth? Trading is one of the main ways zoos get new animals.
- b. **Breeding:** Many animals are born in zoos each year. Zoos have nurseries to take care of these babies. When the animals are grown, they are traded or become part of the zoo collection.
- c. Gifts: People give zoos animals like snakes, birds, and turtles. If the animal is rare or special, the zoo will accept it. Most animals offered to zoos are not taken. Sometimes a foreign country like China will give an animal to a zoo. In 1972 China gave the National Zoological Park in Washington, D. C., two giant pandas.
- d. Loans: Zoos loan each other animals. If an animal's display is being repaired, a zoo might loan the animal to another zoo until the display is finished. Animals are loaned as part of breeding programs, and animals are loaned so they can be seen by more people.
- e **Buy:** Zoos sometimes buy animals. This is not done very much any more since it is less expensive to get animals in other ways.

When a new animals arrives at the zoo, it is given special attention. First it is kept in a special cage away from the other animals. It is watched carefully to make sure it does not have any diseases. If the animal is going into a cage or display with other animals, the other animals are sometimes removed so the new animal can get used to its new home. Once the animal is comfortable, the other animals are put back. The keeper watches the animal closely for many months to make sure it gets along with the other animals.

I need to get back to the zoo, but while I am gone I want you to get a new animal for Zooland. You teacher has a list of animals you can get. Make a good trade and I will see you tomorrow.

5. Hand out ZOO KEEPER ACTIVITY 9 (or 9A). Explain the directions to your students. When they have finished, you may correct the assignment together, or collect the papers and correct them at a later time. After papers have been corrected, announce to the class the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

Here are the answers for today's activity:

**ZOO ACTIVITY 9:** Trade number 3 is a good trade because Zooland will get two of the animals it wants even though it will get an extra kangaroo. However, accept any answer the children can justify.

ZOO ACTIVITY 9A: Accept any answer the children can justify.

Give your students a copy of ZOO PROBLEM 9 and have them read it, or you may read it aloud to them. After giving them time to discuss the problem, get a class consensus on the answer.

#### **ZOO PROBLEM 9**

For the last three weeks you have been trying to trade two of your alligators for a crocodile. Then one afternoon you receive a phone call from a woman who wants to give her son's pet alligator to the zoo. She says it is getting too big for his bathtub, and she thinks the alligator might bite her or one of her children because it just stares at them with its mouth closed and sharp bottom teeth sticking out. Which of these options do you choose to do?

- a. Tell the woman that an alligator is not a good pet to have at home, and give her the phone number of an agency that returns animals like this to the wild.
- b. Decide to go look at the alligator.
- c. Politely refuse to take the alligator.



#### **ANSWER TO ZOO PROBLEM 9**

From the description the woman gave, the animal might be a crocodile. Crocodiles have two bottom teeth showing when their mouth is closed. Since Zooland wants a crocodile, this might an easy way to get one. The best answer is number b.

7. If the answer is correct, congratulate your students. If they are wrong, you will have to remove an animal of your choice from the zoo.

# **ZOO LESSON 10** (optional) Purposes of Zoos

#### Materials:

- 1. Guess the Animal transparency
- 2. ZOO KEEPER ACTIVITY 10 or 10A
- 3. ZOO PROBLEM 10

#### **Procedures:**

- 1. If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden and remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the zoo director read or tell the following:



### **Purposes of Zoos**

To look at Zooland you might think it is the oldest zoo in the world, but it is new compared to some other zoos. The first zoos were built more than 3000 years ago by wealthy kings and powerful rulers. These zoos are no longer in existence. The oldest zoo in the world is the Schonbrunn Zoo in Vienna, Austria. It opened in 1752. The first zoo in the United States, the Central Park Zoo, opened in 1864. In the next few years, zoos opened in Philadelphia and Chicago. Today most major cities have zoos.

People enjoy going to zoos, but most people go to the zoo for entertainment. They like to look at the interesting animals and relax in the beautiful surroundings. Young children like to visit the petting zoo where they can touch and feed the animals. A trip to the zoo is fun for everyone.



It can even be educational. Many zoos have educational programs for children and give lectures and tours.

Zoos, however, have other purposes besides entertainment. Zoos are places of scientific research. Zoologists study animals in zoos and learn about their habits, their bodies, and their diseases. This information is published in books and magazines and is one of the main sources of information about animals.

The fourth purpose of zoos is wildlife conservation. Zoos try to save animals that face extinction. In the last 400 years, 100 different kinds of birds and more than 50 mammals have disappeared, never to be seen again. Today, animals like the elephant and the rhinoceros and thousands of other animals are in danger of becoming extinct. Animals, like the elephant, that face the most serious threat of extinction, are call endangered. Animals that are near extinction in some areas but not in others are called threatened. Zoos offer safe places for these animals to live. Besides providing safety, zoos also breed endangered and threatened animals with the hope of increasing their numbers and returning them to the wild. Breeding programs such as these may save animals like the elephant from extinction.

A zoo is a wonderful place to spend the day, but remember there is more going on at a zoo than just recreation. There are breeding programs designed to save endangered animals. There are educational programs for children and adults, and there are zoologists that use the zoo as a learning laboratory.

5. Hand out ZOO KEEPER ACTIVITY 10 or 10A. Explain the directions to your students. When they have finished you may correct the assignment together, or collect the papers and correct them at a later time. After papers have been corrected, announce to the class

# **OPTIONAL ZOO LESSONS** (Lesson 10)

the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

Here are the answers for today's activity:

**ZOO ACTIVITY 10**: 1. R; 2. W; 3. E; 4. S; 5. S; 6. E; 7. W; 8. R. E.

ZOO ACTIVITY 10A: (Some questions have more than one correct answer. Accept any answers your students can justify.): 1. R; 2. W; 3. W; 4. E; 5. R; 6. S; 7. W; 8. R, E, W; 9. S; 10. E; 11. W; 12. R.

6. Give your students a copy of ZOO PROBLEM 10. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem get a class consensus on the answer.



#### **ZOO PROBLEM 10**

You are the keeper in charge of the giraffes. On your first day you were told not to wear something that you usually wear while working in cages. You were also told that giraffes do not like to be touched. Just as you are about to enter the cage on the second day, you remember not to touch the giraffes, but you forget what it was you should not wear. You decide to take off your

- a. hat
- b. boots
- c. glasses
- d. brown jacket

#### **ANSWER TO ZOO PROBLEM 10**

Giraffes sometimes swing down their heads in an attempt to hit the keepers. If the keepers wear hats, such as baseball caps, they might not be able to see the giraffe's head coming at them and they could get hit. When working with giraffes, keepers must be able to see above their heads at all times. The correct answer is a.

 If the answer is correct, congratulate your students. If the answer is incorrect, you will have to remove an animal of your choice from the zoo.

### OPTIONAL ZOO LESSONS (Lesson 11)

### **ZOO LESSON 11** (optional)

#### **Zoo Careers**

#### **Materials:**

- 1. GUESS THE ANIMAL transparency
- 2. ZOO KEEPER ACTIVITY 11 or 11A
- 3. **ZOO PROBLEM 11**

#### **Procedures:**

- 1. If you hid an object in one of the animal's cages and the students did not find it, show them where it is hidden and remove one of the animals from the zoo. If they found the object, they get to return any animal that was taken from the zoo.
- 2. Play GUESS THE ANIMAL.
- 3. Have your students try to identify the MYSTERY ANIMAL.
- 4. Playing the role of the zoo director, tell the children that they have learned about jobs of the zoo keepers and the curators. Tell them that today they will learn about the jobs of other people that work in the zoo, beginning with the zoo director. Then read or tell the following:



#### **Zoo Careers**

The person that runs the zoo is called the zoo director. In addition to making sure the zoo runs smoothly, the zoo director plans new displays, solves problems with animals, and works with the community and schools. The zoo director also inspects the animals and finds ways to raise money for new zoo exhibits.

You have already learned about the zoo keeper and the curator's jobs, but let me review them with you for a second time. The zoo keeper cleans, feeds, and takes care of the animals. The curator plans the work of the keepers and other zoo workers. The curator also creates animal displays, inspects the animals, takes care of any special problems they have, and orders food and supplies needed at the zoo.



Another important person at the zoo is the veterinarian. A veterinarian is a doctor for animals. The veterinarian cares for the animals by keeping diseases out of the zoo. This is done by giving the animals shots and medicine. They operate on animals, set broken legs, and help deliver baby animals. Veterinarians must work hard to find out what is wrong with an animal because the animals cannot tell the doctor what is wrong. Many times animals try to hide an illness or injury. Being a zoo veterinarian is not easy, but it is an important job at the zoo.

There are other people that work at the zoo that also have important jobs. Here are some of them:

- Guards: Guards are hired by zoos to protect the animals from people and to make sure the rules of the zoo are followed.
- Gardeners: Zoos have lots of beautiful gardens and plants. Gardeners are hired by zoos to take care of these plants and gardens.
- Builders: These men and women repair cages, walls, and walkways. They build fences, houses, and animal displays.
- Electricians: Zoos are filled with lights, motors, and heaters that run on electricity. The electrician keeps everything electrical working.
- Mechanics: When your family car stops working, your parents take it to a mechanic. Zoos also have mechanics to fix the cars that are used in the zoo. Mechanics also fix lawn mowers, trucks, and anything that uses gasoline.
- Plumbers: Zoos use tremendous amounts of water. Water is used to clean the animals, wash down their cages, and give them baths. It is used in ponds, gardens, and public rest rooms. A plumber's job is to know where all the water pipes are and to keep the water flowing.
- Secretaries: The zoo director and curators have secretaries that help them with office work. They

- type letters, answer the phone, file papers, and help in the office.
- Other jobs: There are many other people that work in a zoo. There are people that collect tickets. There are sales clerks in gift stores, people that give tours, and animal trainers that put on shows.

As you can see there are many different kinds of jobs in a zoo.

5. Hand out ZOO KEEPER ACTIVITY 11 (or 11A). Explain the directions to your students. When they have finished, you may correct the assignment together, or collect the papers and correct them at a later time. After papers have been corrected, announce to the class the amount of money it has earned. Post this amount on the Sponsor Section of the map of Zooland.

Here are the answers for today's activity:

ANSWERS FOR ZOO ACTIVITY 11A: 1. veterinarian; 2. gardener; 3. mechanics; 4. secretary; 5. builders; 6. zoo keeper; 7. zoo keeper; 8. curator; 9. zoo director; 10. zoo keeper; 11. any employee; 12. electrician; 13. curator; 14. zoo director; 15. veterinarian

6. Give your students a copy of ZOO PROBLEM 11. Have them read it, or you may read it aloud to them. After giving them time to discuss the problem, get a class consensus on the answer.



#### **ZOO PROBLEM 11**

One of your jobs as a keeper of the monkeys is to give the sick one its medicine. You have been hiding the medicine in the monkey's food. Then you notice that the monkeys steal each other's food, and sometimes the sick monkey doesn't get its medicine. This has happened before, so after discussing the problem with the head keeper and the veterinarian, you choose one of these options:

# **OPTIONAL ZOO LESSONS** (Lesson 11)



- a. put the monkey in a cage by itself so it can be given its medicine.
- b. put medicine in all of the food.
- c. put the medicine in the food, but feed the monkey by hand.

#### **ANSWER TO ZOO PROBLEM 11**

The correct answer is a. Putting medicine in all of the food is unnecessary. Trying to feed a monkey by hand is difficult since other monkeys will try to get the food you want to give to the sick one. The best solution is to put the monkey in a cage by itself.

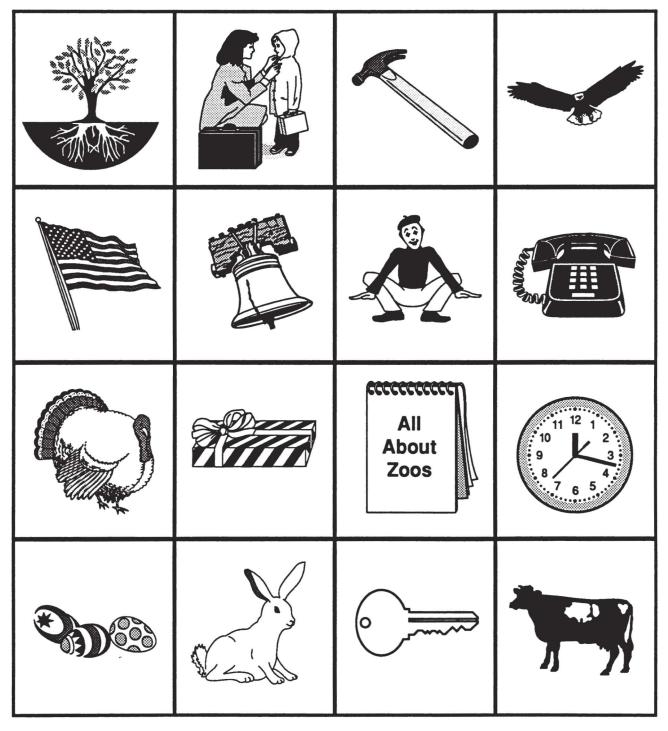
7. If the answer is correct, congratulate your students. If they are wrong, you will have to remove an animal of your choice from the zoo.

# **ZOO ACTIVITY 1**

# **Living and Non-Living Things**

Directions: Draw a circle around each living thing. Remember that living things

- reproduce
- grow
- move
- · react to changes, and
- need water.



# **ZOO ACTIVITY 1A**

# **Living and Non-Living Things**

**Directions:** Read the list of items found at the zoo. Divide the list into groups of living and non-living things. Remember that living things ...

- reproduce
- grow
- move
- · react to changes, and
- need water.





### Items found at the zoo:

nail	cage	water	bird
flower	dirt	shoe	cement
tree	grass	string	fence
lizard	wind	turtle	island
giraffe	mushroom	monkey	bricks
bench	window	balloon	zoo keeper





# **ZOO ACTIVITY 2**

#### **Plants and Animals**

**Directions:** Listen as your teacher reads a description of the living thing. Circle **P** if the living thing is a plant. Circle **A** if the living thing is an animal.

1. **Sea Cucumber:** It lives in the bottom of the ocean. It is about one foot long. There are many small arms around its mouth.

P or A

2. **Sea Anemone:** This looks like a beautiful flower, but inside the flower is a little mouth that swallows fish.

P or A

3. **Snapdragon:** Its flowers form two lips that open like jaws when pressed. It will bloom in the fall and its roots should not be over watered.

P or A

4. **Butterwort:** Because the butterwort cannot move, it traps insects on its sticky leaves. The leaves close around the insect and digest it.

