

Educator Resource Guide

SEA SMILES

Written and illustrated by Bonnie Kelso

A child who loses a tooth encounters and is comforted by a group of ocean creatures with weird and wonderful teeth of their own.

Juvenile Fiction

32 Pages ~ 10 x 10 inches

Grades K to 3rd ~ Ages 5+

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Key Concepts: STEAM learning (human body – teeth, human and animal development), ocean animals / marine life, biological diversity, and humor.

About the Author: Bonnie Kelso writes and illustrates books for children and adults that encourage individualism and brave creative self-expression. A graduate of the Rhode Island School of Design, she has a background in exhibit design and has worked on projects for NASA, National Geographic, and the Smithsonian Institution. Bonnie traveled all the way around the world, twice! An avid snorkeler and scuba diver, Bonnie has explored every sea or ocean she has come close to, except for the really cold ones. She still enjoys indulging her wandering nature whenever she gets the chance. To learn more about Bonnie visit <https://bonniekelso.com>.

Using this guide:

This educational resource guide can be used by anyone interested in sharing enthusiasm about *Sea Smiles* with children of all ages. If you are a teacher, librarian, home school instructor, camp counselor, or super cool parent, grandparent or guardian, this guide is for you! Feel free to adapt the suggested learning projects and activities according to your needs, interests, time, audience, and goals.

We have done our best to provide information, discussion points, and resources that may be useful for you and your learning participants. However, this is not an exhaustive list of ideas or topics. Also, website content and accessibility is subject to change. Please review all suggested resources and websites prior to sharing them in your learning environment to ensure they meet with your individual standards and contain age-appropriate content for your participants.

This guide is broken down into two general categories: 1) learning opportunities (with associated activities) related to teeth and biological diversity and 2) learning opportunities (with associated activities) related to ocean animals and feelings associated with losing teeth. These are broad categories with overlap between subjects, and each activity will vary in complexity depending on the age of the participants. Please modify as you see fit.

Suggested learning activities can be found for each category and are intended to align with appropriate Common Core, NGSS and/or National Core Arts Standards. To inquire about additional materials or if you have questions about this guide, please view our website at: www.gnomeroadpublishing.com.

PART 1: ALL ABOUT TEETH

Learning Opportunity #1: Let's talk about our (human) teeth!

- *Sea Smiles* gives us a close-up view of our human teeth. What are the parts of the teeth shown in the illustrations? (Hint: There are four!)
- Each part of the human tooth has a different function. Some nourish, some protect, and others act like the glue or an anchor to hold it all together. Who knew how complicated teeth could be?
- The author of *Sea Smiles* shares in the book that humans are diphyodont, meaning we develop two sets of teeth over our lifespans. How many “baby” teeth do we usually get? How many “adult” teeth do we usually get? (Hint: Babies have 10 teeth on the top and 10 on the bottom. We end up with 16 teeth on the top and 16 on the bottom. What does that total for each?)
- “Baby teeth” are sometimes called primary or deciduous teeth – meaning they are only temporary. Why do you think two sets of teeth are necessary?

Suggested Activities ~

Show Us Your Sea Smile!

- Chances are you still have some of your baby teeth, but that some of your adult teeth have come in, too. Let's take a closer look at what your mouth will look like when they come in! Sharpen your research skills to find out what kinds of teeth adult humans develop. (Hint: There are four basic categories: incisors, canines, premolars and molars.) After you finish your research, label the different teeth on the worksheet provided with this Educator Resource Guide. Don't forget to draw or collage a picture of your own smile on the back!
- If you are having trouble finding resources, you might try one of these websites
 - **Kids Teeth Health**
 - **Teeth Facts: Lesson For Kids**

Dentists are Delightful! (Make Your Dentist Smile)

- Repeat this phrase: “Dentists are our friends.” Let’s do that one more time. “Dentists are our friends.” Unfortunately, going to the dentist doesn’t always bring pleasant feelings, especially if you are having any type of tooth pain. But dentists are there to help us keep our teeth healthy and to take away the pain associated with tooth problems. Think about the times you have visited the dentist. What kinds of feelings did you have before the visit? What did you feel afterwards? Lets brainstorm ways to make your next dentist appointment a positive experience. (Hint: Taking care of your teeth at home might be one way to make it better.)
- Dentists have to go to school for a long time. When they start to practice dentistry, they need other people in their office to help take care of their patients. They also need lots of tools and supplies. Find out more about this by asking a dentist to answer a few questions (or use your wonderful research skills). You can start with the questions on the handout provided at the end of this resource guide.
- Don’t forget to thank your dentist. Draw or make a surprise picture, collage or model tooth to share with your dentist on your next visit!

