



Scout (Kindergarten) Vol. 16 No. 7

In This Guide

In this guide, you will find language arts, science, and social studies lessons for the articles in this issue of YOUNG EXPLORER SCOUT.

Young Explorer Magazine

YOUNG EXPLORER classroom magazines for kindergarten and grade 1 develop young readers' literacy skills through engaging informational text. Great storytelling and stunning photographs teach students about our planet and the people, plants, and animals that live on it. Encourage your students to read and to explore our world with YOUNG EXPLORER magazines.

Scout

The Scout edition is written for kindergarten students. Some articles with characteristics of emergent text will be easier for students to read. You may find that other articles are better suited for teacher read-alouds.

Visit YOUNG EXPLORER's website, NatGeo.org/explormag-resources, to find additional resources for extending your students' learning.

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An Eagle Grows Up

LANGUAGE ARTS

Objective

- Students will identify the main topic and retell key details in a text.
- Students will use adjectives to describe how eagles grow and change.

Resources

- Language Arts Master (page 4)

Summary

An eagle changes as it grows from eaglet to adult. Its size and appearance change over the months and years it grows into adulthood. As the eaglet grows, it looks more like its parents.

WORD WORK

Sight Words: *up, they, see, a, the, is, it, and, not, for, too, brown, big, are, soon, will, but, yellow, to, white, now, all*

BUILD VOCABULARY AND CONCEPTS

- eagle/eaglet
- beak
- grow up
- wings
- change
- tail
- head
- feathers
- body

The words above are used in the article and may be new to students. Pronounce the words for students.

Have pictures available of eagles and eaglets, or use the pictures in the article “An Eagle Grows Up” to point out the adult eagle and the eaglets. Use the pictures to help students understand the concepts of growing up and changing.

Post a large picture of an adult eagle on a wall or bulletin board. Have word cards handy with the words *head, body, beak, wings, tail, and feathers* written on them. Have students place the word cards on the picture in the appropriate places on the eagle. Students should note that feathers cover nearly all of the bird except its beak, feet, and eyes.

READ AND DISCUSS

Read the article “An Eagle Grows Up” aloud to students as they follow along. You may want to read the entire article first, and then reread the article, taking time to stop and discuss each two-page spread.

Pages 2–3 Read the title and the text aloud to students. After reading say: **Look at the picture of the bird. Does anyone know what kind of bird this is?** (*eagle or bald eagle*) **Does this eagle look like it has grown up?** Let students know that the picture of the bald eagle is an adult.

Help students identify that the main topic of this article is that bald eagles change as they grow. Say: **Let’s read to find out how eagles grow and change.**

Pages 4–5 Read the text on page 4. Ask: **What is a baby eagle called?** (*eaglet*) **What words describe the eaglet?** (*fluffy, small*) Read the text on page 5. Point out the round labels on the pages. Let students know this text tells the reader about how old the eaglets in the pictures are.

Pages 6–7 Read the text on these pages and ask: **What are some other details we learn on these pages about how the eaglet grows and changes?** (*It grows bigger, and it grows brown feathers.*) Ask: **Can the eaglet fly yet?** (*no*) **About how old is the eaglet in these pictures?** (*about 3 months old*)

Pages 8–9 Read the text on these pages and ask: **What are some other details we learn on these pages about how the young eagle grows and changes?** (*Its eyes and beak turn yellow. It begins to grow white feathers.*) **About how old is the eagle in the picture on page 8?** (*about 3 years old*) **What are the last changes that happen before the eagle is all grown up?** (*When it is all grown up, it has white head and tail feathers.*) **About how old is the adult eagle in the picture on page 9?** (*about 5 years old*)

TALK AND WRITE

Students can respond to the article by talking and writing. Use the following prompts to guide them. You might also want to use the Language Arts Master for this article.

- **Talk about something you learned about how eagles grow and change. Use words that describe how eagles grow and change.**
- **Write or draw something you learned about eaglets.**

An Eagle Grows Up

SCIENCE

Objective

- Students will understand that young animals, such as eaglets, are very much, but not exactly like, their parents.

