

GET IN DEEP WITH MARINE ANIMALS

A learning adventure combining science, geography, math, and language arts

Dear Educator,

You may already be familiar with the wildly popular, award-winning *Zoo Tycoon*® 2 series—named the Computer Family Game of the Year by the Academy of Interactive Arts & Sciences and honored with the Seal of Approval from the National Parenting Center.

Now, Microsoft® and Young Minds Inspired (YMI) are pleased to present you with these teaching materials for the newest addition to the *Zoo Tycoon* series, *Zoo Tycoon*® 2: *Marine Mania*®. The lessons **meet national standards in science, math, geography, and language arts**, and teach your students about some of the world's most interesting and important marine animals and where they live.

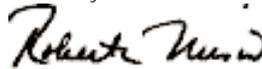
This package includes a CD-ROM with a free trial version of the game, along with fun and informational Zoopedia pages that will provide your students with all the information they need to learn about the 20 marine animals and their biomes featured in *Zoo Tycoon*® 2: *Marine Mania*.

There also is a colorful wall poster designed to help your students learn where in the world these animals live, and a valuable take-home activity that encourages parents and students to learn together about our oceans and the marine animals that inhabit them.

Feel free to make copies of these copyrighted materials and share them with colleagues. You also can download additional copies at www.ymiteacher.com

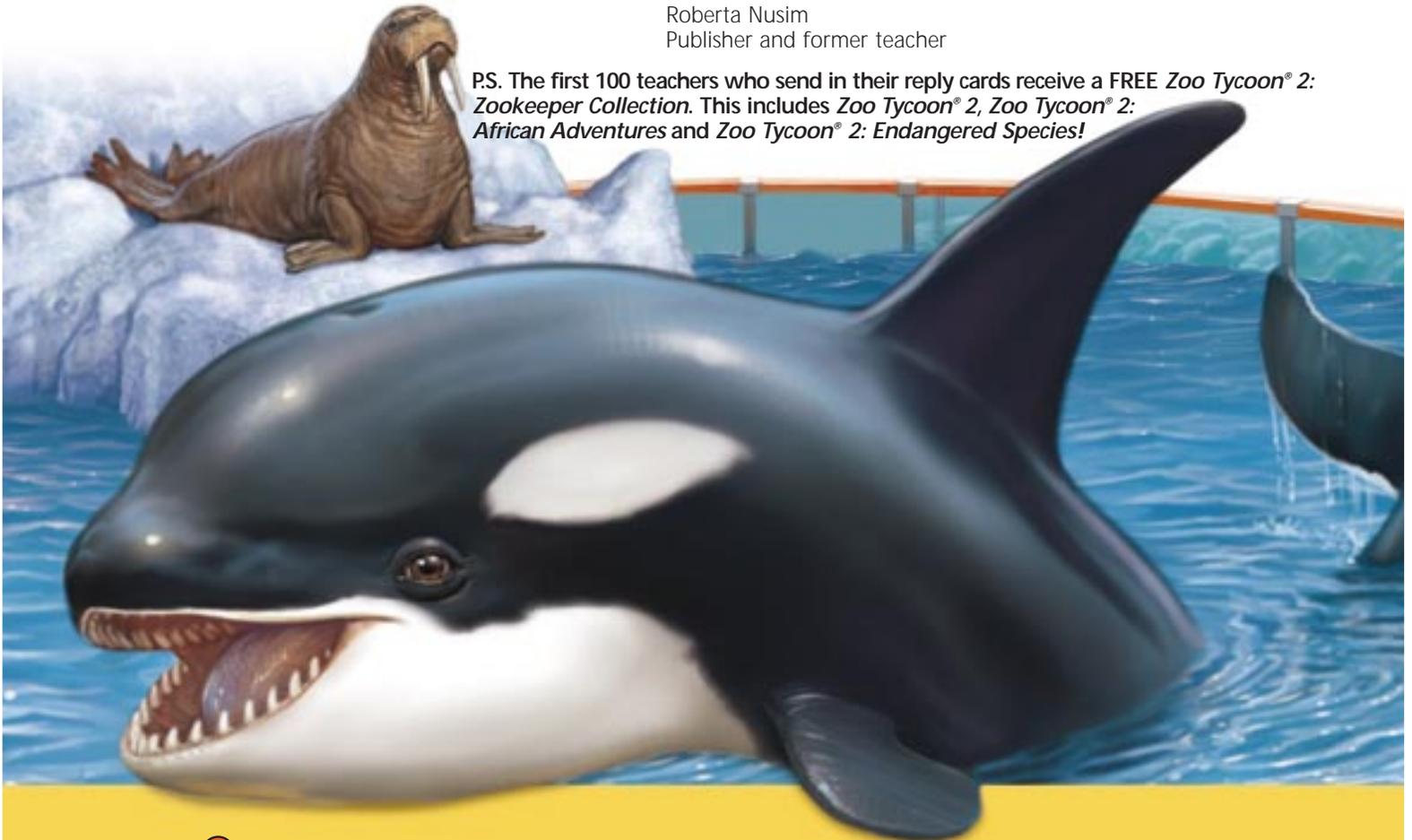
We know your students will have a wonderful time as they **Get In Deep with Marine Animals!**