P or A

5. Vampire Bat: It uses its teeth to cut sleeping animals then uses its tongue to lick up the blood.

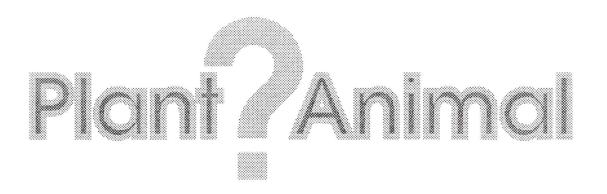
P or A

# **ZOO ACTIVITY 2A**

### **Plants and Animals**

**Directions:** Read each description. If it describes an animal; circle **A**; if it describes a plant, circle **P**.

1.	The sea cucumber lives on the bottom of the ocean. It has many arms around its small mouth.	P	A
2.	The Indian paintbrush is a vampire! Its roots find the roots of plants and suck out water and food.	P	A
3.	The sea anemone looks like a beautiful flower, but inside the flower is a small mouth that swallows fish.	P	A
4.	At one time people thought the mandrake would scream if people pullet it. It has a long, thick root.	P	A
5.	The butterwort cannot move, so it catches insects on its sticky leaves. The leaves trap and digest the insect.	P	A
6.	The alga swims by moving threads that are on one end of its body. This interesting creature uses sunlight to make its own food.	P	A
7.	The gecko likes warm places. They eat mostly insects.	P	A
8.	The sea peach has two openings. One opening sucks in water with tiny animals and plants, and the other opening squirts out the water.	Р	A



# **ZOO ACTIVITY 3**

### **Classification of Animals**

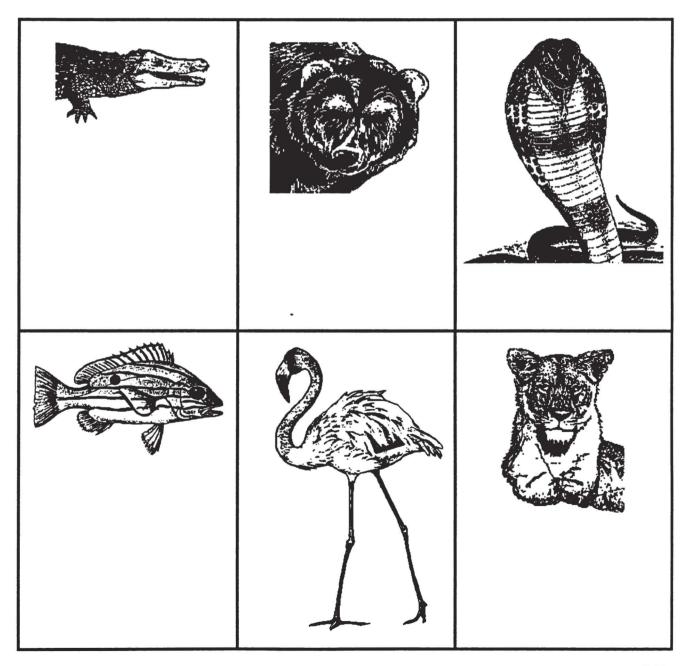
**Directions:** In the box by the picture of each animal, write **M** if it is a mammal, **F** if it is a fish, **B** if it is a bird, and **R** if it is a reptile.

Mammals: hair on body ... drink milk when a baby

Fish: live in water ... have scales, gills, and fins

Birds: feathers on body

Reptiles: scaly skin ... cold-blooded ... lay eggs on land.



# **ZOO ACTIVITY 3A**

#### **Classification of Animals**

Directions: Write the name of each animal listed below under its proper classification.

Mammals: hair on body ... drink milk when a baby

Fish: live in water ... have scales, gills, and fins

Birds: feathers on body

Reptiles: scaly skin ... cold-blooded, and lay eggs on land.

Amphibians: live in water when born ... live on land when grown

Arthropods: hard covering over body and have more than four legs

### **Animals to classify**

frog robin penguin oyster crayfish crocodile trout spider whale beaver salamander bat turtle pelican bear

Mammals Fish Birds

Reptiles Amphibians Arthropods

# **ZOO ACTIVITY 4**

# A Zoo Keeper's Job



### Part 1

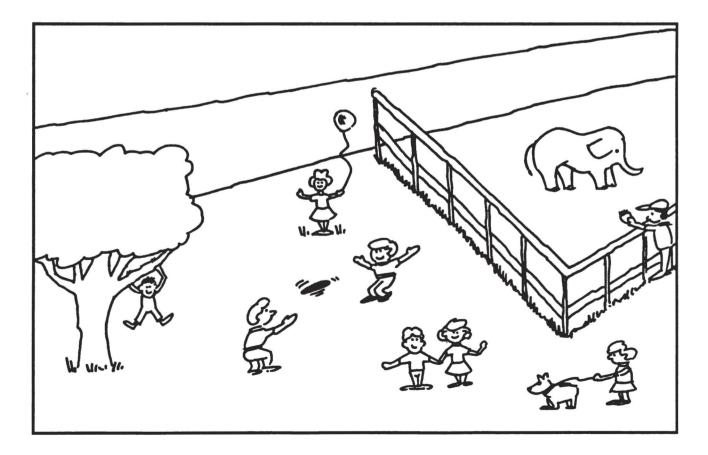
**Directions:** Listen as your teacher reads each statement given below. If the statement is a *true* statement of what a *good* zoo keeper does, circle **T.** If the statement is a *false* statement about what a *good* zoo keeper should do, circle **F.** 

1.	Zoo keepers clean the cages.	T	F
2.	Zoo keepers should never talk to the animals.	T	F
3.	Any problems should be reported by the end of the day.	Т	F
4.	Food and water dishes should be cleaned monthly.	Т	F
5.	Zoo keepers must be good at following directions.	Т	F
6.	Zoo keepers are not allowed to talk to the visitors.	Т	F
7.	Cages should be inspected at least once a month.	Т	F
8.	Zoo keepers give animals medicine.	Т	F
9.	Zoo keepers should watch animals for signs of illness.	Т	F
10.	Zoo keepers should enforce zoo rules.	T	F



### Part 2

Directions: Draw a circle around each rule being broken in the picture shown below.



# **ZOO ACTIVITY 4A**

# A Zoo Keeper's Job

**Directions:** Listen as your teacher reads each statement given below. If the statement is a *true* statement of what a *good* zoo keeper does, circle **T.** If the statement is a *false* statement about what a *good* zoo keeper should do, circle **F.** 

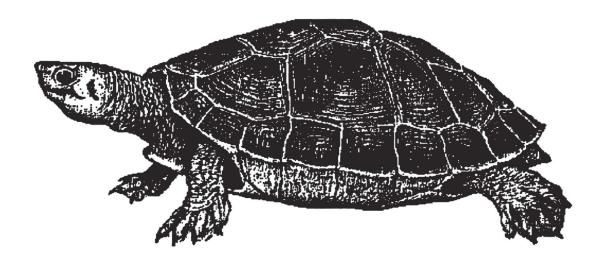
1.	Zoo keepers should never leave a cage without saying something friendly to the animals.	т	F
2.	Zoo keepers are responsible for the daily care of the animals.	т	F
3.	The food and water dishes should be cleaned weekly.	т	F
4.	Any problems should be reported by the end of the day.	T	F
5.	Zoo keepers never give medicine to the animals.	Т	F
6.	Feed all animals every day.	Т	F
7.	Make clicking noises to calm the animals.	Т	F
8.	Locks should be checked at least once a week.	Т	F
9.	Zoo keepers help move animals.	Т	F
10.	Zoo keepers always work with the same animals.	Т	F
11.	Zoo keepers start work in the afternoon so visitors can watch them work with the animals.	т	F
12.	Zoo keepers do not enforce the zoo rules.	T	F
13.	No skates, balloons, or keepers are allowed near the animals.	т	F
14.	Animals like zoo keepers that get excited.	Т	F
15.	Zoo keepers should watch their animals to see if they are sick or injured.	т	F

# **ZOO ACTIVITY 5**

# **Animal Care**

**Directions**: Listen as your teacher reads each sentence. If the statement is *true*, circle **T.** If the statement is *false*, circle **F.** 

1.	Elephants like to take baths.	T	F
2.	Gorillas like loud noises.	T	F
3.	Gorillas like visitors to look at them.	Т	F
4.	Laughing hyenas don't laugh.	T	F
5.	Animals try to hide their injuries.	Т	F
6.	The best way to prevent an animal from escaping is to give it good living conditions.	т	F
7.	Animals like to take medicine.	T	F
8.	Every day zoo keepers should check for signs that an animal might be trying to escape.	т	F
9.	An animal that is eating less than normal may be sick.	Т	F
10.	Never use a scrub brush to clean an elephant.	Т	F
11.	One way zoo keepers give medicine to animals is to put it in their food.	т	F
12.	An animal that walks when it usually runs it a sign that it may be injured.	т	F



# **ZOO ACTIVITY 5A**

### **Animal Care**

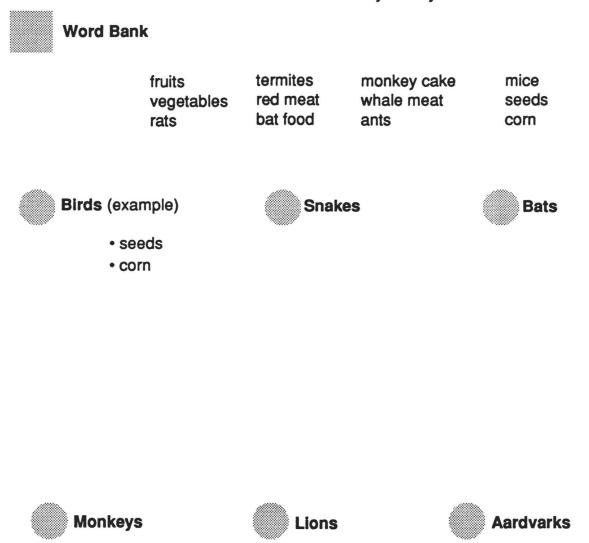
**Directions**: Read each sentence. If the statement is true, circle **T.** If the statement is false, circle **F.** 

1.	An injured animal may attack its keeper.	т	F
2.	Zoo keepers sometimes put medicine in grapes	т	F
3.	Zoo keepers should always talk to the elephant while giving it a bath	т	F
4.	A laughing hyena does not laugh.	T	F
5.	When a gorilla has a sad face and pouting lips it is relaxed.	т	F
6.	A gorilla feels threatened when you stare at it.	T	F
7.	Animals never try to conceal an injury.	T	F
8.	Gorillas are curious.	Т	F
9.	An animal will not try to escape from a clean cage.	T	F
10.	Cages should be checked weekly for any signs of an animal trying to escape.	т	F
11.	Never use a scrub brush to clean an elephant.	T	F
12.	Animals will try to escape if they are given the wrong food, or if it is too noisy around their cage.	т	F
13.	Any damage to a cage should be reported by the end of the day.	т	F
14.	You should spend 15 minutes a day cleaning an elephant's foot.	т	F
15.	Zoo keepers should never add medicine to a liquid like orange juice.	т	F

# **ZOO ACTIVITY 6**

# Feeding the Animals

**Directions:** Under the picture of each animal write the names of two foods found in the word bank that the animal would eat. Some of the foods you may use more than once.



# **ZOO ACTIVITY 6A**

# **Feeding the Animals**

**Directions**: Read each sentence. Circle **T** if the statement is true. Circle **F** if the statement is false.

1.	Vampire bats do not eat blood.	Т	F	
2.	Snakes are fed live rats.	Т	F	
3.	Birds are picky eaters.	T	F	
4.	The kiwi will eat only live worms.	T	F	
5.	Apes eat "Monkey" cake.	T	F	
6.	Monkeys eat fruits and vegetables.	T	F	
7.	Aardvarks in the wild eat ants and termites.	Т	F	
8.	Aardvarks in zoos eat soup.	Т	F	
9.	Lions love to eat liver.	Т	F	
10.	Lions are sometimes fed whale meat.	T	F	
11.	Animals in zoos get the same food they would get in the wild.	т	F	
12.	Bats eat upside down.	T	F	
13.	Snakes eat alone.	T	F	
14.	Lions are sometimes fed chickens.	T	F	
15.	Birds are sometimes fed peanut butter sandwiches.	Т	F	

## **ZOO ACTIVITY 7 and 7A**

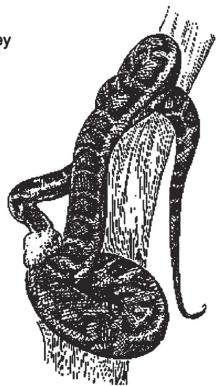
### **Zoo Keeper Examination**

**Directions:** You must pass this examination to become a zoo keeper in Zooland. In Part 1 read each question *carefully* and circle the *best* answer. In Part 2 read each questions *carefully* and circle **T** or **F**, depending upon whether the statement is true or false.



#### Part 1

- Zoo keepers feed the animals and clean their cages. They must also
  - A. plan the food the animals eat.
  - B. design animal cages.
  - C. carefully observe the animals.
- 2. When handling an animal, keepers should never
  - A. talk to the animal.
  - B. make hissing or clicking noises.
  - C. close the door to the cage.
- 3. When leaving a cage the keeper should always
  - A. check to see the door is closed and locked.
  - B. check to see nothing has been left behind.
  - C. check to see that nothing has been left behind and that the door is closed and locked.
- 4. Zoo keepers \_\_\_\_\_ enforce the rules of the zoo.
  - A. never
  - B. sometimes
  - C. should
- 5. The best way for a zoo keeper to know if an animal is sick is to
  - A. notice if it acts differently than usual.
  - B. take its temperature.
  - C. hide its medicine in its food.
- 6. The best way to prevent an animal from escaping is to
  - A. give it good living conditions.
  - B. chain it to a tree.
  - C. give the animal plenty of food.
- 7. Zoo keepers must feed the animals \_\_\_\_\_ that is on the menu
  - A. some of the food
  - B. only the food
  - C. only the exact amount of food



### **ZOO ACTIVITY 7 and 7A** (page 2)

### **Zoo Keeper Examination**

8. The zoo keeper must always follow the directions given by the

A. zoo curator

B. zoo curator and veterinarian

C. zoo visitors.

9. All living things

A. make their own food.

B. need water.

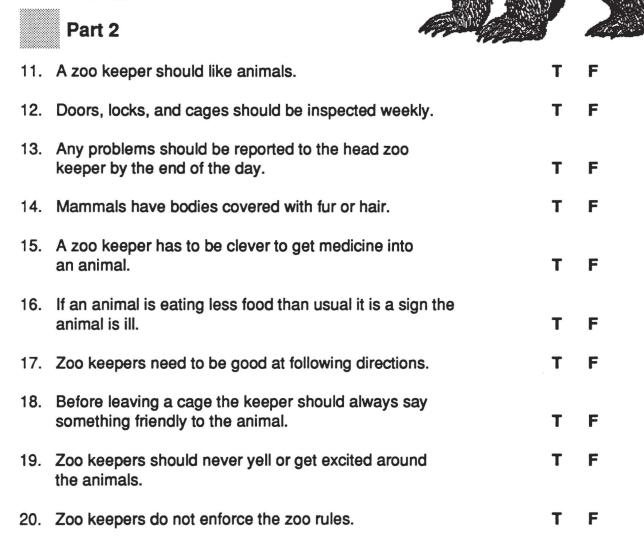
C. stay in one place.

10. Birds are the only animals that

A. have feathers.

B. build nests.

C. lay eggs on land.



## **ZOO ACTIVITY 8**

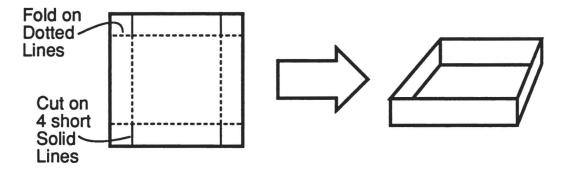
### **Making Monkey Island**

Directions: Make a model of Monkey Island as shown below.

