

Go Wild With Endangered Species!

**A learning adventure in science, geography,
math, language—and running a zoo!**

Dear Educator,

What child wouldn't want to run his or her own zoo? Now, Microsoft® and award-winning curriculum specialists Young Minds Inspired (YMI) have teamed up to send your students on an exciting animal adventure and lead your class through carefully crafted lessons that meet national standards in **science, math, geography, and language arts**.

The activities allow students to learn about endangered animals and the environments in which they live. Students will also manage a zoo budget, spending their money wisely to save as many animals as possible, while making sure zoo visitors have a great time.

This program was inspired by *Zoo Tycoon® 2: Endangered Species*, the newest addition to the popular *Zoo Tycoon* series—honored with the Seal of Approval from the National Parenting Center and the prestigious Bologna New Media Prize for its fusion of education and entertainment.

Because all kids love to use computers, we're featuring a free online Zoopedia, full of amazing facts about a wide variety of fascinating animals. Have students use the Zoopedia to complete the activities and to find cool facts about our world and the fascinating animals in it.

This package includes a CD-ROM—see inside—of fun and informational Zoopedia pages so your students can get a preview of what they'll see online as well as an exciting demonstration of the *Zoo Tycoon® 2: Endangered Species* computer game.

These materials also include a colorful wall poster about endangered animals. Finally, please send home the valuable take-home quiz to encourage parents and students to discuss and learn more about endangered species together.

Feel free to make as many photocopies of these copyrighted materials as you need in order to share with colleagues. Download additional copies at www.ymiteacher.com

Let your students' creativity and imagination run wild!

Sincerely,



Joel Ehrlich
President and former teacher



YMI is the only company developing free, creative and innovative classroom materials that is owned and directed by award-winning former teachers. All YMI teaching materials are pre-certified and approved by our exclusive Educational Advisory Board. E-mail us at feedback@ymiclassroom.com or visit our Web site at www.ymiteacher.com to send feedback and download more free programs.



Who Should Use This Program?

This cross-curriculum program can be used with fourth and fifth grade students.

Program Components

- This teacher's guide
- Four reproducibles on science, math, geography, and language arts, including take-home components
- A colorful wall poster on endangered animals
- CD-ROM of exciting Zoopedia information on animals and biomes and a demonstration of *Zoo Tycoon® 2: Endangered Species*.

Bring Online Learning into the Classroom

Improve students' computer and online research skills with Zoopedia—the online animal encyclopedia from award-winning Microsoft® Encarta®. Show your students the CD-ROM on your classroom computer, featuring the amazing Zoopedia pages and facts about endangered species and the biomes in which they live. Tell them that when they go online to www.zootycoon2.com/endangeredspecies, they're going to get the same exciting information.

Show them the demonstration of *Zoo Tycoon® 2: Endangered Species* so they can get a preview of the animals they're going to study and what it takes to run a zoo. Then copy and distribute the activity sheets. When you're done, ask students to go back online and find out something else about a different animal or biome. Also suggest that they use the **free trial version** of the game to begin creating their own zoo and report back about how they're doing.

Program Objectives

- To use a popular, award-winning computer game as the springboard to lessons about endangered species, ecosystems, and budgetary estimation and responsibility
- To improve online research
- To improve student skills in science, math, geography, and language arts, using online activities to which students can easily relate

How To Use the Wall Poster

Display the wall poster in a prominent place in your classroom. Use the poster to reinforce the importance of saving endangered animals and of making careful choices when budgeting.