Sincerely,



Roberta Nusim
Publisher and former teacher

P.S. The first 100 teachers who send in their reply cards receive a FREE *Zoo Tycoon*® 2: *Zookeeper Collection*. This includes *Zoo Tycoon*® 2, *Zoo Tycoon*® 2: *African Adventures* and *Zoo Tycoon*® 2: *Endangered Species!*



WHO SHOULD USE THIS PROGRAM

This cross-curriculum program is designed for use with students in grades 3-5.

PROGRAM COMPONENTS

- This teacher's guide
- Three reproducible activity masters incorporating lessons in science, geography, math, and language arts
- A colorful wall poster featuring oceans of the world
- A CD-ROM of exciting Zoopedia information about the marine animals featured in the game and the biomes in which they live, along with a free trial version of *Zoo Tycoon® 2: Marine Mania®*

PROGRAM OBJECTIVES

- To use a popular, award-winning computer game as the springboard to lessons about marine animals and the waters in which they live
- To improve students' online research skills
- To provide opportunities for students to build skills and expand their knowledge in science, math, geography, and language arts

HOW TO USE THE WALL POSTER

Display the wall poster in a prominent place in your classroom. Use the map to help build geographic awareness and to help students understand where marine animals live.

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 they need to live and how to feed them, to deciding what zoo visitors need and how much to charge for admission, players build skills and knowledge in science, geography, math, and language arts—all while having a great time.

Core games in the series are *Zoo Tycoon®* and *Zoo Tycoon® 2*. Expansion packs such as *Zoo Tycoon® 2: Endangered Species*, *Zoo Tycoon® 2: African Adventure*, and the all-new *Zoo Tycoon® 2: Marine Mania* can be used with the core games to add even more fun.

BRING MULTIMEDIA LEARNING INTO YOUR CLASSROOM

Improve your students' computer and online research skills with Zoopedia—the online animal encyclopedia from award-winning Microsoft® Encarta®. It features facts about marine animals and their biomes. Tell your students that when they go to www.zootycoon.com, they will find the same exciting Zoopedia information that is featured in the game and on the enclosed CD-ROM.

Show your students the *Zoo Tycoon® 2: Marine Mania* game so they can meet the animals they will study in the activities and learn about running a zoo. Then, copy and distribute the activity sheets. When they have completed the in-class activities, ask students to go online and find out something else about one of the animals in the game. Also suggest that they use the free trial version of the game to begin creating their own zoo. (Be sure to allow time for students to share how they are doing!)

NATIONAL EDUCATION STANDARDS—GRADES 3-5

Activity 1	The Deep Blue Sea	Science —Understand the different earth environments and how they support different life forms. Geography —Use maps; understand the physical characteristics of places. Language Arts (extension activity)—Use written language to communicate effectively.
Activity 2	Marine Mania Math	Math —Develop fluency in adding, subtracting, multiplying, and dividing. Language Arts (extension activity)—Use written language to communicate effectively.
Activity 3	Did You Know?	Science —Understand the different earth environments and how they support different life forms. Geography —Use maps; understand the physical characteristics of places. Math (extension activity)—Represent and analyze patterns and functions, using words, tables and graphs.