Learning Opportunity #2: *Let’s talk about teeth and other animals!*

- There are quite a few sea animals who make an appearance in the book *Sea Smiles*. Which one was your favorite? What did you learn about that animal’s teeth?
- The characters add up the number of teeth (or teeth-like structures) each has and have a contest to see who has the most. Who won the contest? Did this surprise you? Why or why not?
- Line up the characters in the book from the one with the most teeth to the one with the least. Does the order surprise you? Why do you think some sea animals have more teeth than others? Why do you think some lose more than others?
- It’s clear that teeth are important for a number of reasons, including an animal’s ability to survive in its habitat. Teeth determine what an animal can eat and can help it to defend itself. What kinds of teeth do you think other non-sea animals have? Do you think they are the same or different than the animals found in this book? How do these animals’ teeth help them to survive?

Suggested Activities ~

Become a Tooth Expert!

- Use your research skills to find out more about animal teeth. In groups or on your own, choose an animal that you want to research. It doesn’t have to be a sea creature; it can be any animal you like (including ones that are extinct)! Here are some research questions to help you out:
 - o How many teeth does the animal have?
 - o Does the animal lose teeth? If so, how many and when?
 - o What does the animal eat with those teeth?
 - o Does the animal’s teeth serve any other purpose than eating food?
 - o What did you learn about the parts of this animal’s tooth? Are they the same or different than what you learned about human teeth in *Sea Smiles*?

- Don't forget to report back to other learning participants what you learn about your animal.

Show What You Know!

- Now that you've learned more about the teeth of your favorite animal, get out your art and crafting supplies and draw/paint/collage or construct a model of your smiling friend. Be sure to show how those fantastic teeth look for Animal Picture Day! As a bonus, complete the Tooth Parts Matching Sheet and the Sea Smiles Word Search found at the end of this resource guide!

PART II: THE WORLD OF OCEAN ANIMALS, FOSSILS AND BIG FEELINGS

Learning Opportunity #1: Let's talk about Ocean Animals and Fossils!

- We saw a variety of ocean animals in the book *Sea Smiles*. Some were big and some were very small. Can you name them largest to smallest? Which one was your favorite? Why?
- If you were writing a book about sea animals, which animal would you choose? What would you want to know about the animal and what would you include in a book?
- The animals in this book ranged from fish, to birds, to slugs. When we put animals into categories like this, we are classifying them. Can you think of other ocean animals that can go into these categories? (Hint: It might be easiest to make a chart with labels at the top and then write the names of each kind of animal in the appropriate categories.)
- These sea animals are different in many ways, not just because of their teeth. When you look at the animals you've classified, how else are they different? When we look at variations in the way living things are put together and how they interact with their environments, we call this biological diversity! What are other examples of biological diversity in the world around you?

Suggested Activities ~

Make Your Own New Ocean Species!

- Now that you know more about the diversity of animals in the ocean, it's time to create one of your own. If you need to do some research first, visit websites, head to the library, or visit a museum to find out more about biological diversity. Then get out those arts and crafts supplies and show off your drawing, painting, or mixed media skills by constructing your new ocean animal species. Make sure to write down information about your new creation, like what it eats, in what part of the ocean it can be found, and how long it survives. And don't forget ... tell your fellow learning participants how many teeth it has and what happens if it loses one!

Teeth to the Rescue! Take a Look at Tooth Fossils!

- No doubt you have already heard about dinosaurs and the scientists who study them. What is one source of information we use to understand dinosaurs? Yep, you guessed it ... fossils! What exactly is a fossil anyway? (Hint: Webster's dictionary defines it as a remnant, impression or trace of an organism of past geologic ages that has been preserved in the earth's crust.)

- Teeth can be fossils, too, right? What exactly do fossilized teeth tell us? Get your research skills ready and prepare to amaze yourself and other learning participants by finding out more about them. Choose an extinct animal and share what scientists have learned by examining their teeth. You can use the handout at the end of this guide to draw the tooth and write a few words about it.