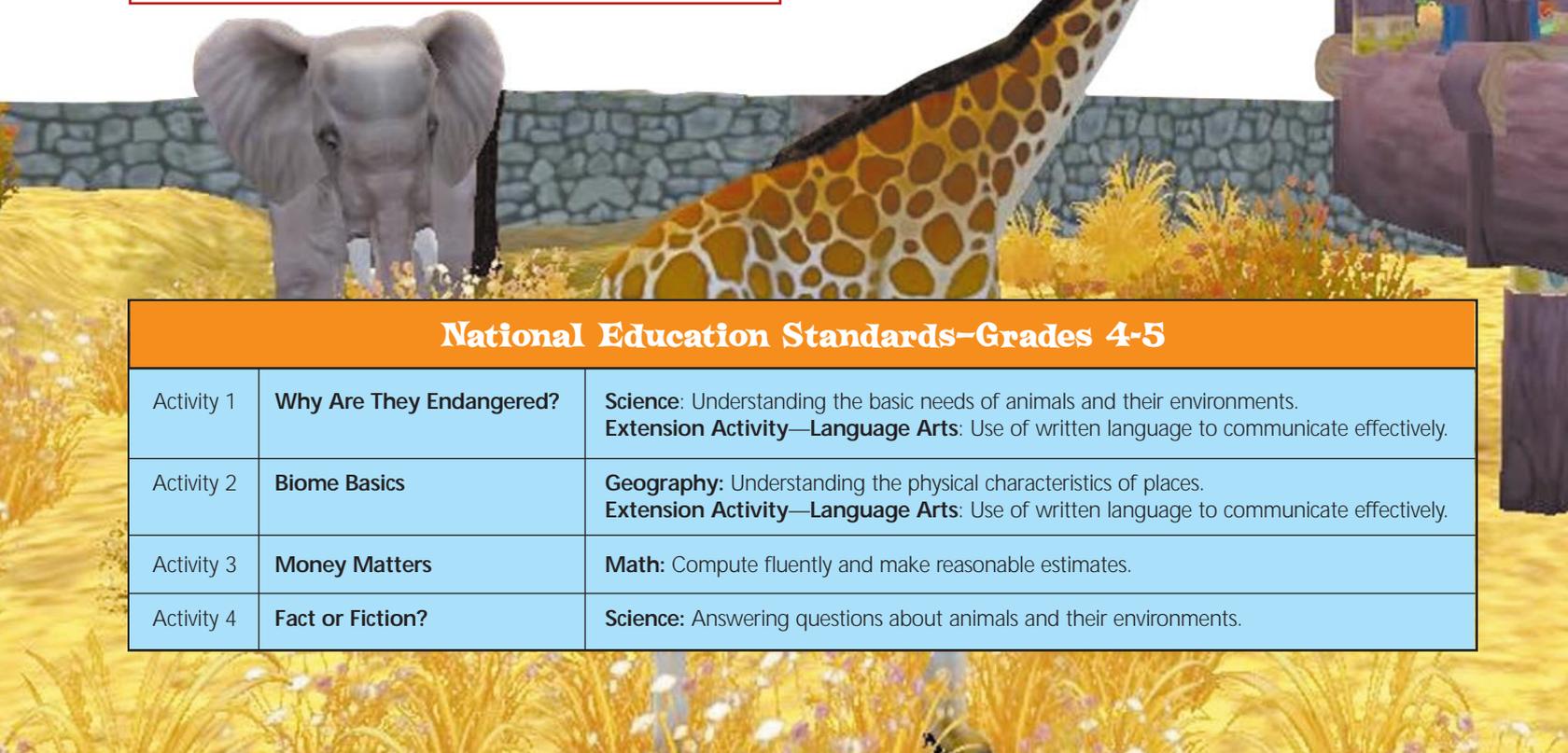
Introduction to Zoo Tycoon

The *Zoo Tycoon* computer game series lets players imagine, create, and run their own zoo. From choosing the animals and deciding what to feed them to deciding what guests need and how much to charge for admission, players learn science, social studies and math all while having a great time.

Core games in the series are *Zoo Tycoon* and *Zoo Tycoon 2*. Expansion packs such as *Zoo Tycoon: Dinosaur Digs* and *Zoo Tycoon: Marine Mania™* and the new *Zoo Tycoon 2: Endangered Species* can be used with the core games to add even more fun.

National Education Standards—Grades 4-5

Activity 1	Why Are They Endangered?	Science: Understanding the basic needs of animals and their environments. Extension Activity—Language Arts: Use of written language to communicate effectively.
Activity 2	Biome Basics	Geography: Understanding the physical characteristics of places. Extension Activity—Language Arts: Use of written language to communicate effectively.
Activity 3	Money Matters	Math: Compute fluently and make reasonable estimates.
Activity 4	Fact or Fiction?	Science: Answering questions about animals and their environments.



Activity 1

Why Are They Endangered?

Part A. Saving endangered animals is a challenge faced by zoos and wildlife conservation societies around the world. Here is a list of the most common reasons animals become endangered.

- contact with domestic animals
- loss of habitat due to deforestation, natural disasters, or human population growth
- hunting and trapping
- being captured to be sold as pets or for their fur
- introduction of their predators by humans
- wars
- poaching by humans for body parts such as horns

Part B. Tell your students to use the Zoopedia, the fact-filled section of the *Zoo Tycoon® 2: Endangered Species* Web site (www.zootycoon2.com/endangeredspecies) to research one of the endangered animals featured in the game.

Extension Activity

- Ask your students to write a letter to their local zoo explaining what they found in their research.
- Have your students ask their parents about how they are meeting the basic needs of their pets at home.