Resources

- Baby Birds poster (Teacher's Edition)
- Parents and Young poster (Teacher's Edition)
- Science Master (page 5)

Science Background

Bald eagles build their nests high up in tall trees to keep their eggs safe from predators. Eagle parents often return to the same nest each year, building them up with new sticks and grasses. Both male and female bald eagles attend to their young. At least one parent is with the eaglets constantly for the first few weeks after they've hatched. Both parents also bring food to the nest. A bald eagle's diet is mostly fish, when it is available.

ENGAGE

Ask students if they have ever seen a bald eagle. If some students have, ask them to describe the eagle and tell where they saw it. You might explain to students that a bald eagle is not bald in the way we think of bald. The word *bald* comes from the old English word *balde* that means white. Say: **Knowing that bald (or balde) used to mean white helps us understand why the bald eagle got its name.**

EXPLORE

Explore more about bald eagles. Research with students information about the bald eagle. Find out about its habitat and if bald eagles can be found near where you live. You might want to find an eagle cam website to view with students. You can watch how the eaglets in the nest grow and change and see how the eagle parents take care of their young.

EXPLAIN

Read the article to students.

After reading, have students look at each picture and describe how the eaglets are similar to or different from their parent.

- Pages 4–5: (*Students might say the eaglets look very little like their parent. They are much smaller with different coloring. The eaglets have a beak and eyes, as does their parent, but they are a different color.*)
- Pages 6–7: (*The young eagle is almost as large as its parent, but the color of its feathers, beak, and eyes are not yet like the adult eagle's.*)
- Pages 8–9: (*On page 8, the young eagle's feathers are still not exactly like the parent's, but its beak and eyes have turned yellow like an adult's. On page 9, the young eagle now has white head and tail feathers and is a fully grown adult eagle.*)

ELABORATE

Use the Baby Birds poster and the Compare and Contrast Parents and Young poster to find out about other baby animals and how they are similar to and different from their parents.

Baby Birds poster: Read the text on the poster. Then read the label for each picture and ask: **How are these baby birds different from their parents?**

Compare and Contrast Parents and Young poster: Read the text on the poster. Then read the label for each picture and ask: **How are these young animals the same as and different from their parents?**

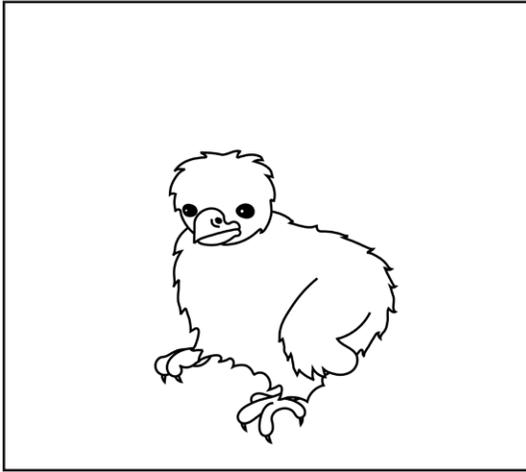
EVALUATE

Assess students' understanding with the Science Master for this article. You might also use the following prompts.

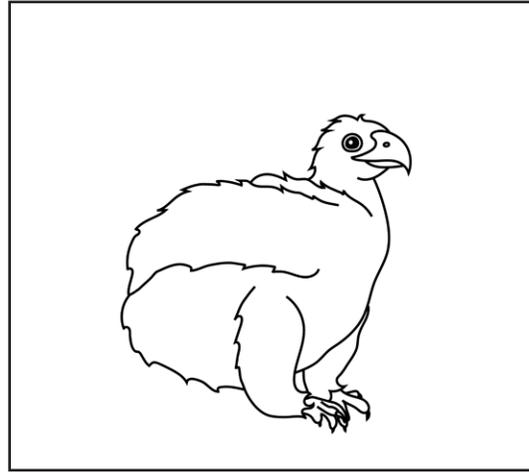
- **How do eagles grow and change?**
- **Describe what an eaglet looks like at 3 weeks old and at 3 months old.**