Learning Opportunity #2: *Let's talk about losing a tooth (or lots of teeth)!*

- Have you ever lost a tooth? What did it feel like? Has another grown in or are you waiting for that to happen?
- What feelings did you have about losing your tooth? If you've lost more than one, did your feelings change about losing the second one? How do you feel about losing more teeth?
- In *Sea Smiles*, you learned that losing teeth is natural. But even if we lose some of our teeth, we also need to protect them – especially when our permanent teeth arrive. Why do you think that is? How do humans take good care of their teeth?

Suggested Activities ~

Baby Teeth No More

- When humans are born, our teeth do not start to appear for another 6 to 12 months. Everyone is different, but most of us have our full set of “baby teeth” by age 3. This first set of teeth is gradually replaced with a second, permanent set during childhood. Let's find out more about these teeth and the differences between our first and second sets! Here are some websites to get you started, but there are many out there with helpful information:
 - **When Kids Start Losing Teeth**
 - <https://www.healthline.com/health/how-many-teeth-do-adults-have#Take-care-of-your-teeth>
- Now in a group or on your own, draw a picture of the first set of teeth and label the names of each one. Write the order in which these baby teeth usually fall out. Are there any teeth that we keep from childhood into adulthood?

Your Own Dental Care Kit!

- Just because we lose our baby teeth doesn't mean we don't have to take care of them. Using the Dental Care Kit handout at the end of this resource guide, cut out the pieces and place them on a self portrait. Don't forget to ask your responsible grown-up to make your next dentist appointment!

Websites About Ocean Animals and Their Teeth:

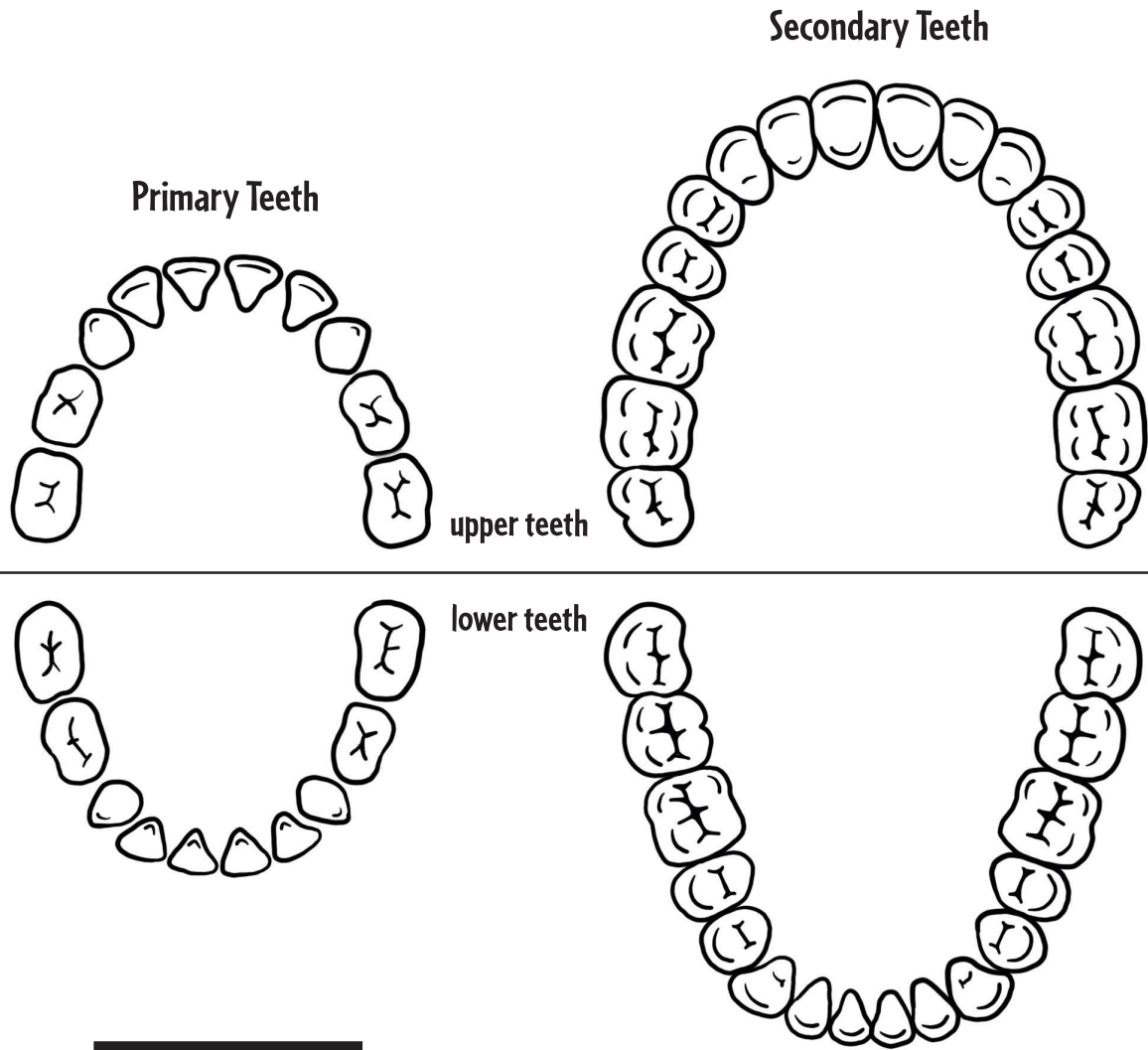
- **Ocean Animals Wildest Teeth**
- **Sea Creatures Terrifying Teeth**