ACTIVITY 1

THE DEEP BLUE SEA

PART A. Your students can see how much they already know about marine animals as they answer the questions on the activity sheet. Then, divide them into teams and have them use the Zoopedia—the fact-filled section of the *Zoo Tycoon® 2: Marine Mania* featured on the enclosed CD-ROM—to develop 10 new questions. They can use their questions as they challenge the other teams in a game of Marine Mania Jeopardy.

Answer Key: 1. ocean 2. tanks 3. fish 4. pollution 5. temperatures

PART B. Tell your students to use the Zoopedia and www.zootycoon.com to research the narwhal and learn about this creature with the very strange name.

Answer Key: 1. toothed whale 2. ice 3. pods 4. fish, squid, shrimp 5. Inuits

PART C. When your students have finished researching the marine animal they chose, distribute small pieces of construction paper and have them cut out a box the size of the one on the activity sheet. Tell them to write the name of their animal on the paper,

answer the questions on the activity sheet, locate the animal's habitat on the map on the poster, and tape or pin the paper in the appropriate area. When they are finished, conduct a class discussion about the importance of protecting the oceans and seas that so many creatures call their home.

EXTENSION ACTIVITY

Have your students imagine that they have created a zoo area for the animal they chose. Now, they must use the Zoopedia to gather their facts and write a paragraph or two for the sign that will tell visitors about the animal.

ACTIVITY 2

MARINE MANIA MATH

There's much more to running a zoo than designing the exhibits and feeding the animals. There's the matter of paying for it all. That's where building a budget and managing costs come in. Zoo operators must think about more than just the cost of the animals—they need to consider what those animals need to live a happy and healthy life. And then there are the visitors. It's important to ensure that they have a good experience. That costs money, too.

In this activity, your students will make those important decisions about which marine animals to include in their zoo. You may need to guide them as they make their choices and help them stay within their \$60,000 budget. If they would like to have more information about the specific needs of the animals they are considering, they can use the Zoopedia on the CD or online at www.zootycoon.com to do their research.

EXTENSION ACTIVITY

Ask your students to consider the following question: "If I could have only one animal in my zoo, which animal would it be?" They can use the Zoopedia to learn more about the animals they are considering. Then, they should write a paragraph that explains the reasons (including financial reasons) for their choice.

ACTIVITY 3

DID YOU KNOW?

Encourage your students to take the quiz and test their knowledge about marine animals. Then, they can test their parents. When they are done, they can go online to www.zootycoon.com and check their answers against the information in the Zoopedia.

Answer Key: 1. True 2. True 3. False 4. True 5. False 6. True 7. True 8. False

EXTENSION ACTIVITY

Ask students to bring the completed activity sheet back to class. Have students work in groups to make graphs showing who knew more in each group—students or parents.

RESOURCES

- The Zoopedia at www.zootycoon.com
- Microsoft Encarta Encyclopedia Article Center at http://Encarta.msn.com/artcenter_0/Encyclopedia_Articles.html
- MarineBio.Org at www.marinebio.org



Microsoft
game studios



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Young Minds Inspired Web site at www.ymiteacher.com to download this program and *Go Wild with Endangered Species*, another program in the Zoo Tycoon series.

ACTIVITY 1

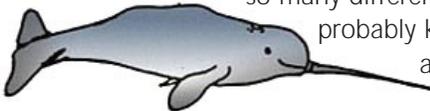
THE DEEP BLUE SEA

Bottlenose dolphins, Rockhopper penguins, California sea lions, green sea turtles...you'll learn about all of these animals and more when you're in charge of your own zoo with *Zoo Tycoon® 2: Marine Mania®*.

PART A. You probably already know more than you think about these special creatures. How many of the following sentences can you complete? (We've given you the first letter of each correct answer as a clue.)

1. Marine animals live in the **o** _____.
2. In zoos, marine animals live in **t** _____.
3. Many marine animals eat **f** _____.
4. Because they live along the coast, sea lions can be affected by toxic **p**_____.
5. Marine animals can be found in many different climates, so different animals live in different water **t** _____.