Activity 2

Biome Basics

Tell students that understanding the natural environment or “biome” in which an animal lives is essential to creating a comfortable and healthy zoo environment. Zookeepers must recreate a biome that meets animals’ needs for food, shelter, exercise, rest, privacy, hygiene and social interaction.

Parts A&B. Review the definitions of the following biomes with your class:

Grassland—Grass is dominant with few trees. Climate ranges from desert-like to tropical. Very good for farming and grazing.

Savannah—Hot year-round, with distinct wet and dry seasons. The vegetation ranges from forests to grass and shrubs.

Tropical Rainforest—Warm, humid, and rainy year-round. Contains many trees. It features the largest variety of plants and animals in the world.

Boreal Forest—Evergreen are dominant. Long, cold winters and very short summers.

Tundra—No trees and practically no plants because it is so cold, windy, and snowy year-round.

Alpine—High mountain elevations and very cold. Plants grow close to the ground because of the harsh conditions.

Scrub/Chaparral—Hot, dry summers and cool, wet winters. Frequent droughts and fires. Trees and shrubs are small with hard evergreen leaves.

Desert—Less than 10 inches of annual rainfall and very sandy soil. Very hot during the day but can drop down to freezing at night.

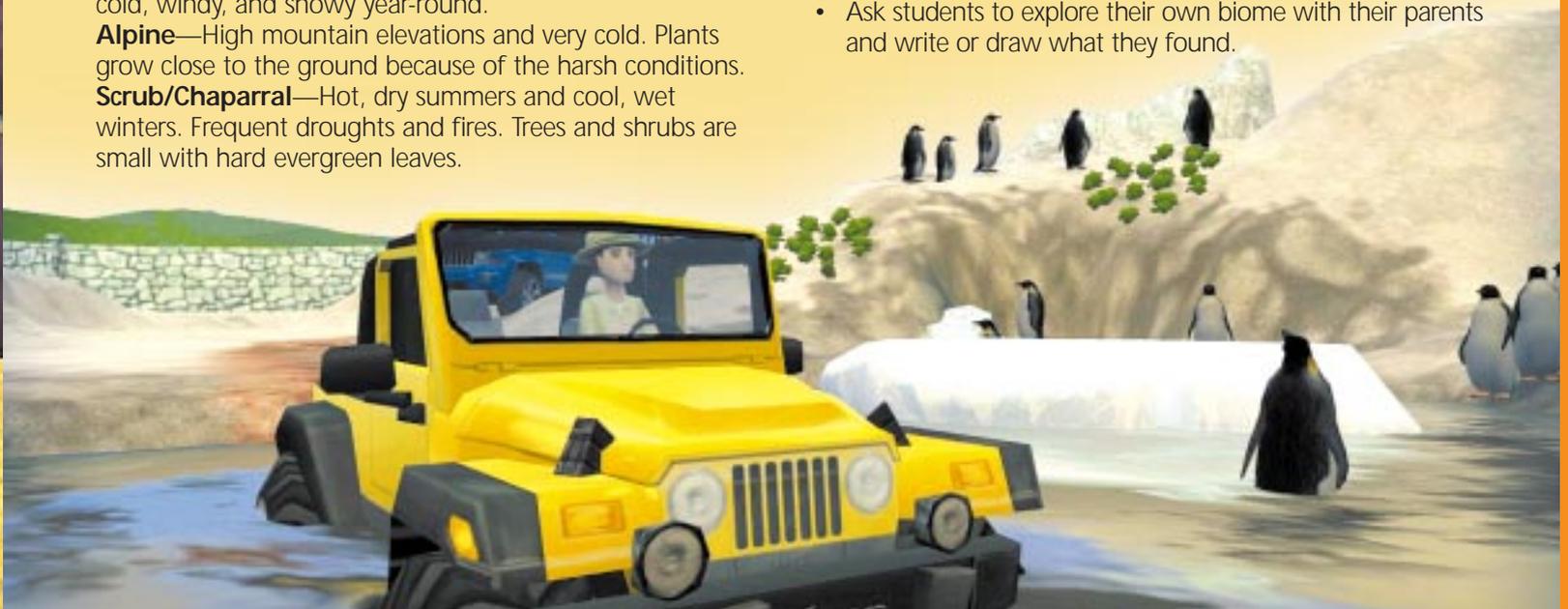
Temperate Forest—Four distinct seasons with year-round precipitation. Leaves on deciduous trees change color in autumn and then drop.