Websites About Human Teeth and Teeth Loss:





- **Human Teeth**
- **Dentists4kids.com**

Show Us Your Sea Smile!

Choose a different color for each tooth type (at the bottom). Next, color code this tooth chart by filling in each tooth with the matching tooth type color. On the back, draw or collage a picture of your own smile!



TOOTH TYPES

			
incisors	canines	premolars	molars





Interview Your Dentist!

Use this worksheet to write down your notes when you interview your dentist. You can add your own questions at the end.



What is your name?

How long did you go to school to learn about teeth?

What type of degree did you get to become a dentist?

Who works in your office? What types of jobs do they perform?

How do you work together?

What kinds of instruments do you use? How do they help you be a good dentist?

What is your favorite part about being a dentist?

Inside A Tooth!

Match the parts of the tooth to their descriptions by drawing a line between them.

Pulp

Cementum

Dentin

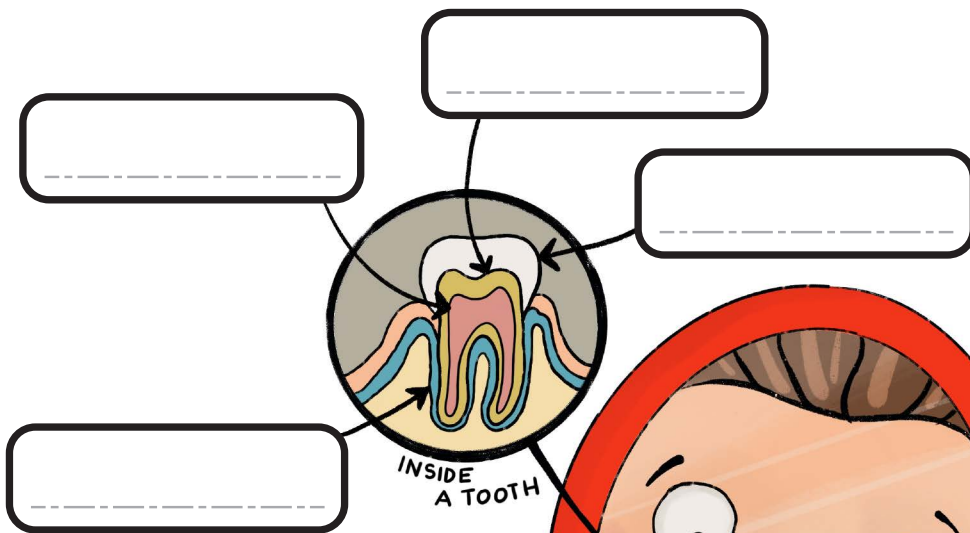
Enamel

A hard yellow substance that protects the pulp.

The hardest tissue in the body! It protects the tooth from harmful bacteria and temperature changes.

Covers the tooth's root, holding it in place within the jawbone.