LANGUAGE ARTS: Growing and Changing

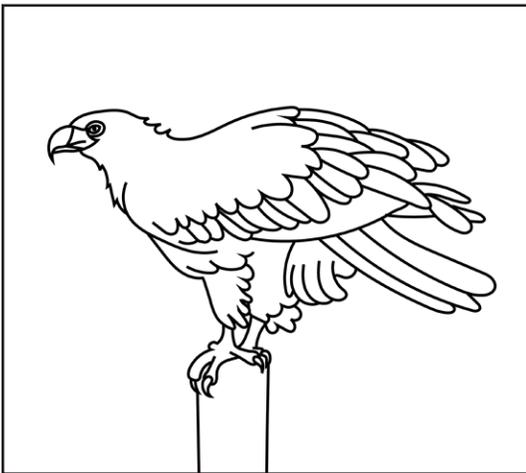
Show how eagles grow and change. Color the pictures to match the words.



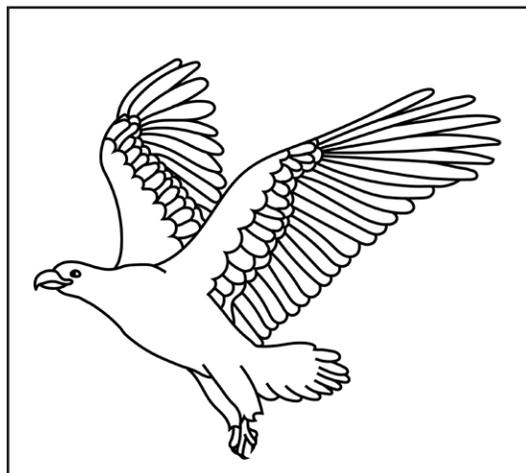
white and fluffy



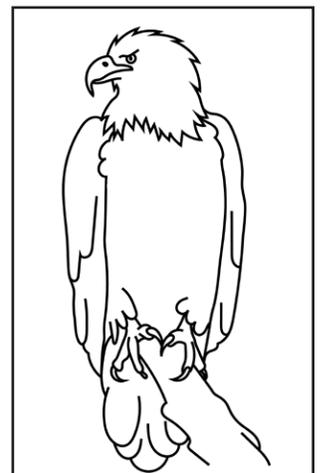
gray feathers



brown feathers



yellow beak and eyes

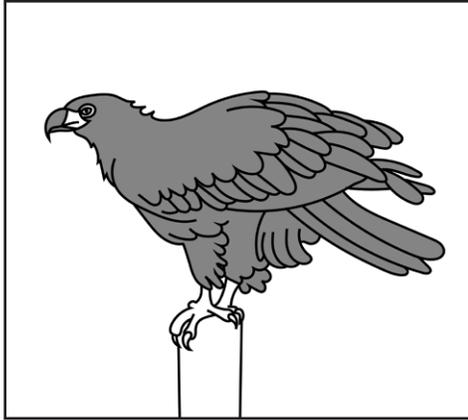


white head and tail feathers

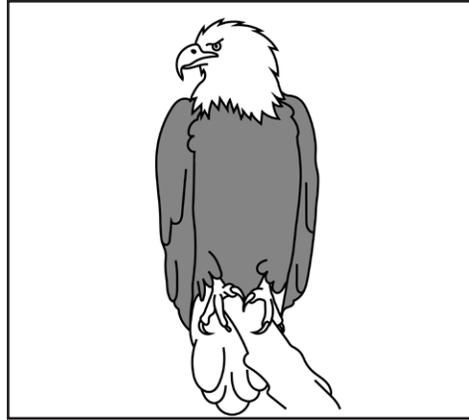
SCIENCE: Alike and Different

How are the eaglet and eagle alike and different?

eaglet



eagle



alike

different

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Making Chocolate

LANGUAGE ARTS

Objectives

- Students will use verbs and sequence words to describe steps in a process.

Resources

- Language Arts Master (page 8)

Summary

There are many steps to making chocolate bars. The steps start with cocoa beans and end with chocolate bars that are sold in stores.