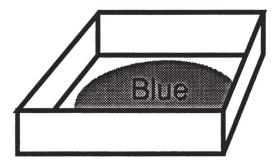
Materials for each student: 12 x 18" piece of heavy manila paper folded and stapled to form a box that is12 x 12" with 3" sides ... (See illustration below) ... tape ... glue ... paste ... scissors ... crayons ... assorted colors of construction paper

#### **Procedures:**

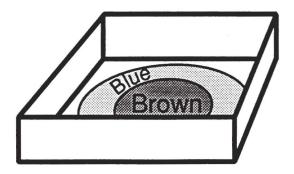
1. Take the above materials, cut and fold on the dotted lines, and then staple each corner as shown in this illustration.



2. Cut a circle out of blue construction paper that is large enough to just fit inside the manila box above. Glue it to the bottom.



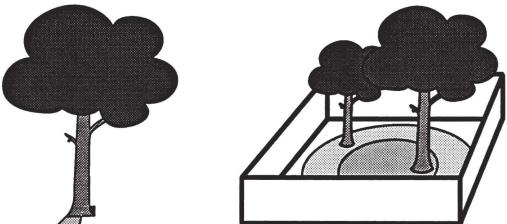
3. Cut a circle (this circle will be the island) out of brown construction paper that is approximately 2" smaller than the blue circle. Glue the island (brown circle) on top of the blue circle. When you have done this, you will have an island surrounded by a moat of water.



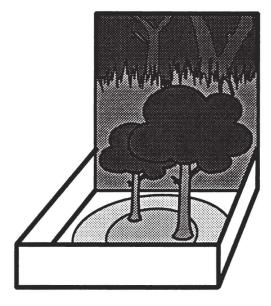
### **ZOO ACTIVITY 8** (page 2)

### **Making Monkey Island**

4. Make trees, vines, and rocks from construction paper. Glue these to the island as illustrated below:



- 5. On a 9 x 12" sheet of light green construction paper, students may color in a jungle scene. Students may cut out trees and vines and glue these to the paper.
- 6. To complete the Monkey Island display, staple the jungle scene to back of the box as illustrated.



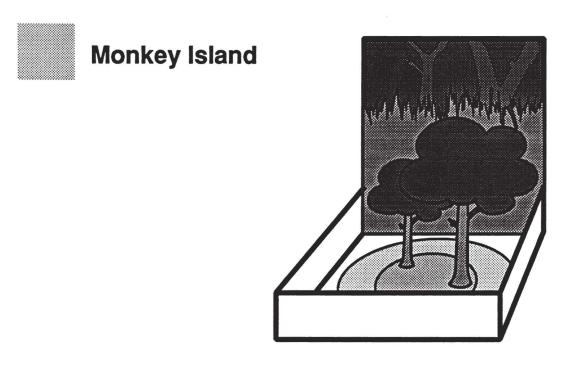
7. If you want to do so, you may make small monkeys to add to the display.

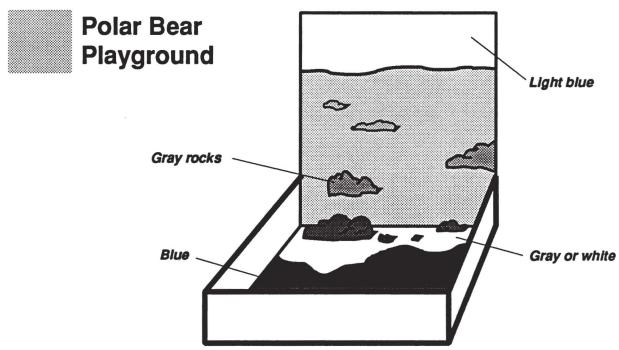
## **ZOO ACTIVITY 8A**

### **Making Model Displays**

Directions: Use the materials listed to make one of the model displays shown below.

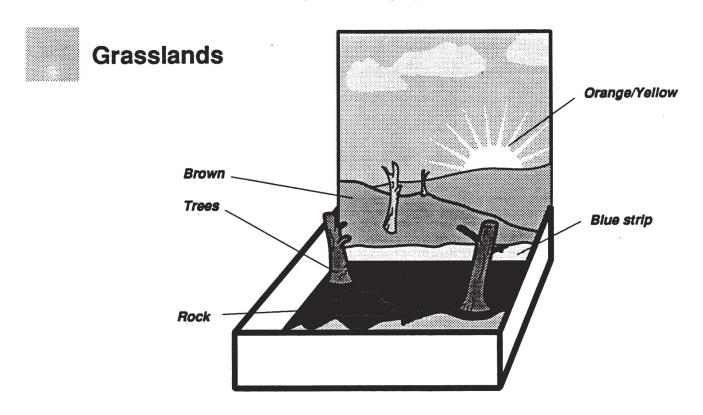
**Materials for each student:** 12 x 18" piece of heavy manila paper folded and stapled to form a box that is12 x 12" with 3" sides ... (See illustration below) ... tape ... glue ... paste ... scissors ... crayons ... assorted colors of construction paper

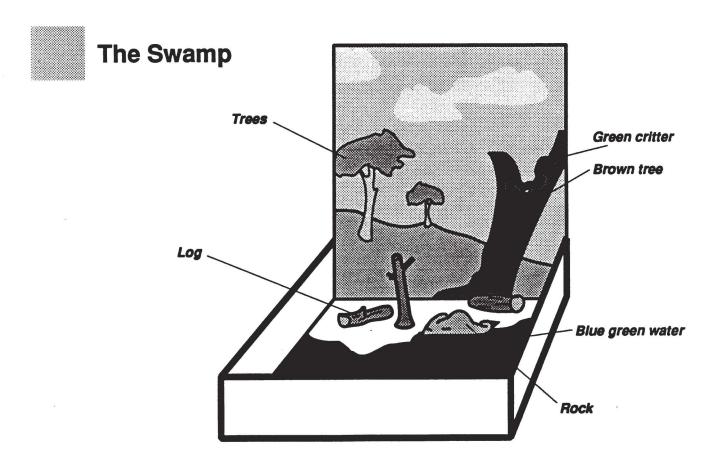




## ZOO ACTIVITY 8A (page 2)

**Making Model Displays** 





## **ZOO ACTIVITY 9** (Optional)

### **How Zoos Get Animals**

**Directions:** Listed below are the animals Zooland wants to trade and the animals Zooland wants for its zoo. Under this list are the trades Zooland can make. Put a circle around the best trade you can make.



### **Animals Zooland will trade**



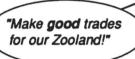
### **Animals Zooland wants**

- lions
- kangaroos
- a hippopotamus
- monkeys

- · a tiger
- · a leopard
- · a giraffe
- an elephant



### Trades Zooland can make





### Trade 1

Two lions ... for ... 1 tiger and 5 monkeys



### Trade 2

A kangaroo ... for ... 5 monkeys and a snake



#### Trade 3

A hippopotamus ... for ... a kangaroo, a tiger and a leopard



#### Trade 4

Five monkeys ... for ... a kangaroo



### Trade 5

A lion ... for ... a kangaroo, a tiger and a monkey

## **ZOO ACTIVITY 9A** (Optional)

### **How Zoos Get Animals**

**Directions:** Circle the number of the best trade you can make based on the information given below. On the bottom of this page write your reasons for making this trade.



### Zooland wants these animals

- · a tiger
- a leopard
- a giraffe
- an elephant



#### Zooland trades ...

- 1. its only elephant
- 2. its only tiger
- 3. one of its three hippos
- 4. its only leopard
- 5. its only elephant and giraffe
- 6. its 8 squirrel monkeys
- 7. its only kangaroo



#### for new animals

- a tiger and three leopards
- a giraffe
- a kangaroo, a lion and a fox
- 12 monkeys
- a pair of panda bears
- a leopard
- two jaguars and two gila monsters



Explain why you made the trade you selected.



## **ZOO ACTIVITY 10**

### **Purposes of Zoos**

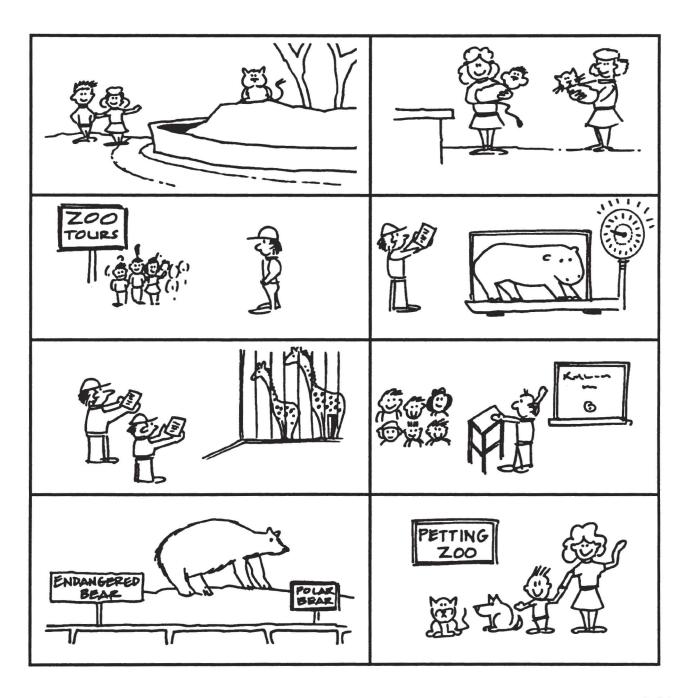
Directions: Next to each picture write either R ... or ... W ... or ... S ... or ... E.

R if it is an example of recreation and entertainment

W if it is an example of wildlife conservation

S if it is an example of scientific research

E if it is an example of an educational program



## **ZOO ACTIVITY 10A**

### **Purposes of Zoos**

Directions: Next to each sentence write either R ... or ... W ... or ... S ... or ... E.

R if it is an example of recreation and entertainment

W if it is an example of wildlife conservation S if it is an example of scientific research E if it is an example of an educational program 1. The children visited the petting zoo. 2. It was the second polar bear born at the zoo. 3. The snow leopard lives in the safety of the zoo. 4. The tour guide said the elephant is endangered. 5. The visitors watched the monkeys swing from branch to branch. \_\_\_\_\_ 6. The scientists mapped the movements of the zoo's newest animal. 7. The breeding program saved the European bison from extinction. 8. The guide showed the students the zoo's nursery and hospital. 9. The scientists recorded the diseases commonly found in the animals at the zoo. 10. The club invited the zoo curator to talk to them about endangered animals. 11. The young giraffe was born in the zoo two years ago. \_\_\_\_\_ 12. The zoo used jungle sounds and fog sprayers to create a display for Tiger Land.

## **ZOO ACTIVITY 11** (Optional)

### **Zoo Careers**

**Directions:** Listen as your teacher reads the list of jobs available at Zooland. Choose one of the jobs you like and draw a picture of yourself doing that job.



### Jobs at Zooland

- zoo keeper
- curator
- electrician
- plumber
- builder

- guard
- gardener
- mechanic
- secretary
- veterinarian



Draw your picture here:

## **ZOO ACTIVITY 11A** (Optional)

### **Zoo Careers**

builder

gardener

guard

secretary

veterinarian

zoo director

**Directions:** Fill in the blanks with one of the occupations listed below.

• zoo keeper

electrician

curator

	• plumber •	mechanic				
1.	The	makes sure the animals are healthy.				
2.	Α	takes care of the zoo's plants.				
3.	The	keeps the zoo's buses running.				
4.	The	helps the curator in the office.				
5.	Α	repairs the brick wall.				
6.	The	gives the elephant a bath.				
7.	The	feeds the lion.				
8.	The	plans the work for the zoo keeper.				
9.	The	runs the entire zoo.				
10.	The	first notices an animal is not eating.				
11.	Α	tells a visitor not to feed the elephant.				
12.	The	installs an electric heater in the reptile house.				
13.	The	is the keeper's boss.				
14.	The	is the curator's boss.				
15.	The	's instructions				
	for animal care are followed by everyone.					

One day while walking by the ostrich pens, you notice that the gate has been left open. You find two of your newest zoo keepers off in a corner of the yard arguing about a strange object that was found in the grass.

One keeper says, "I know this thing is alive."

The other keeper says, "It is not. It's just a rock. That's all it is. Just a rock."

"It's alive," yells the first keeper.

"It's a rock," screams the second.

You close the gate and walk up to the zoo keepers. You carefully examine the object and notice that it moves ever so slightly.

Which of these options do you choose?

- a. tell the keepers it is a living thing.
- b. tell the keepers it is a non-living thing.
- c. tell the keepers they are both wrong.
- d. tell the keepers it was once a living thing but is now non-living.



You are working with the head zoo keeper when a special shipment of plants and animals arrives. You eagerly open the box and find two smaller boxes. One is labeled **Butterworts**; the other is labeled **Gecko**. You tell the head keeper that you want to open the box with the animal. You go to the **Gecko** box and just as you reach inside, the head keeper yells, "Stop!"

He yelled at you to stop for which of these reasons?

- a. You were about to reach into the box containing plants.
- b. You should never reach into a box without first checking to make sure the animal is harmless.
- c. The Gecko will fly away unless you take it out of the box with a net.

Why were you yelled at?

You and four keepers have just finished putting the zoo's newest animal into its new home. It took the five of you most of the afternoon to move this animal. All of you stare at it. One of the keepers says, "I hope we don't have to move that bird again. I'm exhausted!"

"You won't," said another keeper, "because it is not a bird. Most people think it's a bird because it has feathers, but it's really a mammal. It can't fly, and everyone knows that birds fly. And I just happen to know that this animal is the fastest creature on two legs. It's a mammal, not a bird."

All of the other keepers think it's a bird.

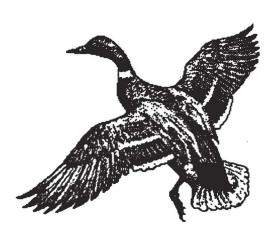
Based on what you have heard, is this animal a bird or a mammal? Explain why.



You have been given the messy task of cleaning the duck pond. It is the dirtiest job in the zoo. The pond is drained, and you must shovel out the black muck that is sticking to the bottom. You want to finish this job, get cleaned up, and leave. Halfway through the job, you see a woman picking flowers in the garden across from the gorillas. No one else from the zoo is around.

Which of the following options do you choose?

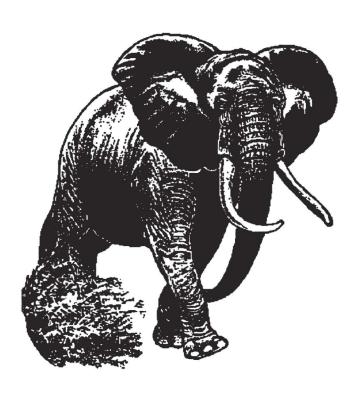
- a. finish your job. Then you find the woman, show her your ID card and tell her that picking flowers is not allowed in Zooland.
- b. leave the duck pond, and politely tell her to stop picking the flowers.
- c. yell at the woman to stop and then walk over to her. You show her your ID card and politely explain to her that picking flowers is not allowed in Zooland.
- d. leave the duck pond and walk over to the woman. You show her your ID card, and politely tell her to stop picking the flowers.