PART B. Marine animals are really interesting because there are so many different species. You probably know something about penguins and turtles, but what about narwhals? What's a narwhal? You're about to find out! Check out the Zoopedia at www.zootycoon.com or on your teacher's CD-ROM and finish the following sentences. (There are no clues this time—you'll get all the help you need in the Zoopedia.)



1. A narwhal is a _____.
2. Narwhals live in the Arctic and are often found near floating _____.

3. Narwhals live in small groups called _____.
4. Narwhals eat _____, _____, and _____.
5. The biggest danger to narwhales are the _____, who hunt them for their skin, meat, blubber, and tusks.

PART C. Now, pick another marine animal that you would like to research. You can choose one of the animals mentioned at the top of this page or any of the others from the list in the Zoopedia.

Write the name of your animal in the box.

In what kind of climate does it live? _____

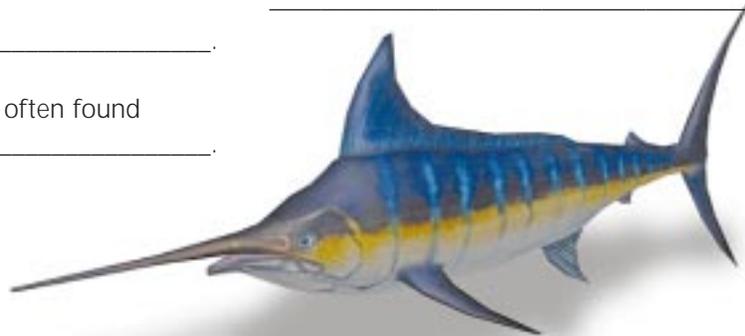
What does it eat? _____

Does your animal live alone or in groups?

List two fun facts about your animal:

- _____

- _____



DIVE INTO A TANKFUL OF FUN WITH THE FREE TRIAL VERSION OF ZOO TYCOON® 2: MARINE MANIA PC GAME AT WWW.ZOOTYCOON.COM



ACTIVITY 2

MARINE MANIA MATH

You'll need to think about lots of things when you are a Zoo Tycoon!—the proper biome (habitat), the right foods, and the special things that make life enjoyable. Then there are the visitors. You'll need to take care of them, too!



Imagine you are building your own very special Marine Mania® zoo. You have \$60,000. Your goal is to create a healthy, happy habitat for as many different animals as possible and a good experience for your visitors. Use the "shopping list" on this activity sheet to choose what you want for your zoo. Just make sure to stay within your \$60,000 budget!

Category	How Many?	Cost for Each	Total Cost
Animals			
Orca Whale	_____	\$50,000	_____
Bottlenose Dolphin	_____	15,000	_____
West Indian Manatee	_____	3,000	_____
Rockhopper Penguin	_____	5,500	_____
Black Tip Reef Shark	_____	10,000	_____
Manta Ray	_____	1,250	_____
Animal Needs			
Artificial reef with fish	_____	\$800	_____
Food box with seaweed	_____	250	_____
Jar with fish treat	_____	320	_____
Large reef rock	_____	50	_____
Visitor Amenities			
Marine fountain	_____	\$ 400	_____
Show platform	_____	1,200	_____
Beluga splash fountain	_____	560	_____
Small grandstand	_____	200	_____
YOUR TOTAL COST			_____
Did you stay within your \$60,000 budget? Yes ____ No ____			



A DOZEN DOLPHINS OR A TANK FULL OF TURTLES? NOT A PROBLEM! YOU'RE IN CHARGE WITH THE FREE TRIAL VERSION OF ZOO TYCOON® 2: MARINE MANIA PC GAME AT WWW.ZOOTYCOON.COM

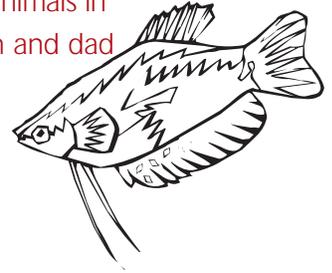


ACTIVITY 3

DID YOU KNOW?



Now that you know a lot about marine animals, take this Marine Mania® challenge. Then, ask your parents the same questions. You can learn about these animals in the amazing Zoopedia, so go online (www.zootycoon.com) with mom and dad when you're done to see who got the highest score!