WORD WORK

Sight Words: *are, find, out, is, in, the, on, they, to, a, into, and, like, now, eat*

BUILD VOCABULARY AND CONCEPTS

- chocolate
- beans
- pods

Students will likely know what chocolate and beans are, but they may not be familiar with what those words look like in writing. The words have several different examples of what they are. Work with students to find different examples of each of these words, such as the following:

- chocolate: different chocolate bars and candies made of chocolate
- beans: green beans, black beans, pinto beans, etc.
- pods: pea pods, pods from different trees that contain seeds, vanilla bean pods, etc.

Work with students to define each word and to come to an understanding that there are many different types or forms of chocolate, beans, and pods. Let students know you will be finding out about cocoa beans and pods in this article.

READ AND DISCUSS

Read the article “Making Chocolate” aloud to students as they follow along. You may want to read the entire article first, and then reread the article, taking time to stop and discuss each two-page spread.

Pages 10–11 Read the title and text on pages 10 and 11. Ask: **What looks familiar to you in these pictures?** (*Students will likely mention that the chocolate bar looks familiar.*) **What does the text tell us we will learn about in this article?** (*how chocolate bars are made*)

Pages 12–13 Read the text on pages 12–13. Say: **We learned about pods and beans in our vocabulary lesson. What kind of pods and beans are these?** (*cocoa pods and cocoa beans*) **The cocoa beans are used to make chocolate. What’s the first step to getting the cocoa beans?** (*cutting open the pods and scooping out the beans*)

Pages 14–15 Read the text. Ask: **What are the next steps that have to happen?** (*The beans are put on tables to dry out, and then they are sent to a factory where the beans are roasted, ground to a paste, and mixed with milk and sugar.*) Ask: **Is the contents of the large mixing bowl starting to look a little more like chocolate?** (*Students should notice that the contents is starting to look more like chocolate.*)

Pages 16–17 Read the text. Students may not know what molds are. Point out the picture on page 16 and discuss the different shapes of chocolate candy students are familiar with. Let them know that these shapes are formed by molds. Ask: **What are the next steps after the chocolate cools and hardens in the molds?** (*The chocolate bars are wrapped and sent to stores.*) Ask: **What is the final step that we all like best?** (*eating the chocolate bar*)

Have students work with a partner and use the diagram at the bottom of pages 16–17 to talk about the steps in the chocolate-making process. Encourage students to use sequence words such as first, next, and then as they describe the steps.

TALK AND WRITE

Students can respond to the article by talking and writing. Use the following prompts to guide them. You might also want to use the Language Arts Master for this article.

- **Talk about something you learned about making chocolate.**
- **Write or draw something you learned about making chocolate.**

Making Chocolate

SOCIAL STUDIES

Objectives

- Students will describe the steps to make chocolate.

Resources

- Social Studies Master (page 9)

Social Studies Background

Cocoa beans, pods, and trees are also called cacao beans, pods, and trees. Cocoa trees grow in regions where it is warm and humid. There is an area called the cocoa belt that extends 20 degrees latitude north and south of the equator. In these areas, conditions are right for growing cocoa trees.

In addition to the steps outlined in the article, there is a fermentation process that takes place. Before the cocoa beans are dried, they are piled in bins for several days. Bacterial action causes the beans to take on a rich, brown color and the aroma we all know and love.

ENGAGE

Students will know what chocolate is, but most, if not all, will have no idea where chocolate comes from or how it is made. Engage students in a discussion about foods and how they are made. Many will have helped out in the kitchen and will understand that some foods they eat have to go through steps in a process before they can be eaten. Ask some of the following questions to see if you can get a discussion going around the idea of steps in a process using a familiar example.

- **Have you helped a parent or an older sibling make a recipe? What did you make?**
- **What ingredients did you use?**
- **What steps did you take to make the recipe?**

EXPLORE

You might want to explore where cocoa trees are grown. Let students know that you are going to read about how chocolate is made and the ingredients needed to make chocolate. Let them know that one ingredient comes from the cocoa tree. Research places where cocoa trees are grown and find those places on a map.