One of your favorite jobs is giving Elmo the elephant a bath. Usually Elmo is calm and playful, but today Elmo is acting strange. He pushes you aside with his trunk and backs away from you as you approach him. You walk slowly toward him, but before you can touch him, he swings his trunk and slams you into a wall. You get up, thankful you are not hurt.

Which of the options below do you choose? Explain why.

- a. decide to leave the cage and report what has happened.
- b. remember that you forgot to talk to him when you entered his cage, so you walk slowly toward Elmo, speaking softly and offering him a lump of sugar.
- c. decide to show the elephant you are in command. You poke him with an elephant prod and make him follow your orders.



You have been given the job of caring for the birds, bats, and snakes. One day a poisonous snake got loose in the kitchen. It was found later that day and returned to its cage, but in all of the confusion the menus for the bats and snakes got mixed up. You aren't sure which animals get what food. You can't decide if you should feed the animals the food on **Menu 1** or the food on **Menu 2**.

Menu 1: The bats are fed bat food and the snakes are fed mice.

**Menu 2:** The snakes are fed rats, and the bats get a special mixture of milk, cream cheese, hard-boiled eggs, chopped raw meat, vegetables, bananas, and finely chopped nuts

After looking at these menus you know exactly what you will do. Explain what you will do.



## What should the menu be?

(Note: For this problem your teacher may put you students into small groups. If so, inside your group choose the best solution and share it during a class discussion.)

One of your jobs at the zoo is to play with the young gorillas. You and the gorillas always have a good time. The gorillas have so much fun they have started blocking the doorway and won't let you out. You can't move them out of the way because they are stronger than you, so you have started tricking them. Last week you tricked them by moving to a far corner of the cage where you pretended to play. When the gorillas came over to play, you quickly ran to the door and escaped. This worked for a few days, but now the gorillas carefully watch you and quickly race you to the door before you can reach it. You know that you won't be able to fool them tomorrow.



What is your best solution to this problem?

- a. You decide to stop playing with the young gorillas.
- b. You bring in some toys they can play with by themselves.
- c. You ask another zoo keeper to stand outside the cage and distract the gorillas with a new toy while you escape.

You have just finished putting up an Antarctica sign for the new polar bear/penguin exhibit that has just opened. You are amazed by how good the display looks. There is a large pool of water and a sheet of ice kept frozen by special refrigerator coils. The fake snow looks real, and the penguins are safely protected by an invisible glass barrier. You laugh at the penguins as they waddle across the ice and suddenly you realize someone has made a foolish mistake.

What is this foolish mistake? Explain why it was a foolish mistake to make.





For the last three weeks you have been trying to trade two of your alligators for a crocodile. Then one afternoon you receive a phone call from a woman who wants to give her son's pet alligator to the zoo. She says it is getting too big for his bathtub and she thinks the alligator might bite her or one of her children. She feels this way because the alligator just stares at them with its mouth closed and it sharp bottom teeth sticking out.

Which of these options do you do? Explain why.

- a. tell the woman that an alligator is not a good pet to have at home and give her the phone number of an agency that returns animals like this to the wild.
- b. decide to go look at the alligator.
- c. politely refuse to take the alligator.







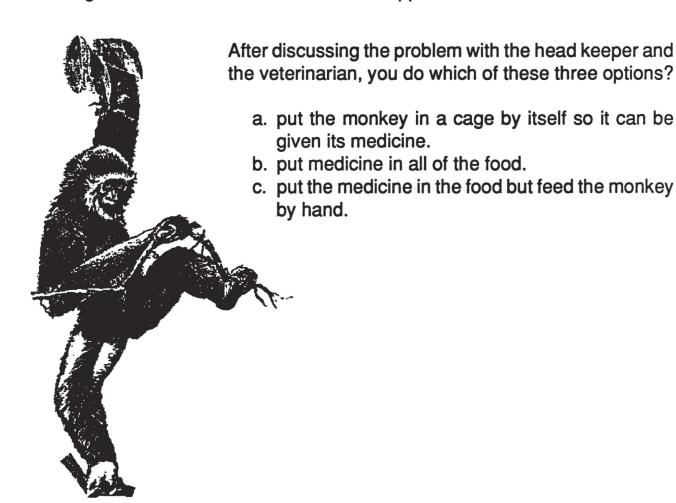
You are the keeper in charge of the giraffes. On your first day you were told not to wear something that you usually wear when working in cages. You were also told that giraffes do not like to be touched. Just as you are about to enter the cage on the second day, you remember not to touch the giraffes, but you forget what it was you should not wear.

You decide to take off which of the following?

- a. hat
- b. boots
- c. glasses
- d. brown jacket



One of your jobs as a keeper of the monkeys is to give any sick monkey its medicine. You have been hiding the medicine in the monkey's food. Then you notice that the monkeys steal each other's food and sometimes the sick monkey doesn't get its medicine. This situation has happened before.



## **ALLIGATOR**

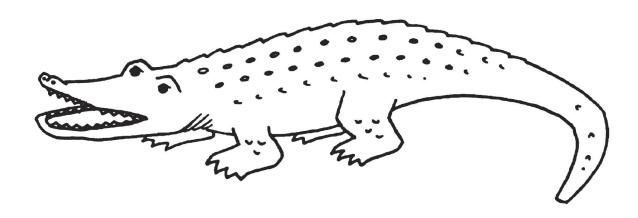
BODY: Alligators look a lot like lizards. They are larger and have bigger bodies. They grow to 12 feet in length and can weigh as much as 550 pounds. Their eyes rest on the top of their heads so they can swim with just their eyes showing. An alligator has a strong jaw filled with many teeth. The jaw is so powerful it can crush cattle bones, but once it is closed, a person can hold it shut with his bare hands. The fourth tooth of an alligator fits into a hole in the upper jaw. This tooth cannot be seen when the mouth is closed.

**FOOD:** Alligators eat small animals that live near water. They eat snakes, turtles, small mammals, fish, and frogs. Some larger alligators eat dogs, pigs, and cattle. Alligators grab their prey with their strong jaws and tear them apart. Larger animals, like pigs, the alligators pull underwater and drown. In the zoo they are fed fish and meat.

WHERE FOUND: Alligators live in only two places: the United States and they live in China.

HABITAT: Alligators live in swamps and along rivers and lakes. In winter they like to go underwater or bury themselves in mud holes.

INTERESTING FACTS: People have a hard time telling the difference between an alligator and a crocodile. An alligator has a narrow mouth and its fourth tooth is hidden. A crocodile has a broad mouth and its fourth tooth can be seen when its mouth is closed.



- green body
- · white teeth and eyes
- Add red to the mouth



## **BEARS**

**BODY:** Bears are the largest meat-eating animal on earth. Some bears can get to be 11 feet long and weigh more than 2,000 pounds. The smallest bears weigh less than 100 pounds. A bear's body is covered with a deep, thick fur. It makes their bodies look bigger than they really are.

Bears have large heads with small eyes and small, rounded ears that stand straight up. Their feet have five toes and each toe has a long claw. Some bears have claws that are five inches long! These claws are dangerous weapons. A blow from a bear can easily kill a person.

**FOOD:** Bears eat many kinds of meat and plants. Bears hunt for squirrels, mice, and other small animals. They go into streams to catch fish, and they hunt for eggs, ants, and grubs. They have even been known to steal lambs and

pigs from farms.

Although bears like meat, they eat mostly plants. They feed

on roots, berries, leaves, acorns, and fruits. And of course they are very fond of honey.

WHERE FOLIND: W

WHERE FOUND: Wild bears are found only in the Arctic, Asia, Europe, and North America. Other bears are found in South America, but bears do not live in Africa, Australia, or Antarctica.



**HABITAT:** Bears live in many places. Black bears like the forest. They stay close to the trees. Brown bears live in open meadows near streams and rivers. Polar bears roam the icy regions of the far north, occasionally swimming from island to island.

INTERESTING FACTS: Bears are popular animals at the zoo. They are playful and beg for food. They act friendly and they look soft and gentle, but they can be very dangerous. Even tame ones can't be trusted.

Bears look slow and clumsy, but they are among the fastest animals on earth. A bear can run fast enough to catch a horse — about 35 miles per hour. A polar bear can swim at six miles per hour and can travel up to 60 miles without stopping.

A bear's fur keeps it warm and protects it from bee stings. Some brown bears might have black fur, and polar bear's fur is yellowish, not pure white as some people may think.

# Paint: • brown



### CAMEL

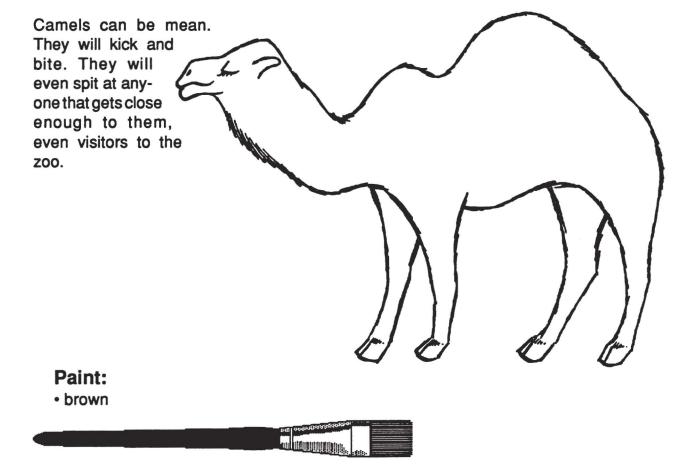
BODY: Camels are large animals that live in the deserts. They have one or two humps on their backs. The Arabian camel has one hump; the Bactrian camel has two humps. Camels are about seven feet tall and weigh more than 1,000 pounds. They have thick woolly fur and a small ropelike tail. The hump on the camel's back is not a storage place for water. It is mostly fat. The camel uses this fat as food when it is starving. The hump gets smaller as the camel uses up the fat. After a rest and some food, the hump will get back to its normal size. The camel has thick eyebrows that shade the sun from its eyes, and each eye has three eyelids that keep the desert sand from getting in its eyes.

**FOOD:** In zoos, camels are fed hay and grains. In the desert they are fed dates, grass, wheat, and oats. While crossing a desert, camels eat leaves, seeds, and just about anything they can get into their mouths. Camels can even eat a thorny cactus without getting hurt because the skin in their mouth is so tough the thorns cannot penetrate it.

WHERE FOUND: Camels live in Africa and Asia.

**HABITAT:** Camels live in deserts. The Arabian camel lives in the sandy deserts of Africa; the Bactrian camel lives in the rocky deserts of Asia.

**INTERESTING FACTS:** Camels can go without food and water for days and even weeks. People use them to cross the desert. They also use the camel for food and clothing.



### **CROCODILE**

**BODY:** Crocodiles are the largest of all living reptiles. Crocodiles have long bodies, short powerful legs, and a long tail. They can grow to 20 feet in length. They can float in the water with just their nose and eyes showing. They have powerful jaws and sharp teeth. The bottom fourth tooth of a crocodile can be seen, unlike an alligator, when the mouth is closed.

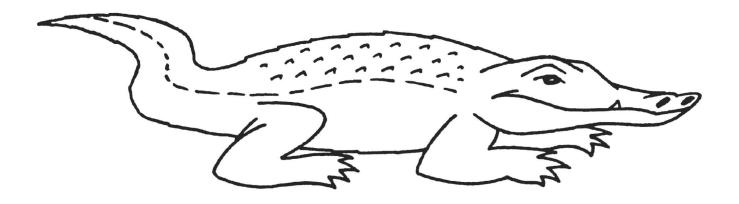
**FOOD:** Crocodiles eat any animal they can catch. They usually eat small animals like fishes, birds, and small mammals, but they have been know to attack larger animals including man.

WHERE FOUND: Most crocodiles are found in Africa and Asia, but some live in Australia, North America, and South America.

HABITAT: Crocodiles live in swamps and around rivers where the temperature is warm.

INTERESTING FACTS: Crocodiles are large reptiles that look like alligators. The American crocodile was once hunted for its skin. As a result, the American crocodile is now an endangered specie.

Most crocodiles spend their time in water. Some even swallow stones to give them better balance in the water.



- · green body
- · white teeth
- · red mouth



## **ELEPHANT**

**BODY:** Elephants are the largest animals that live on land. Only the giraffe is taller. There are two kinds of elephants: the African elephant and the Asiatic (Indian) elephant.

Elephants can be 12 feet tall and weigh more than six tons. They have thick, gray, wrinkled skin. Their trunks are five feet long. Elephants use their trunks for breathing, smelling, eating and drinking. The trunk can lift objects that weigh as much as 600 pounds, and it can hold a small coin or pluck a single blade of grass. The elephants tusks are really teeth that are used for digging and fighting. Other teeth are used for grinding food. These teeth can be a foot long and weigh eight pounds.

The African elephant is the largest kind of elephant. It has large ears that cover its shoulder, and its back dips in the middle. The Asiatic elephant is smaller. It has a rounded back and small ears that do not cover the shoulder. Both animals have tusks, but the Asiatic elephant's are much smaller than the African elephant.

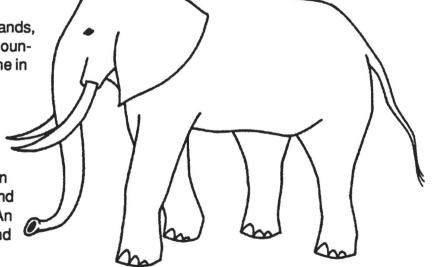
**FOOD:** Wild elephants eat roots, bark, shrubs, leaves, and grass. Elephants in zoos eat between 600 and 700 pounds of food each day. In one year the average elephant will eat 100,000 pounds of hay, 12,000 pounds of alfalfa, and more than 2,000 potatoes. It will drink 40 gallons of water in one day.

WHERE FOUND: Elephants are found in

Africa and southern Asia.

HABITAT: Elephants live in grasslands, forests, jungles, swamps, and mountains. They love water and will bathe in lakes and rivers.

phants are not afraid of rats or mice. Elephants can swim great distances. On land they can run as fast as 25 miles per hour and walk 300 miles in search of food. An elephant's tail weighs 22 pounds and each ear weighs 110 pounds.



Elephants are an endangered specie. They are being killed for their ivory tusks, and each year more and more of their land is being occupied by people.

- gray body
- · white tusks



## **FLAMINGO**

**BODY:** Flamingos are easily recognized birds. They are from three to five feet tall and have bright red to pale pink feathers. They have long graceful necks and stilt-like legs with webbed feet. Flamingos swim and fly quite well.

FOOD: Flamingos eat shellfish and small water plants.

WHERE FOUND: Flamingos are found in Africa, Asia, North America, and South America.

**HABITAT:** They live in marshes, lakes, and seas.

**INTERESTING FACTS:** Flamingos live in large groups called colonies. A million flamingos may be in one colony.



- pink body
- · white & black tail



### **GIRAFFE**

**BODY:** Giraffes are the tallest land animals. They are about 17 feet tall. Their great height comes from long legs and a neck that can be six feet long. The amazing thing about this neck is that it has the same number of bones as a human—seven. The giraffe's bones are just larger.

Their heads look small but are nearly two feet long. On top, they have two bony horns covered with fur. The males use the horns for fighting; the females do not use them at all.