Wetland—Ground is immersed or partially soaked in water year-round. Exists in every climate except desert.

Have students use the Zoopedia, the fact-filled online encyclopedia, at www.zootycoon2.com/endangeredspecies to research the biome of one of the 20 endangered animals featured in the game. Tell them to use the information and their imagination to answer the questions to **Part B**.

Extension Activity

- Have students imagine what it would be like to be the animal they chose. Have them write about a day in the life of an endangered animal from that animal's point of view.
- Ask students to explore their own biome with their parents and write or draw what they found.



Activity 3

Money Matters

In the practical world of building and running a zoo, budgetary concerns force zoo operators to make critical decisions about which animals to include, what those animals need to live a happy and healthy existence, and what amenities to provide zoo visitors.

In this activity, ask your students to make the tough choices about which endangered animals to save within a limited budget. Explain that for each animal they purchase, they must provide for that animal's needs, including food and shelter. They must also provide for the needs of visitors. And they must hire zoo staff. Guide them through their choices, helping them

to stay within the \$40,000 budget. Students who want to learn exactly what specific endangered species like to eat and even what types of toys they like to play with should go to the Zoopedia pages at www.zootycoon2.com/endangeredspecies

Extension Activity

Ask students to go online with their parents to the Zoopedia to see which items their parents think are important in running a zoo. Have them report back what items their parents thought were necessary.

Activity 4

Fact or Fiction?

Encourage your students to test their endangered species IQ and then have them test their parents. When they're done, suggest that they go online to the information on Zoopedia at www.zootycoon2.com/endangeredspecies with their parents to find the correct answers.

Ask students to bring the completed quiz into class. Make a graph of who knew more answers—parents or students.

Answers: 1-T, 2-T, 3-F: caribou live in the Arctic tundra, 4-T, 5-T, 6-F: gray wolves hunt in packs of up to 24 wolves, 7-F: the markhor is the largest wild goat in the world, 8-T, 9-T, 10-T

Resources:

- The Zoopedia at www.zootycoon2.com/endangeredspecies
- http://encarta.msn.com/artcenter_0/Encyclopedia_Articles.html
- <https://secure.worldwildlife.org/endangered/index.cfm>
- www.yमितeacher.com



Activity 1

Why Are They Endangered?

Part A. What would you do if you could create and run the zoo of your dreams? That's exactly what happens in the world of *Zoo Tycoon*®. The newest addition to this award-winning computer game series is all about endangered species.

Zoos work hard to protect and save endangered species. As the creator of your own zoo, you have a chance to do the same. But first you need to learn about the animals you want to help and also discover what is causing them to be endangered.

Why do animals become endangered?

1. _____
2. _____
3. _____
4. _____
5. _____

Part B. Choose one of the following endangered animals—**koala**, **komodo dragon**, **wolverine**, **American bison**, or **orangutan**—to include in your zoo, or pick any from the list you find in the Zoopedia at www.zootycoon2.com/endangeredspecies



Koala



Komodo Dragon



Wolverine



American bison



Orangutan

Which animal did you choose? _____

Now use the Zoopedia to answer the following questions:

Where in the world does your animal live? _____

Why is your animal endangered? (Problem)

What can be done to prevent it? (Solution)

1. _____
2. _____
3. _____

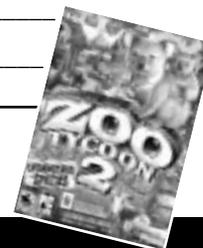
- _____
- _____
- _____

Now list five cool facts you learned about your animal:

1. _____
2. _____
3. _____
4. _____
5. _____



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Go wild with the FREE trial version of *Zoo Tycoon*® 2: *Endangered Species* PC game at www.zootycoon2.com/endangeredspecies

Activity 2

Biome Basics

Every animal needs food and shelter. The environment in which they live should provide them with these needs. This environment is called a "biome." One of the fun challenges in *Zoo Tycoon*® 2 and the Endangered Species expansion pack is to make sure you have a natural environment for each of your animals in your zoo.



Florida Panther



Gray Wolf



Galapagos Giant Tortoise



Javan Rhinoceros



Fennec Fox

Part A. Here is a list of biomes found around the world:

Biomes: Grassland, Savannah, Tropical Rainforest, Boreal Forest, Tundra, Alpine, Scrub/Chaparral, Desert, Temperate Forest, Wetland

Choose one of these endangered animals—**Florida panther, gray wolf, Galapagos giant tortoise, Javan rhinoceros, fennec fox**—or pick any from the list you find in the Zoopedia at www.zootycoon2.com/endangeredspecies

Now use the Zoopedia to find out in which biome the animal you chose lived.