Connective tissue, nerves and blood vessels, which nourish the tooth.



Fill in the blanks with the vocabulary words from above.



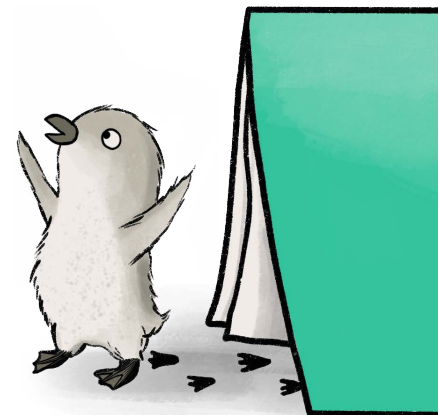


SEA SMILES

Word Search

T O O K E C A Q E P
C N E N A R W H A L
E W O L F F I S H U
M I D D G T E M K P
E R E I O P E I E H
N C N D S Y I L R E
T A T O O T H E A R
U N I U G N E P T S
M E N A M E L R I C
R E A L U D A R N D

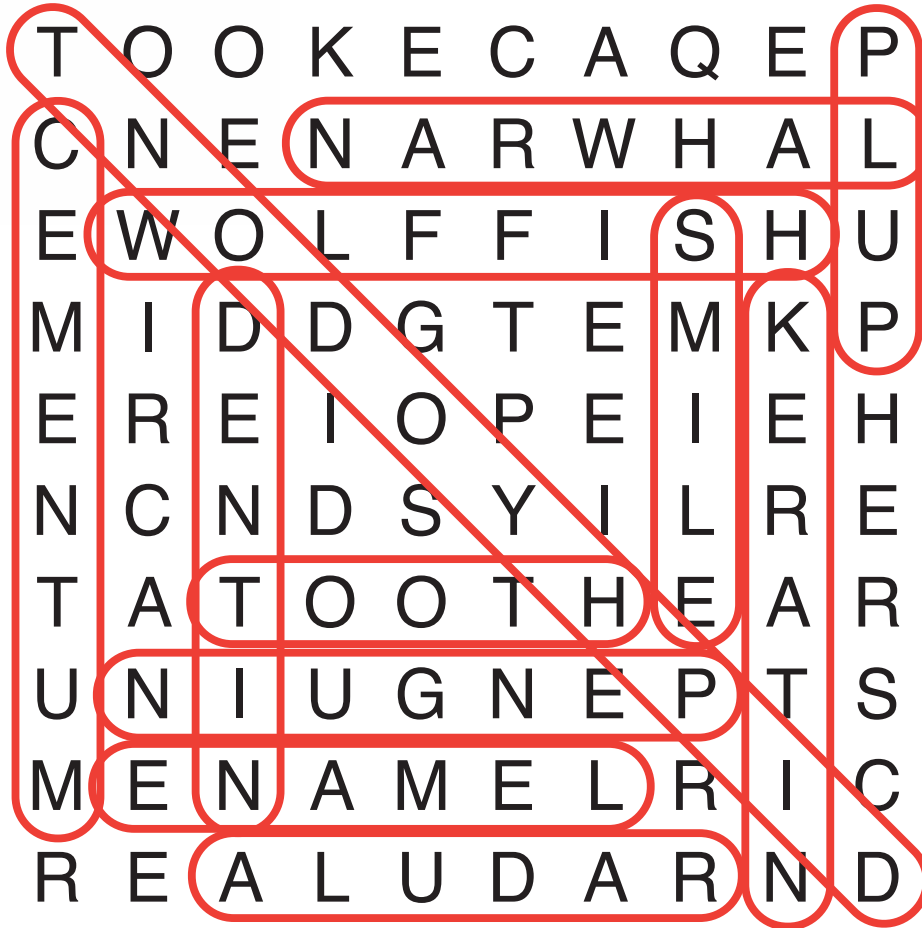
dentin	radula	narwhal
enamel	keratin	penguin
pulp	diphyodont	wolffish
cementum	smile	tooth