Giraffe bodies are covered with patch-like markings that are brownish-yellow and dark brown. These markings make them hard to see when they are standing in the shade of trees.

FOOD: Giraffes eat leaves and twigs. Their favorite leaf is the acacia. They use their 17 inch tongues to strip the leaves from the branches. Giraffes rarely drink water. They get moisture from the leaves they eat.

WHERE FOUND: Giraffes are found in different parts of Africa.

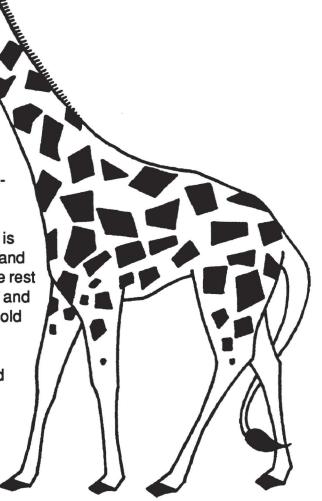
HABITAT: Giraffes like to live where there are plenty of trees. They spend most of their time in open forests or tree-dotted plains. They avoid deserts and jungles.

INTERESTING FACTS: When a giraffe is born, it is as tall as a man and weighs 150 pounds. It can stand up after an hour. Baby giraffes do not feed with the rest of the herd. They stay together in a "kindergarten" and are watched by a single female until they are old enough to join the herd.

Giraffes are quite peaceful, but if they are attacked by a lion or other predator, they fight fiercely by kicking with their huge legs. These kicks are so powerful they have been known to kick a lion's head right off.

- yellow body
- brown patches





## **GIANT PANDA**

**BODY:** The giant panda is one of the most beautiful animals in the world. It can grow to be five feet long and weigh between 200 and 300 pounds. It is covered with black and white fur. Under the white fur it has pink skin, and under the black fur it has dark skin. To most people it looks big and cuddly.

**FOOD:** The giant panda eats mostly bamboo shoots, but it will also eat plants, honey, small rodents, and fish.

WHERE FOUND: The giant panda lives in China and Tibet.



## **GORILLA**

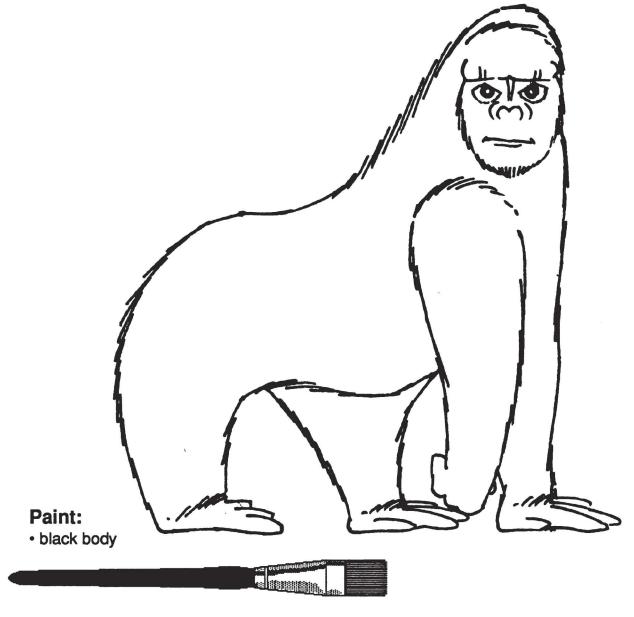
**BODY:** Gorillas are powerful animals. They are as tall as a man and can weigh 450 pounds. Their bodies are covered with black hair, except for their shiny black faces. Gorillas' feet have a thumb that helps them climb. They can stand on two feet but usually walk on all fours.

FOOD: Gorillas eat fruits, leaves, and bark.

WHERE FOUND: Gorillas are found only in central Africa

**HABITAT:** Gorillas live in rain forests. Some live in mountainous areas as high as 13,000 feet above sea level.

**INTERESTING FACTS:** Gorillas are peaceful animals. They are always moving and never spend the night in the same place. They build simple nests on the forest floor or in trees. The only enemy of the gorilla is man. Gorillas are now considered an endangered specie.



## **HIPPOPOTAMUS**

**BODY:** The hippopotmus is the third largest creature on earth. It has a large long body and a huge head. It weighs up to 3,000 pounds, stands five feet high, and can be up to 15 feet long. The hippopotamus has short legs, and each foot has webbed feet. Inside the mouth are two huge tusks that may grow to more than two feet in length.

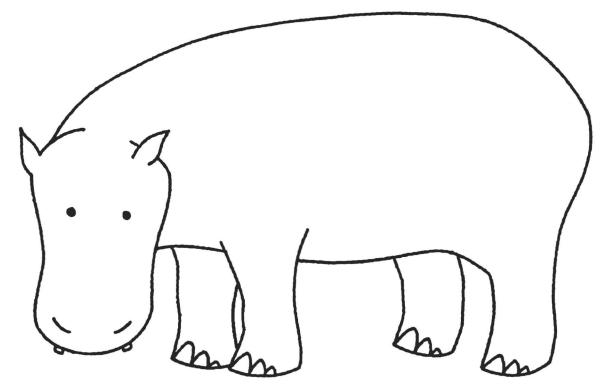
**FOOD:** The hippopotamus grazes near river bands and eats fruits, vegetables, leaves, and water plants. It consumes about 130 pounds of food a day.

WHERE FOUND: This animal lives in Africa.

**HABITAT:** The hippopotamus spends its days in grasslands at the edge of rivers, lakes, and streams.

**INTERESTING FACTS:** The hippopotamus is a good swimmer. It can close its ears and nostrils when it dives, and it can stay underwater for as long as six minutes. On land, the hippopotamus can run as fast as man — about 20 mph.

Another kind of hippopotamus that is much smaller is the Pygmy hippopotamus. It weighs from 400 to 600 pounds.



- gray body
- · white toes



### **KANGAROO**

**BODY:** Most kangaroos are six feet tall and weigh 100 pounds. They have a head like a small deer and a body covered with short brown or gray fur. Kangaroos stand upright on two powerful legs. A large tail helps them balance. A kangaroo can jump 25 feet and hop 40 miles per hour.

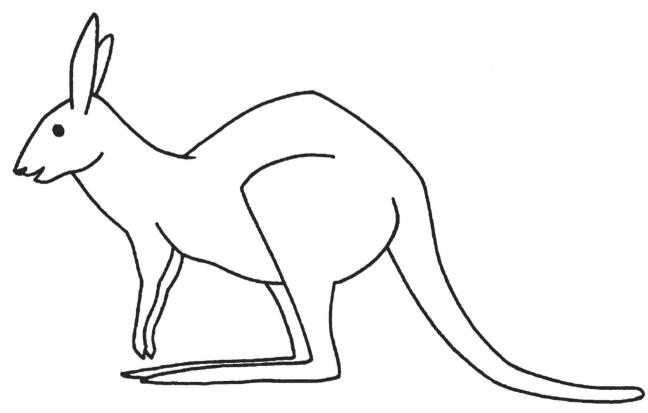
FOOD: Kangaroos eat mostly grasses, and some leaves and fruit.

WHERE FOUND: Kangaroos live in Australia, New Guinea, and other nearby islands.

**HABITAT:** Some kangaroos roam the plains of Australia. Others live in forests and some even live in deserts.

**INTERESTING FACTS:** There are many different kinds of kangaroos. Some are only two feet tall and others have been known to be seven feet tall. There are even kangaroos that spend most of their time in trees.

When a kangaroo is born it is only about an inch long. It crawls up its mothers stomach and into a pouch. It is called a joey. The joey will stay in the pouch for about six months.



### Paint:

• light brown ... and ... grayish body



### LIONS

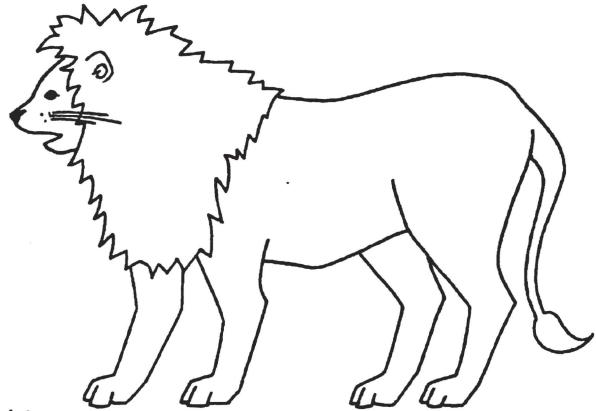
BODY: Lions are one of the largest members of the cat family. They can weigh more than 400 pounds and are nine feet long. Male lions have a thick mane of fur around their necks; female lions do not. Lions have huge claws and thirty sharp teeth. They have brownish-yellow fur that lets them blend in with the dead grass and enables them to sneak up on their prey.

**FOOD:** Lions eat large animals such as zebra, antelope, wart hogs, and buffalo. They will also eat smaller animals including fish, turtles, and even animals that have died from disease.

WHERE FOUND: Lions are found in Africa and India.

**HABITAT:** Lions like to live in woodlands and grassy areas that have a few trees. There must be a good supply of food and a place to drink water.

**INTERESTING FACTS:** Lions are the only members of the cat family to live in groups. A group of lions is called a pride. Since lions cannot run as fast as the animals they try to catch, they hunt in packs and sneak up on their prey. Females do most of the hunting, and the males take the food they want. An adult lion can eat between 40 to 75 pounds of meat at one sitting.



### Paint:

- brownish, yellowish body
- · mane slightly darker



### **MONKEYS**

BODY: All monkeys have bodies that are good for climbing trees. They have long arms and legs. Both their hands and feet have "thumbs" that help them hold onto objects like branches. Most monkeys have tails. Some monkeys, like the Spider Monkey, use their tails to grasp objects and can even hang by their tail. There are about 200 different kinds of monkeys. The largest are nearly three feet tall, and the smallest are about six inches.

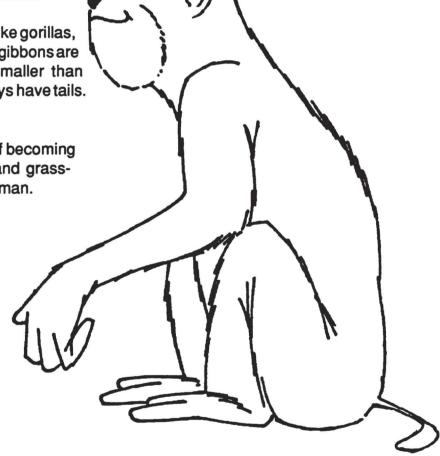
**FOOD:** Monkeys eat leaves, fruit, eggs, birds, flowers, frogs, and just about anything they can find.

WHERE FOUND: They are found in Southeast Asia, Africa, Central America, and South America.

HABITAT: Some kinds of monkeys spend their entire lives in forests living in trees. Other kinds stay mostly on the ground in grasslands that have a scattering of trees.

INTERESTING FACTS: Apes like gorillas, chimpanzees, orangutans, and gibbons are not monkeys. Monkeys are smaller than these animals and most monkeys have tails. Apes do not have tails.

Many monkeys are in danger of becoming extinct because their forests and grasslands are being taken over by man.



### Paint:

brown body



### **OSTRICHES**

**BODY:** Ostriches are the largest of all birds, but they cannot fly. They stand eight feet tall and weigh as much as 345 pounds. The males have black feathers on their bodies and white feathers on their small wings. Females are covered with brown feathers. Both have long thin legs and a long thin neck. They are the only bird that has only two toes on each foot.

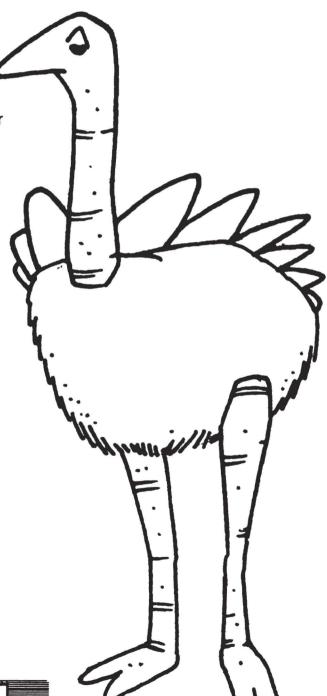
**FOOD:** Ostriches eat plants but have been known to eat lizards and turtles when they can be found.

WHERE FOUND: Ostriches are found in Africa.

**HABITAT:** They live on open plains, grasslands, and deserts.

INTERESTING FACTS: Ostriches can run faster than race horses—about 40 miles per hour.

Ostrich eggs are 18 inches around and weigh about three pounds. The male sits on the eggs at night, and the female sits on them in the day. A month after an ostrich is hatched, it can run as fast as its parents. Ostriches do not hide their heads in the ground as was once commonly believed.



### Paint:

- · white neck, head, and feathers
- black body
- · light blue legs

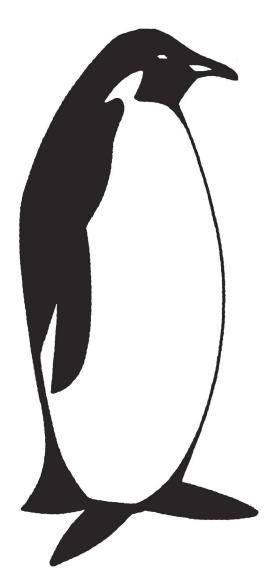


### **PENGUINS**

**BODY:** Penguins are birds with short, stocky bodies that range in height from one to four feet. They can weigh as much as 100 pounds. Their bodies are covered with short white feathers on the chest and black feathers on the back. Under the feathers are thick layers of fat that keep them warm in cold water. Instead of wings, they have flippers, and they have webbed feet. The webbed feet and flippers make penguins excellent swimmers.

FOOD: Penguins eat fish, squid, and shellfish.

WHERE FOUND: Penguins are found in Antarctica and the southernmost parts of South America, Africa, and Australia. One rare kind of penguin is found on the Galapagos Islands.



**HABITAT:** Penguins live on packs of ice along coastal waters. Some live in lakes, ponds, and rivers.

INTERESTING FACTS: There are 18 different kinds of penguins. The penguin most people think of is the Emperor Penguin that lives off the icy water of Antarctica. They live in colonies that may contain nearly a million birds.

The female lays a single egg, then leaves. The male carries the egg to a group of other males that also have eggs. The male will sit on this egg and keep it warm. For two months, the male keeps the egg warm, and during this time it does not eat. When the chick hatches, the female returns to take care of it and the male goes to sea to get food for itself and the chick. After six months, the baby penguin will be able to take care of itself.

### Paint:

black and white body



### **POLAR BEAR**

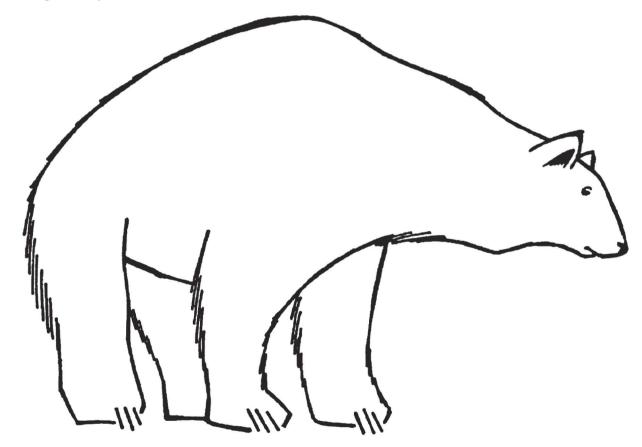
**BODY:** Polar bears are great white bears that live in the Far North. They can weigh as much as 1,600 pounds and grow to a length of almost 10 feet. Their bodies are covered with a thick white and yellowish fur that blends in with the snow and makes them hard to see. They have stiff hair on the bottom of their feet which prevents the bear from slipping on snow and ice. The polar bear's head and neck is smaller than other bears.