Animal name _____

Biome _____

Write a short description of that biome. Is it always hot or always cold? Does it rain a lot there or is it very dry? On which continents can you find your biome?

Part B. Now, imagine you are that animal and write five facts about why you like living in that biome. Think about how the way you look, the food you eat and even where you sleep are affected by your biome.

1. _____

2. _____

3. _____

4. _____

5. _____



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Dolphins in the desert? Camels in the ocean? Or the other way around? You're in charge with the FREE trial version of *Zoo Tycoon*® 2: *Endangered Species* PC game www.zootycoon2.com/endangeredspecies

Activity 3

Money Matters

It takes more than just animals to create a successful zoo in real life or in the world of *Zoo Tycoon*®. The animals have to be fed and placed in environments that keep them healthy and happy. You also need to keep zoo visitors happy. And all of this costs money.

Pretend you are building a zoo. You have \$40,000 to save as many endangered animals as possible. Below is a list of items for purchase in the *Zoo Tycoon*® 2: *Endangered Species* expansion pack. Choose what you want from the list below. Make sure your total cost doesn't go over \$40,000. Use the Zoopedia at www.zootycoon2.com/Endangeredspecies to help you make good choices.



CATEGORY	HOW MANY?	COST FOR EACH	TOTAL COST
Animals			
Caribou	_____	\$1,250	_____
Galapagos Giant Tortoise	_____	\$3,000	_____
Koala	_____	\$7,500	_____
Komodo Dragon	_____	\$5,500	_____
Orangutan	_____	\$35,000	_____
Animal Needs			
Animal food	_____	\$150 per animal	_____
Maple tree	_____	\$60	_____
Tire swing	_____	\$800	_____
Small burrow	_____	\$700	_____
Large burrow	_____	\$1,600	_____
Visitor Needs			
Face-painting building	_____	\$1,000	_____
Hot dog stand	_____	\$300	_____
Small restroom	_____	\$100	_____
Trash can	_____	\$100	_____
Bench	_____	\$125	_____
Zoo Staff			
Zookeeper	_____	\$500	_____
Maintenance worker	_____	\$200	_____

YOUR TOTAL COST = _____

Did you stay within your \$40,000 budget? Yes _____ No _____



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\$125 for berries, \$3,000 for a sky tower, or \$10,000 for a wolverine? You're in charge with the FREE trial version of *Zoo Tycoon*® 2: *Endangered Species* PC game at www.zootycoon2.com/Endangeredspecies


Activity 4

Fact or Fiction?

What's your endangered species IQ? First, write your answers. Then ask your parents their answers. When you're done, you and your parents can use the amazing Zoopedia at www.zootycoon2.com/endangeredspecies to see who's right.

Take the Endangered Animals Quiz

- The survival of African wild dogs is threatened by contact with domestic dogs because they have introduced distemper and rabies. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- From 1830 to 1889, hunting of American bison for sport and for hides reduced their number from 60 million to less than 1,000. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- Caribou live in the desert. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- The Florida panther is also known as a cougar or a mountain lion. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- Only 1,000 giant sable antelope survive in the world—all of them living in central Angola at the Luando Reserve and Kangandala National Park. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- Gray wolves hunt alone. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- The markhor is the smallest wild goat in the world. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- The Przewalski's wild horse is considered extinct in the wild. This horse was last sighted in the wild in the late 1960s. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- The scimitar horned oryx has been hunted to the verge of extinction for its beautiful horns. It is considered extinct in the wild. True or False?
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____
- The Spanish lynx is the most endangered cat species in the world, with only about 1,000 remaining in the wild.
Your answer: _____ **Your parents' answer** _____ **Zoopedia answer** _____

How many did you get right? _____ How many did your parents get right? _____
 Bring the answers into class and compare them.

Dear Parent: Your child has been participating in an exciting learning adventure using Microsoft®'s *Zoo Tycoon*® computer game—winner of the prestigious Bologna New Media Prize for its fusion of education and entertainment—to study endangered species, biomes and how to run a zoo. Core games in the series are *Zoo Tycoon*® and *Zoo Tycoon*® 2. Expansion packs such as *Zoo Tycoon*® 2: *Endangered Species*, *Zoo Tycoon*®: *Dinosaur Digs* and *Zoo Tycoon*®: *Marine Mania*™ can be used with the core games to add even more fun and learning. These exciting, educational games are available at stores everywhere. Go to www.zootycoon2.com/endangeredspecies for a FREE trial version.