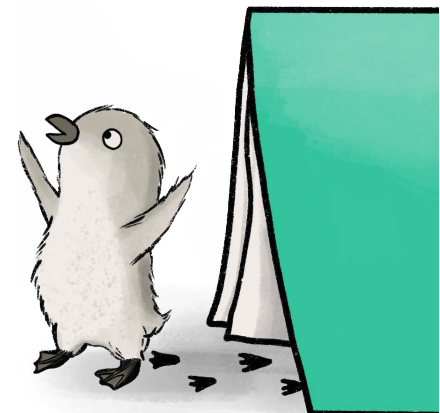


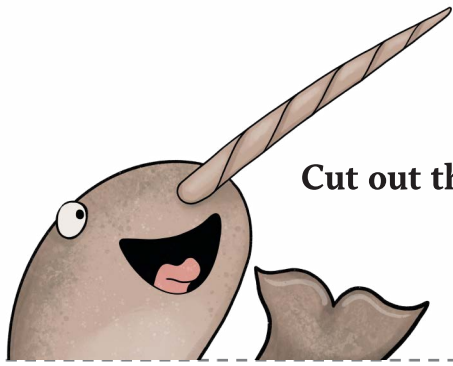
SEA SMILES

Word Search



- | | | |
|----------|------------|----------|
| dentin | radula | narwhal |
| enamel | keratin | penguin |
| pulp | diphyodont | wolffish |
| cementum | smile | tooth |



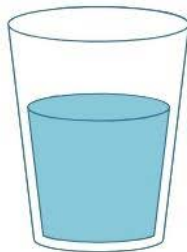


Dental Care Kit

Cut out the pictures below and add them to your
“Dental Care Self-Portrait.”



REMEMBER
CHECK-UPS



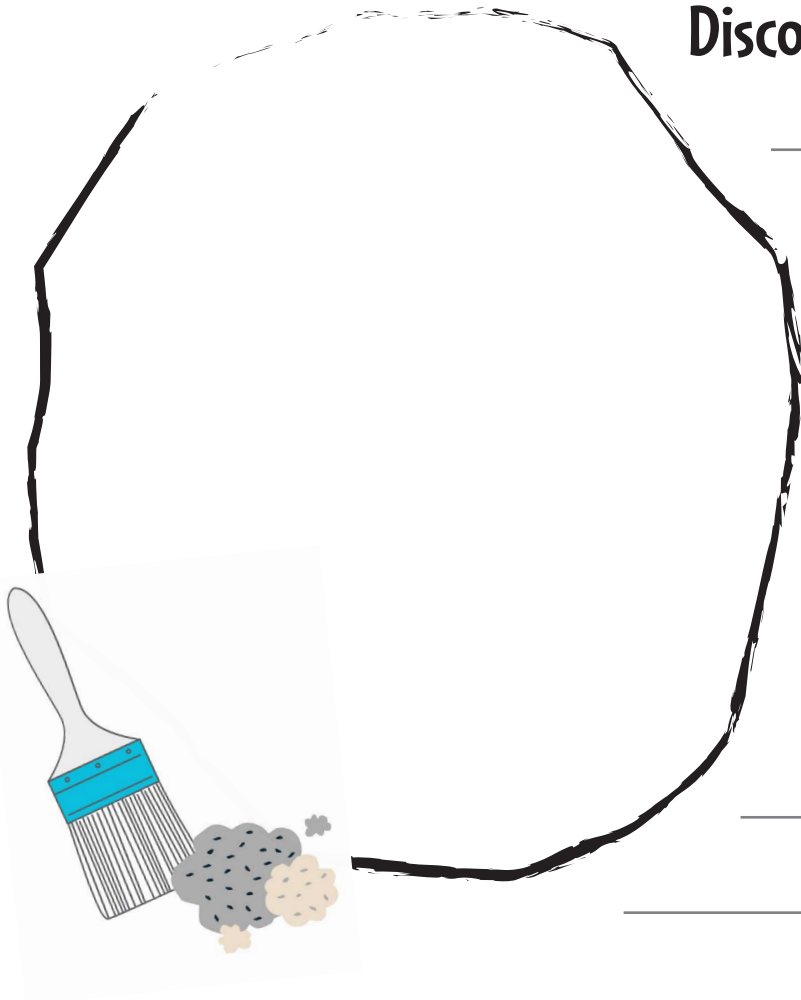
Tooth Fossil Discoveries

Draw a picture of the tooth fossil you learned about. Write what you discovered about it.



Name of Animal: _____

Discoveries: _____



Your Name: _____