**FOOD:** The main food of the polar bear is seals.

WHERE FOUND: Polar bears live on arctic islands and on the northern shores of Alaska, Greenland, and Canada.

HABITAT: Polar bears live on packs of ice and snow near water.

**INTERESTING FACTS:** Polar bears are excellent swimmers. They paddle with their front feet, which are webbed, and can swim at an average speed of six miles an hour. They have been known to swim up to 60 miles without resting. The polar bear, once widely hunted, is now an endangered specie.



### Paint:

white body



### RHINOCEROS

**BODY:** Rhinoceroses are large animals with one or two horns on their nose. These horns can reach lengths up to three and a half feet. This matches the rhinoceroses enormous size. They can stand up to six feet tall at the shoulder, be 15 feet long, and weigh two tons. They have short legs and very thick skin.

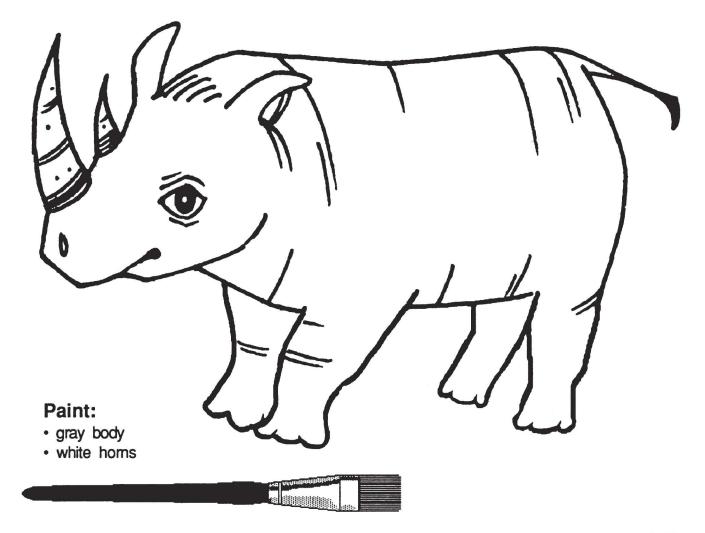
**FOOD:** These large animals eat shrubs, grass, and leafy twigs. In zoos they are fed hay and receive protein and vitamin supplements.

WHERE FOUND: The rhinoceros is found in Africa, India, and Southeast Asia.

**HABITAT:** Most rhinoceroses live in grasslands and swampy areas. Some live in forests near streams.

**INTERESTING FACTS:** Rhinoceroses like to lay in mud and water. It helps keep them cool. They also cover their bodies with mud. When the mud dries, it protects their skin from the sun.

The rhinoceros is protected by law. People used to kill it just to get its horn. The rhinoceros nearly became extinct, and today it is still an endangered specie.



### **SNAKES**

BODY: Snakes come in many sizes and shapes. The longest snake is a Python that measured 32 feet 9 1/2 inches. The shortest snake, the Thread Snake, is only 4 1/4 inches long. The Anaconda is the heaviest snake, weighing in at 600 pounds. Snakes' bodies are mostly muscles covered with dry scales that make up their skin. This skin has three layers. Snakes shed their outermost skin. Young snakes may shed as many as seven times a year. Snakes have jaw bones that are loosely connected. This enables them to open their mouths very wide and swallow animals and eggs that are much larger than their heads. Snakes have poor hearing and poor eyesight. They use their tongues to catch small specks of dust that are brought into their mouths and tasted. In this way, they can tell what is going on in the world around them.

FOOD: Snakes eat small animals like mice, rats, and frogs. Some eat only eggs. Since snakes do not have teeth for chewing, they must swallow the animal whole and alive. Some snakes kill their prey before eating, squeezing it until it cannot breathe or poisoning it with a deadly bite. WHERE FOUND: Snakes are found all over the world except for the polar regions. HABITAT: Snakes like to stay hidden. They live in deserts, mountains, oceans, lakes, forests, and streams. Most of them live on the ground or underground. Some kinds live in trees **INTERESTING FACTS:** There are nearly 2,700 kinds of snakes. Only 50 are poisonous to man. Very few people in the United States die from snake bites. Snakes use their poison to kill prey not people. They will bite only if they feel there is no other way of escaping.

Some snakes can go without eating for six months to three years! When they do eat, they can eat a great deal. A 140-pound Python is reported to have swallowed an animal that weighed 130 pounds!

### Paint:

- green body
- black patterns



### **TIGER**

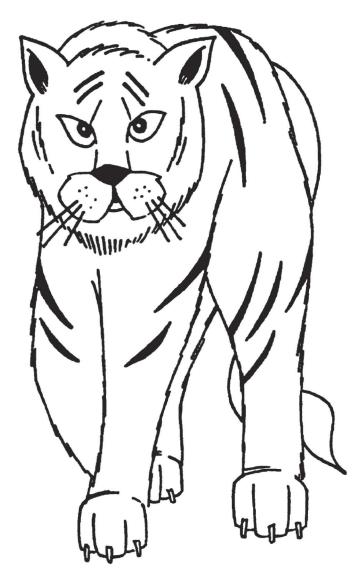
**BODY:** Tigers are large cats. They grow to be nine feet long and weigh more than 400 pounds. They have a brownish-yellowish coat that helps them blend in with their natural surroundings. Tigers are very powerful and can drag the body of a 500-pound animal a quarter of a mile.

**FOOD:** Tigers eat meat. They like large prey and will attack deer, antelope, and wild pigs. In some areas they have attacked cattle, sheep, horses, and even people. They will also eat small animals like monkeys and frogs.

WHERE FOUND: Tigers are found in India and Southeast Asia. Some have even been found in China.

**HABITAT:** Tigers live in jungles and in cold, snowy forests. They like places that have water, shade, and food.

INTERESTING FACTS: Tigers are very good swimmers. They swim across rivers in search of food, and on hot days, they will even play in the water.



### Paint:

- orange body
- · white face



### **ZEBRA**

**BODY:** Zebras look like striped horses. It is these stripes that make the zebra different from other members of the horse family. The stripes cover all parts of the zebra, including its mane and tail. Zebras stand from four to five feet tall.

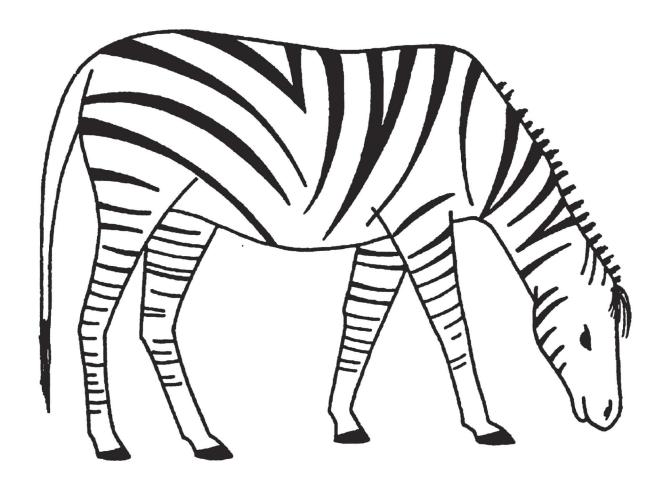
FOOD: Zebras are grazing animals. They feed on grass and occasionally eat bark and leaves.

WHERE FOUND: Zebras are found in Africa.

**HABITAT:** Zebras live on open grassy plains and sometimes in mountains. Their stripes help them blend in with the tall grasses, making it harder for their main enemy, the lion, to see them.

INTERESTING FACTS: Unlike horses, zebras are difficult to tame and to train.

They were once killed for their hides and meat. Zebra meat is considered very tasty. Some kinds of zebras are nearly extinct, but most are numerous.



### Paint:

black and white body



### **Mystery Animal #1: BATS**

**BODY:** There are more than 900 different kinds of bats. They come in all sizes and colors. The largest bats have wingspans of more than five feet and have bodies the size of pigeons. The smallest bats weigh less than an ounce and have wingspans of six inches. Bats have hands with fingers and feet with toes. The skin between the fingers and toes forms the bat's wings.

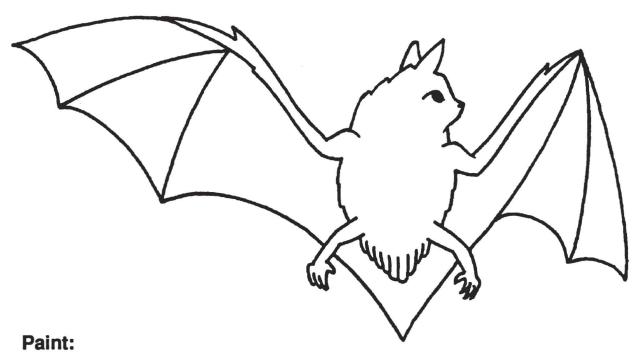
**FOOD:** Most bats eat flying insects, but some kinds eat other foods. Some bats catch fish. Others eat lizards, birds, and even other bats. The vampire bat eats blood and some bats eat fruit. Each night bats eat nearly half their weight in food.

WHERE FOUND: Bats live in all parts of the world, except Antarctica and the Arctic.

**HABITAT:** Bats like to sleep in dark places and come out at night. They make their homes in caves, attics, trees, and places that are dark.

INTERESTING FACTS: Bats are misunderstood animals. The expression "blind as a bat" is not true. Bats can see. They just can't see very well. Bats do not hurt people, but they do get diseases that are harmful to man. For this reason they should be avoided.

Bats make sounds while flying. By listening to the sounds' echoes, bats can fly in complete darkness and still not run into anything. They can even use these echoes to find flying insects and catch them in mid air.



dark brown body ... or... dark gray body



### **Mystery Animal #2: CHIMPANZEE**

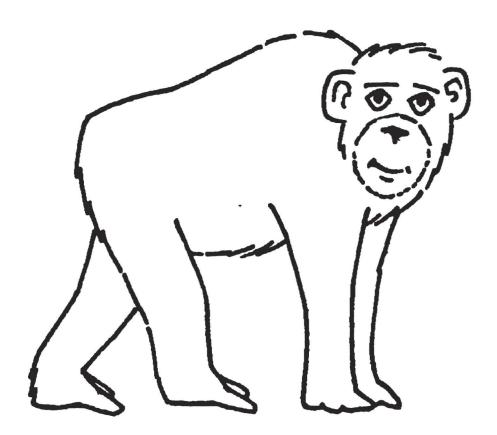
**BODY:** The chimpanzee is an ape. Its height ranges from three to five feet, and it weighs about 100 pounds. Its toes stick out sideways, enabling it to hold onto branches with its feet. Its hands are also well adapted for holding onto things. The chimpanzee's body is covered with long, black hair.

**FOOD:** Chimpanzees eat leaves, nuts, fruits, eggs, fish, and termites. They have been known to kill small baboons and wild hogs for food. An adult chimpanzee can eat 50 bananas at one sitting.

WHERE FOUND: The chimpanzee is found in Africa.

**HABITAT:** Chimpanzees live in forests and grassy plains. They make nests in trees and sleep in these nests. During the day, they spend their time in trees and on the ground.

**INTERESTING FACTS:** With the exception of man, chimpanzees are the best users of tools among animals. They use sticks to reach objects. They use leaves they have chewed to make sponges to soak up water to drink, and they use the stems of leaves to catch termites to eat.



### Paint:

brown body



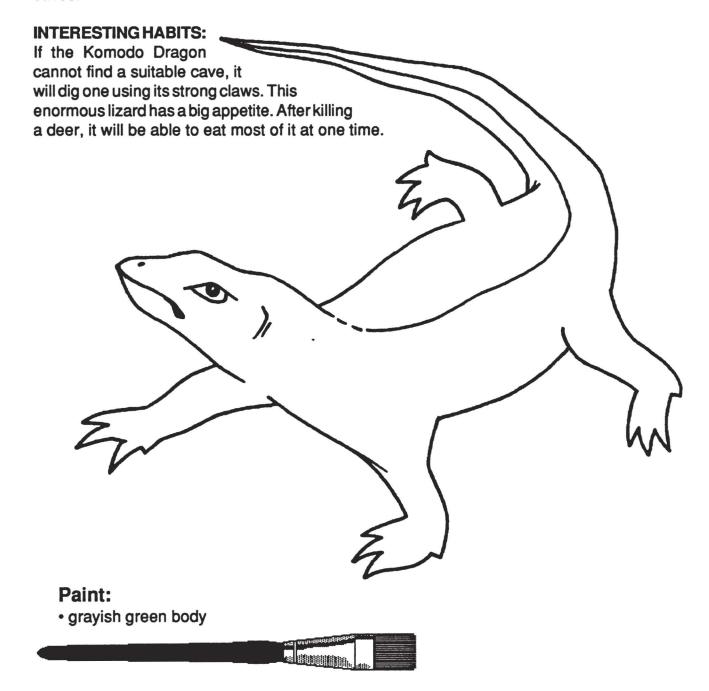
# Mystery Animal #3: KOMODO DRAGON

**BODY:** The Komodo Dragon is the largest lizard on earth. It reaches of length of 10 feet and weighs 300 pounds. This lizard has a long tail and its body is covered with small scales.

FOOD: The Komodo Dragon eats deer, pigs, and monkeys.

WHERE FOUND: This lizard is found on Komodo Island and other islands of Indonesia.

**HABITAT:** The Komodo Dragon lives in tall grass. At night it stays between rocks or crawls into caves.



# Mystery Animal #4 PELICAN

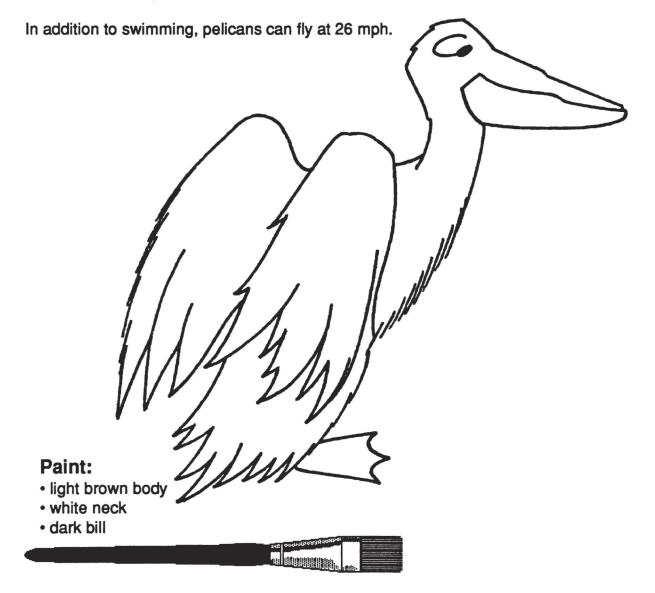
BODY: A pelican is a large web-footed bird. It is about five feet long and weighs about 16 pounds. The pelican has a wing span that ranges from eight to 10 feet. Attached to its bill is a large pouch that can hold up to 12 quarts of water.