TAKE THE MARINE MANIA QUIZ

1. The reef biome provides one of the most biologically diverse habitats on earth. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____
2. The sea otter is the smallest marine mammal. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____
3. Alligators are one of the primary predators of the manatee. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____
4. The goblin shark got its name because it is really ugly. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____
5. A byproduct of kelp is used in the manufacture of some types of plastic. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____
6. Green sea turtles are declining in numbers because they are the main ingredient in turtle soup. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____
7. The bottlenose dolphin has a brain that is larger than a human's. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____
8. Orcas (killer whales) are found only in colder waters. True or False?
Your answer _____ Your parents' answer _____ Zoopedia's answer _____

Dear Parent: Your child has been participating in an exciting learning adventure based on Microsoft's *Zoo Tycoon*® 2 computer game. *Zoo Tycoon*® has been recognized with the prestigious Bologna New Media Prize for its effective combination of education and entertainment. The newest expansion pack, *Zoo Tycoon*® 2: *Marine Mania*®, lets you choose exciting marine animals, environments and accessories to build the 3-D interactive zoo of your dreams. Visit www.zootycoon.com to download a free trial version the entire family can play.



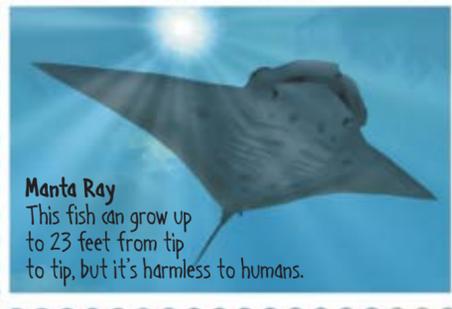
MARINE ANIMALS AROUND THE WORLD



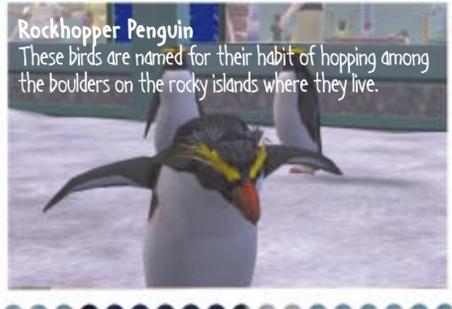
Black Tip Reef Shark
These sharks mainly eat fish, but they also have been known to eat snakes!



Bottlenose Dolphin
Bottlenose Dolphins are named for the shape of their snout.



Manta Ray
This fish can grow up to 23 feet from tip to tip, but it's harmless to humans.



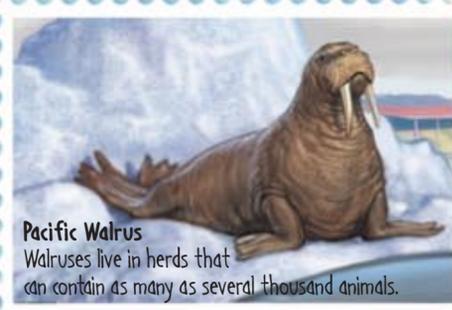
Rockhopper Penguin
These birds are named for their habit of hopping among the boulders on the rocky islands where they live.



Orca (Killer Whale)
Orcas live in more parts of the world than any other aquatic mammal.



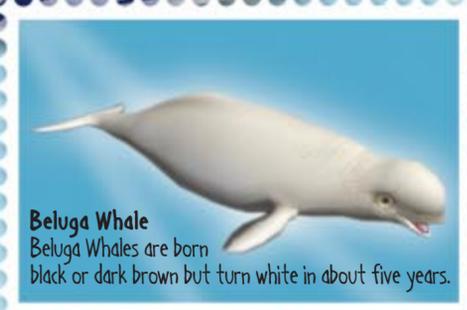
Green Sea Turtle
The shell is brown, but this turtle's fat is green!



Pacific Walrus
Walruses live in herds that can contain as many as several thousand animals.



Blue Marlin
Blue Marlin are among the ocean's fastest swimmers due to their hydrodynamic shape and great strength.



Beluga Whale
Beluga Whales are born black or dark brown but turn white in about five years.



West Indian Manatee
The manatee is also known as a sea cow because it grazes on marine grasses and other water plants.