**FOOD:** This bird eats small fishes that it catches by scooping them with its bill. Pelicans also eat shell fish.

WHERE FOUND: Pelicans are found in North America, Australia, Africa, and New Zealand.

**HABITAT:** Pelicans live in colonies along the shores of marshy lakes.

**INTERESTING FACTS:** Pelicans sometimes help each other catch fish. They form a line and swim together, beating the water with their wings. This causes the fish to move ahead of them, then they are scooped up by the diving pelicans.



### **Mystery Animal #5: WILD BOAR**

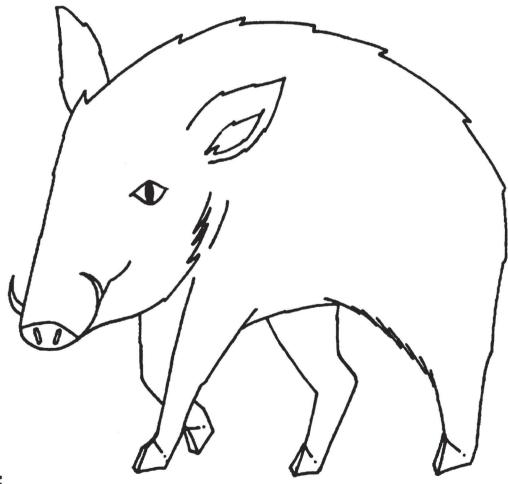
**BODY:** The wild boar has short grayish-black hair and stands about three feet high. It weighs nearly 400 pounds and is very powerful. The wild boar's lower jaw has two tusks that are used for fighting.

**FOOD:** The wild boar eats mostly grains and roots, but it will occasionally eat small animals and birds' eggs.

WHERE FOUND: The wild boar was once found in Europe, but it is now found only in Asia and Africa. Sometimes this animal is brought to other places so it can be hunted.

**HABITAT:** This animal likes to live in areas thick with trees and bushes. During hot weather, it likes to wallow in mud.

INTERESTING FACTS: This has been a popular animal for hunting.



### Paint:

- grayish ... brownish body
- · white teeth





### Introduction

During the final week of this simulation, your students will convert your classroom into a zoo and put on a program for students, parents, and teachers. Here is a brief description of what these visitors will see when the come to the reopening of Zooland.

Visitors As the visitors file in the classroom, they will be greeted by the sounds of animals. They will see these animals in special habitat displays. Animals of the grasslands, swamp, mountains, desert, and polar regions will be moving about. Zoo keepers will be seen cleaning the cages and moving around the zoo.

The tour The visitors walk to the center of the room where space has been provided for them to sit. When all of the visitors are seated, the lights go out and a spotlight focuses on the swamp. A tour guide welcomes the visitors and takes them on a trip through the zoo, stopping at each display area. The first area is the swamp. The guide points out all the animals for the visitors to see. Then, just before the two zoo keepers leave this area, the alligator and crocodile lunge at them. The audience is warned to be careful when visiting this area.

The guide then takes the visitors to the Polar Regions, where they meet the penguins and a polar bear. The tour moves next to the grasslands, where the visitors learn why the elephant is endangered, and they learn some interesting facts about the giraffe. At the jungle, the audience sees the tiger, the monkey, and the gorilla. The final stop of the tour is the mountains. Here the visitors see a bear and the zoo's most valuable animal, the giant panda.

Free time After the tour, the lights go on and the visitors wander around the zoo. They can look at the animals up close and ask the zoo keepers any questions they may have about the animals.

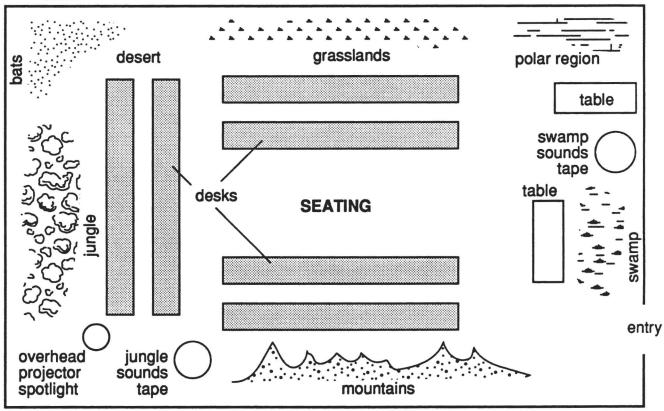
The lesson plans for this part of the simulation show you how to get your room ready for the reopening of Zooland, but before you begin there are several things you must prepare in advance.

# Setup Directions for Zooland's Reopening

- Make overhead transparencies of all animals you are using in this simulation, or if your projector has an acetate roll you may trace the animal on to the acetate. Also make transparencies of the Grasslands, Jungle, Swamp, and Mountains.
- 2. With the help of your students, project each animal's image onto large sheets of cardboard and trace them with a black marker. Have your students make the cardboard animals as large as possible, but try to keep their sizes proportional to each other. The giraffe should be the tallest (at least 6'); the elephant, the biggest (at least 5' tall and 6' long); the bats, the smallest, and the other animals should be in between. Obtain the necessary cardboard from stores that sell large appliances and furniture.

3. Collect all the materials you will need for each of the habitat displays. The displays that are shown will vary, depending on the size, shape, and placement of fixtures in your classroom. Consider making these displays: grasslands, jungle, mountains, swamp, polar region, desert, and bats. These "displays" eventually will go on the walls; the cardboard animals will stand in front of the displays.

## Bird's Eye View of ZOOLAND



### Grasslands

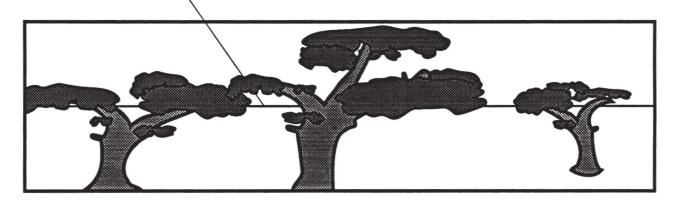
### **Materials:**

1. Two rolls of yellow butcher paper the length of your longest wall.

### **Procedures:**

- Staple or tape both rolls of butcher paper to the wall. Use a minimum amount of tape and staples because the paper will be removed when you have finished the next step.
- 2. Project the image of Grasslands at one end of the butcher paper and trace with a marking pen. Move the image to another section of the butcher paper and trace again. Continue in this way until you reach the end of the paper. When you are done, the Grasslands mural should look something like this:

You will likely have to tape together 2 sheets of butcher paper to make the total mural.



Have your students paint the scenery on the 2 sheets of yellow butcher paper. Of course, if they are imaginative and energetic artists, encourage them to add more to the Grasslands Mural (and to other murals) than is given here.

3. Remove the butcher paper and save it until you are ready to have your students paint it.

### **Jungle**

### **Materials:**

- 1. A roll of dark green butcher paper that is as long as your chalkboard.
- 2. An eight-foot piece of light green butcher paper, and an eight- foot piece of brown butcher paper.

### **Procedures:**

- Roll up the dark green butcher paper and set it aside. You will not need it now, but it will eventually be stapled above your chalkboard.
- 2. Project the image of Jungle on to the light green and the brown butcher paper so that the tree trunks are on the brown and the tree leaves are on the light green. Trace with a black marking pen.
- 3. Set aside these drawings. They will be cut out at a later time and taped to the chalkboard and dark green paper to make the Jungle display shown below.

Green butcher paper only ... or green butcher paper and green chalkboard



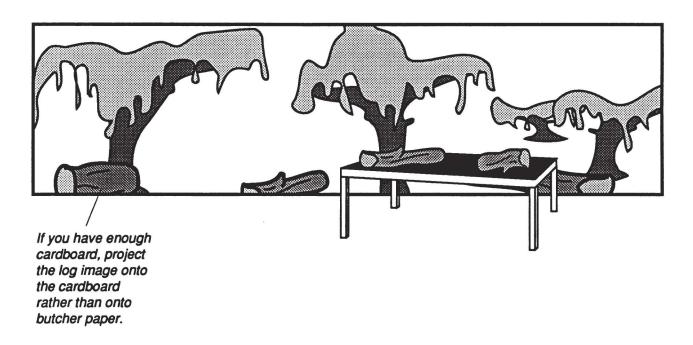
### Swamp

### **Materials:**

- 1. Two rolls of light green butcher paper long enough to cover one wall.
- 2. A roll of dark blue butcher paper long enough to cover a table, and an eight-foot roll of brown butcher paper.

### **Procedures:**

- 1. Using the Swamp overlay, project the image of the trees onto the light green butcher paper and trace their shapes. Students will paint these trees at a later time.
- 2. Using the Swamp overlay, project the logs onto the brown butcher paper and trace their shapes. These will be cut out at a later time, painted, and then mounted on the display.
- 3. The illustration given below shows how all of these parts go together to create the swamp display.



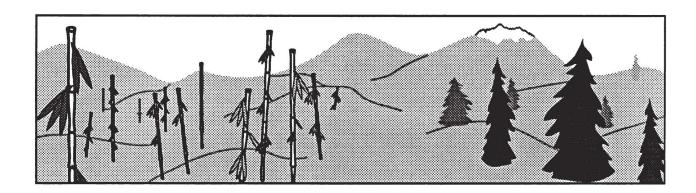
### **Mountains**

### Materials:

1. Two rolls of butcher paper that will cover one of your classroom walls.

### **Procedures:**

- 1. Using the Mountains overlay, trace the trees onto the butcher paper. Set aside for students to paint at a later time.
- 2. The illustration below shows how this display will look when completed.



### **Polar Regions**

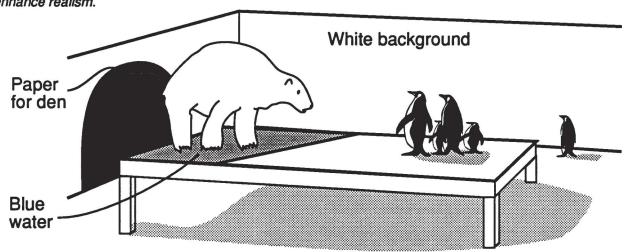
### **Materials:**

- 1. White butcher paper, black butcher paper (3' x 3')
- 2. Enough blue butcher paper to cover a table

### **Procedures:**

1. This illustration shows how the Polar Regions are created.

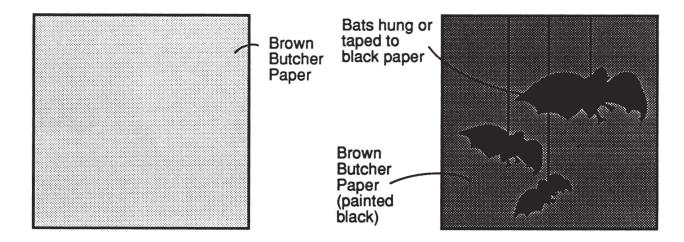
Of course, for some of these displays, you may have to cover cabinets, drapes, or bookshelves to enhance realism.



### **Desert and Bat Displays**

### **Materials and Procedures:**

 The desert and bat displays will go in a corner or any remaining spaces. The desert will have brown butcher paper for a background. The bats can hang from the ceiling against a black background. The illustrations below show these two displays.





- 4. Select music and animals sounds for the zoo. Several environmental recordings on CD are appropriate for this purpose, or sounds may be downloaded for free from the internet. If you yourself cannot find such background music and sounds, select some creative students to find appropriate background music recordings to which they can add animal sounds which they make! After they have made their plans and you have heard what they have practiced, approve their sound creation and have these students make a recording.
- 5. For the zoo tour you will need a **spotlight**. To make a spotlight, cut out a circle 5" in diameter from the center of a 12" x 18" piece of black construction paper. Lay the construction paper on the overhead projectorand turn on the projector. Adjust the size of the spotlight by making a larger or smaller hole.
- 6. Make arrangements for **visitors** (parents, teachers, and other classes and a photographer and reporter from the community newspaper) to come to your zoo. Do not have morethan one class visit at a time. The amount of time a class spends in the zoo will vary, but 20 minutes is usually enough.
- 7. If you have access to a video camera, film the grand opening. You can use this video to motivate next year's class when they begin ZOO, and you can share it with parents at Open House during Public School Week.
- 8. During the final "performance," you may have the mayor and members of the city council (role played by adults in the school) arrive and announce the following: "Zooland will stay open forever thanks to the hard work of the students in \_\_\_\_\_!"

Plan for at least four performances. Several classes will likely wish to visit your zoo. Put a sign-up sheet in the teacher lounge.

Your students will love being video taped. Tell them in advance that they are going to be video stars and they will work even harder to be capable zoo keepers.

Jung

# Swamp

# Mountains

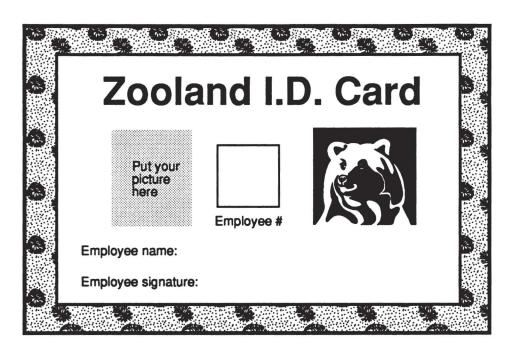
Grasslands

This line represents where you and your students will likely have to tape together 2 sheets of butcher paper for the Grasslands area. To make other areas in your zoo you may choose to place one sheet of butcher paper over a green chalkboard.

### **ZOOLAND IDENTIFICATION CARDS**

**Directions:** Duplicate sufficient copies so that after cutting the sheets apart, you will have one I.D. Card for each student. Consider mounting on lightweight cardboard and laminating.

Final suggestion: If you have a school mascot, place its picture over the bear's picture.





### **ZOO STORIES**

Create your own zoo story by using information from the ANIMAL FACT SHEET and your own imagination. Here are some things you may include in your story:

- 1. Give your animal a name.
- 2. Tell how your animal got its name.
- 3. Tell how Zooland got your animal.
- 4. Tell something interesting your animal did at the zoo.
- 5. Explain any unusual habits your animal may have.
- 6. Tell about any problems the zoo keeper may have had with your animal.
- 7. If your animal is endangered, tell why.
- 8. Include interesting facts about your animal.

You may add any ideas of your own to this story, but do not make up animal facts or change the ones you were given. Here is a sample zoo story.

### **Chomper the Camel**

This is Chomper. He is one of two Bactrian camels we have here in Zooland. He was a gift from the San Diego Zoo. Since on his first day here he bit three zoo keepers, we decided to name him Chomper. Most camels are mean and nasty. If they can't kick you or bite you, they will try to spit on you, so stay back.

You will notice that Chomper has two humps on his back. Arabian camels have one hump; Bactrian camels have two. Most people think the hump is full of water, but it is mostly fat. A camel will use this fat for food when it has nothing to eat. Camels can go without food for weeks.

Camels live in deserts. Their bodies help them survive in the desert. Thick fur protects them from the hot sun and cold desert nights. They have thick eyebrows that keep the sun out of their eyes. Each eye has three eyelids that protect them from the desert sand. The skin in their mouth is so tough they can eat many things, even thorny cactus plants.

Here in Zooland, we feed the camels hay and grains.

### HOUR 11

### **Materials:**

- 1. A different ANIMAL FACT SHEET for every two students.
- 2. A copy of ZOO STORIES for each student.

### **Procedures:**

1. Playing the role of the zoo director read or tell the following:



For the last two weeks you have been taking care of animals, learning how to be zoo keepers and raising money. I want to congratulate all of you. Because of your efforts we have raised enough money from sponsors to begin remodeling Zooland. So I am closing the zoo today and sending the animals to other zoos while we are remodeling. We are going to replace the old cages with new, exciting displays that will show the animals in their natural habitats. When we finish we will have a Grand Reopening of Zooland and show everyone the exciting zoo we have created.

Meanwhile, there is plenty of work for us to do. While I am ordering the building supplies, I want you to become familiar with all of the animals we have and to become an expert on one of them. Your teacher has the directions for this, so let's get started.

- 2. Give each student a partner. Then assign one of Zooland's animals to each pair of students. (*Note:* The flamingo, penguin, snake, and bats need only one student.) Today each pair will study their animal and write a zoo story about it.
- Give each pair an ANIMAL FACT SHEET about their animal and have them read it. Tell them they are responsible for knowing all of the information given on this paper, and that they should study it whenever they have a chance. If your are using ZOO with older or gifted students, suggest they use encyclopedias to increase their knowledge.

- 4. Hand out a copy of ZOO STORIES to each student. Go over the directions. Explain to your students that they will be writing their own zoo story about the animal they were assigned.
- Tell everyone that they will have to tell their stories to the students in class and to the visitors when the zoo reopens. The class presentation will be in three days; the visitor presentation will be in four days.
- 6. Explain that there may be two entirely different stories about the same animal. This will not be a problem because partners will alternate between telling stories and moving the animal. (Refer to Hour 14 for more information).
- 7. When students have finished their stories, they may keep them in their desks or you may collect them and make photo copies. Then students can have one copy at home and one at school.
- 8. Encourage your students to practice their zoo stories until they can tell them with ease and fluency.

### **HOUR 12**

### **Materials:**

- 1. Cardboard with outlines of animals
- 2. Paints

### **Procedures:**

- 1. Have your students, working in pairs, paint the outlines of their animals with black paint.
- 2. While the paint is drying, have your students memorize their zoo stories and facts about their animals. They may pair up and tell their stories to each other.
- 3. Once the paint is dry, have your students paint the rest of their animals. Students that finish early may help paint the larger animals like the giraffe and elephant.

### **HOUR 13**

### **Materials:**

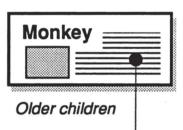
- 1. Rolls of butcher paper on which you traced the grassland, jungle, swamp, and mountain scenes.
- 2. Paint, scissors, crayons, markers, and construction paper.
- 3. A sharp knife (for teacher use only)

### **Procedures:**

1. Have your students make signs for their animals.



Younger children



Draw maps of contients to show where the animal lives ...
Also add an animal fact to the sign.

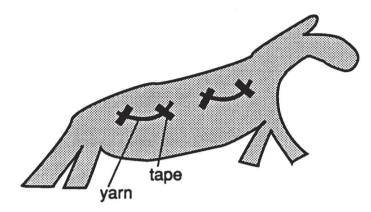
- 2. Assign five students to each make a "Please! Do Not Feed The Animals" sign.
- 3. Assign three students to repaint any parts of the animals that need to be "touched up."
- 4. Unroll the sheets of butcher paper on which you traced the scenes for the grasslands, the swamp, the jungle, and the mountains. Have your students cut out and paint the trees for the jungle and the logs for the swamp. Next have them paint the trees on the grasslands, swamp, and mountain displays. Then staple or tape these to a wall to dry.

5. Assign three students to paint the following signs: ZOOLAND NOW OPEN and TOURS BEGIN AT \_\_\_\_\_ (students write in the times of the tours).

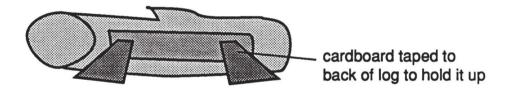
Do this activity in a large room or hallway. Do it outside only if it is not windy.

Tell your students the times for the tours. Then they write these signs. Use a sharp knife or razor blade. A serrated steak knife works great.

6. After the students have gone for the day, cut out each animal. Tape two pieces of yarn to the unpainted side as shown below. The yarn will be used by the students to hold up the animal.



7. Tape the logs to pieces of cardboard as shown below.



### HOUR 14

### **Materials:**

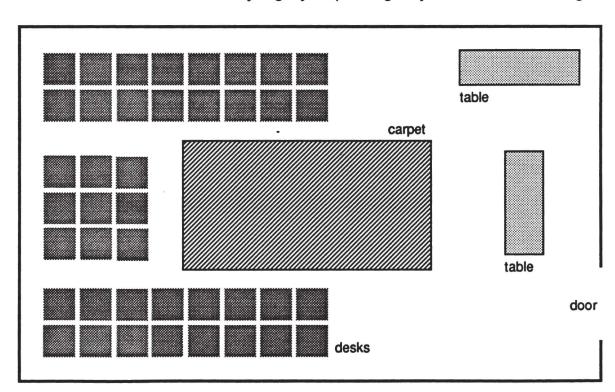
Have students bring in the materials after #1 and #2.

- 1. Brooms, mops, buckets, and rags for zoo keepers
- 2. Sound effects music
- 3. Wall displays to create the grasslands, swamp, jungle, polar region, deserts, and mountains.

### **Procedures:**

Consider video taping this activity.

- Have your students, one at a time, tell their zoo stories to the class.
   While one student is telling the story, the partner is moving the cardboard animal.
- 2. When your students have finished their zoo stories and the cardboard animals are put safely away, move the desks into a configuration similar to the one shown below. The arrangement of desks will vary slightly, depending on your classroom's design.



3. Have your students go to the part of the classroom where they will be standing with their animals. (*Note:* Students do not have animals at this time.) Suggestions for placement are given below, but may be changed depending on classroom space available.

Grasslands: elephant, giraffe, lion, rhinoceros
Jungle: tiger, gorilla, monkey, snake, chimpanzee
Swamp: alligator, crocodile, flamingos, snake, pelican,
bats, hippopotamus

Mountains: bear, giant panda
Polar: polar bear, penguins
Desert: camel, kangaroo

Note: The animals in bold italics are mounted in the displays

and do not move.

- Make adjustments where the zoo is too crowded. If there are too
  many grassland animals, move some of them to another section
  of the zoo.
- 5. Bring in the animals. The animals are placed on the desks that are nearest the walls. One student stands behind the animal and moves it. The other student stands in front of the desk and animal. This student will eventually play the role of the zoo keeper.
- 6. Once again make any moves that are necessary. Then hand out buckets, mops, brooms, sponges, and rags to the students playing the roles of zoo keepers.
- Explain to your students that they will be either moving their animal
  or "cleaning" around their animal when the zoo visitors enter. They
  will continue until everyone is seated and the sound effects music
  stops.
- 8. Turn on the music of animal or jungle sounds. Have your students practice moving the animals and "cleaning" until the music stops.
- 9. Tell your students that after the visitors are seated, the lights will go out and the zoo tour will begin. Remind them that during the tour they should be quiet and still.

Assign a student as KEEPER OF THE LIGHT.

"Lights Off" is the signal for students to stop moving and to be quiet.

10. Practice the zoo tour given on page 5:24 ff. with your students until they are familiar with their parts. Turn on the overhead projector and focus the spotlight on the swamp. Turn off the lights and begin.



### **TOUR GUIDE'S PRESENTATION**

Welcome to Zooland. I will be your guide this morning (or afternoon) for a brief tour of our zoo. Before we begin, may I remind you to stay back from the animals and please do not feed them. They might bite!

All of the animals you see are separated by panes of thick, clear plastic and other invisible barriers that are designed to make viewing the animals easier for you.

As we tour the zoo, you will notice boys and girls wearing ID cards. (Have your students point to their ID cards and focus spot light on them.) They are the zoo keepers that work with the animals here in Zooland. After the tour, please feel free to ask them any questions about the animals. Now, let's get started.

The first area we are stopping at is the swamp. (All of the animals are visible except the alligator and crocodile which are hidden.) Point out each animal, except for the alligator and crocodile, and their zoo keepers.) We also have crocodiles and alligators, but I don't see them right now. (Pause) They're probably sleeping. When you visit the swamp, be sure to ask the keepers the difference between an alligator and a crocodile.

Have the keepers jump back and scream!

Next we have ... (Start to move the spot light away but quickly go back and yell, "Look out," as the crocodile and alligator lunge at the keepers that are standing at the end of each log.) Did you see that? Those keepers almost got pulled into the swamp. I recommend you stay back when you visit this area.

Wait until the audience settles down.
Then move the spotlight to the Polar Region.

Our next display is the Polar region. That polar bear would just love to eat those penguins, but we keep those penguins protected. In the wild, a polar bear would never

# Read/Speak

Be sure you put the spotlight on each zoo keeper and his/her animal during the tour. Suggest questions that members of the audience may ask the keepers after your introduction. For example, someone might ask the elephanat's zoo keeper: "Are all elephants the same? Or are some kinds more angry than others?"

Yell this WATCH OUT!

Use a soft voice, as if telling a secret, while you talk about staring at a gorilla. eat a penguin. The keepers can tell you why. (Penguins live in Antarctica and polar bears live in the Arctic.)

Next we have the grassland display. It has many animals you may recognize. (Point out the animals except for the elephant and giraffe. Then focus the spot light on the elephant.) The elephant is now an endangered specie. It is killed for its ivory tusks. (Have the keeper point out the tusks.) Imagine that entire elephant is killed just so people can have those tusks. In 50 years there is a good chance there will not be a single living elephant on earth.

Next, we see the giraffe. (Turn the spot light on the giraffe.) Just look at its long neck. That neck has the same number of bones in it that yours and mine have. The giraffe's bones are just larger. I don't remember how many bones there are, but the keepers might be able to tell you. Here comes a keeper now. Oh, no! He's (she's) making a big mistake. Watch out! (Giraffe swings its head at the keeper but misses.) Giraffes sometimes try to hit the keepers by swinging their heads at them. If the keepers wear hats, they can't see very well above them and they might get hit. They should keep their hats off when working around giraffes. (Move the spotlight.)

In our jungle display we have some of the most popular animals in the zoo. (Point out these animals except for the gorilla.) Gorillas do not like to be stared at. When you stare at a gorilla, it thinks you want to fight. However, there is a way you can get a gorilla to come right up next to you, and our zoo keepers can tell you how to do this.

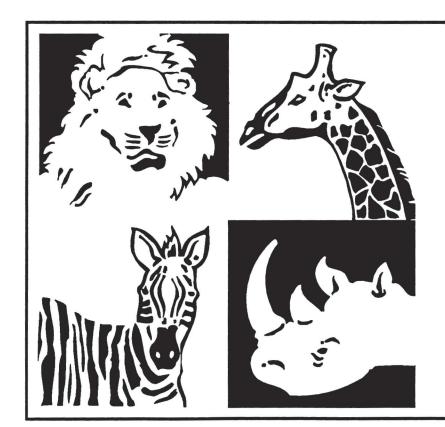
The last stop of our tour brings us to our most valuable animal: the giant panda. There are less than 20 giant pandas in zoos outside China. We are very fortunate to



have one of these rare animals. Be sure to ask the keeper about the giant panda.

That concludes the tour. You may visit the animals on your own and feel free to ask the zoo keepers any questions you may have. I hope you have a pleasant visit and come back to see us again soon.

- 11. Tell your students that at this point the lights and sound effects will go back on, and the visitors will go to see the different animals and listen to the zoo keepers stories.
- 12. At the end of the day, put up the scenery for all of the habitat displays. Put it up over the existing bulletin board. (See pages 5:3 through 5:6.)
- 13. Tell your students to bring in plain-colored shirts and baseball hats for tomorrow's opening of Zooland.



And above all,

## THANK

all your students for saving ZOOLAND for all of us!

## HOUR 15 ZOOLAND'S GRAND REOPENING

### **Materials:**

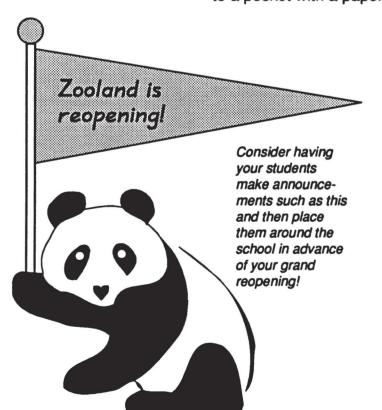
- 1. Mops, brooms, buckets and rags for the zoo keepers.
- 2. Sound effects music.
- 3. Overhead projector.
- 4. Zooland ID cards and paper clip for each student

## Procedures:

- 1. Put up the some signs outside your classroom door such as at the left.
- 2. Inside the classroom, put up the signs with each animal's name where the animal will be positioned. Then put up the "Please! Do Not Feed The Animals" signs around the classroom.
- 3. Give your students their Zooland ID cards. These may be attached to a pocket with a paper clip.

Zooland now open Today's tours begin at 10 AM

> 11 AM 2 PM



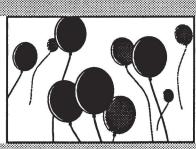
- When the first visitors arrive, have them line up outside your classroom.
- Have your students take their positions. Start the sound effects music. Have the visitors come in and sit on the floor in the middle of the classroom.
- While the visitors are entering, the animals should be moving and the keepers cleaning.
- When the visitors are all sitting, slowly turn off the sound effects music, turn on the spot light, and turn off the lights.

important: Don't forget to video tape this tour. Parents that cannot attend will enjoy watching their children perform ... And of course, making a video together is one more way to help your class feel that the members are one ... The same can be said for having a wrap up party such as is described in number 14 below ... One of the many great things about simulations is that they help class members become a community!



- 8. Begin the tour. Read/tell the TOUR GUIDE'S PRESENTATION beginning on page 5:24.
- 9. Turn on the lights and music. While people are wandering around the zoo, pay attention to students that might not be getting any visitors. If this happens, direct people toward them.
- 10. After 15 minutes, blink the lights a few times and announce the zoo will be closing in 5 minutes.
- 11. When all of the visitors have left, discuss with your students any questions they could not answer. If time permits, try to find the answers to these questions.
- 12. If there is a long break between "performances," have your students put the animals and props in a place where they will not get broken or damaged.
- 13. After the final "performance," hold a brief discussion about this simulation. Discuss the following:
  - What did you like best about Zoo? the least?
  - What part was the most fun? the least?
  - How many of you would like to work in a zoo?
  - · What jobs would you like to do at the zoo?
  - What is something you learned about zoos that you did not know before?
  - What did you learn about the animals?
  - Would you like to do this simulation again?
- 14. If you have planned a party to celebrate your students' experience with this simulation, this would be a good time to have your celebration.

**ZOO** party today for all zoo keepers



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