EXPLAIN

Read the article to students.

Work with students to understand and describe the steps involved in making chocolate. You might have students work in groups of five or six to come up with ways to act out the steps in the process. They can use the diagram on pages 16–17 and the text and pictures in the article to help them.

- Cut the pods from the tree.
- Open the pods. Scoop out the beans.
- Dry the beans. Send them to the factory.
- Roast and grind the beans. Mix them with milk and sugar.
- Pour the chocolate into molds. Cool and harden.
- Wrap and send to stores.
- Eat and enjoy!

ELABORATE

There are many different things we do that require steps in a process. Brainstorm with students to determine other things that require steps in a process. Some of these might include the following:

- brushing your teeth
- making a meal
- doing your homework
- getting dressed

EXTEND

Chocolate comes from cocoa beans. There are many other foods that come from plants and also animals. To help students find out more about where other foods come from, use the More to Explore activity on the back of the *Young Explorer* magazine. Have students work with a partner to match each food to the plant or animal it came from. Let students know that there is a process involved in getting each of these foods from the plant or animal to the food we know.

EVALUATE

Assess students' understanding with the Social Studies Master for this article. You might also use the following prompts.

- **What are the steps to make chocolate?**
- **What is your favorite step? Why?**

LANGUAGE ARTS: In the Right Order

Number the pictures in the right order, 1-6.

Then write about your favorite chocolate candy.



mold



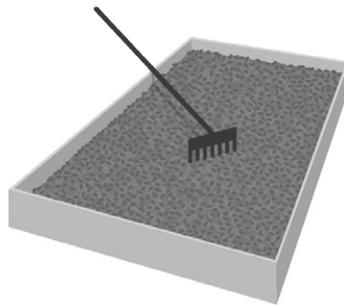
wrap



open



1 cut



dry

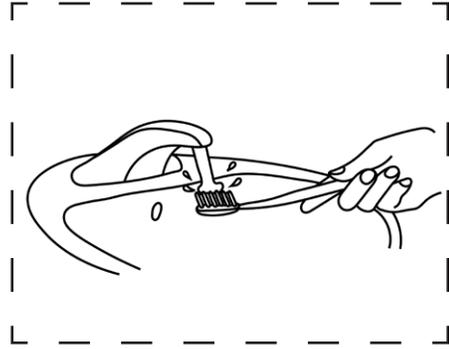
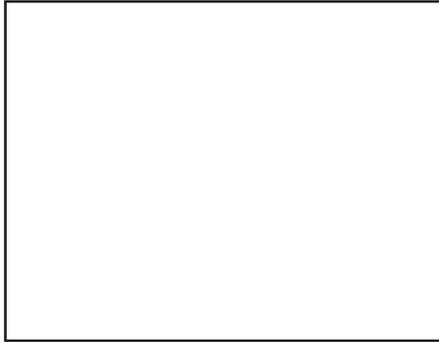


roast, grind, mix

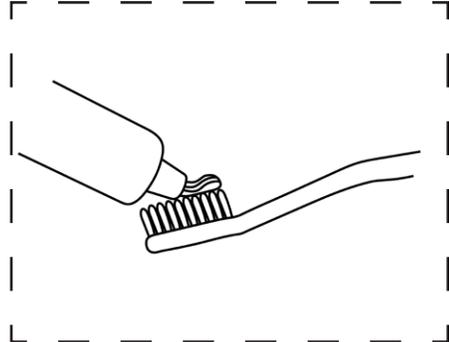
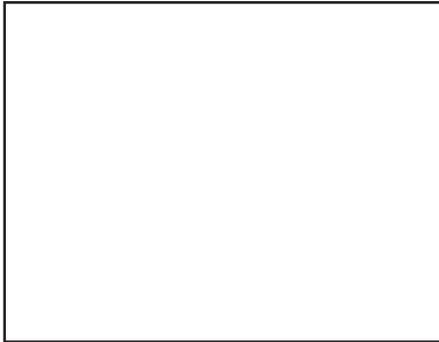
SOCIAL STUDIES: Step by Step

Cut out the pictures. Glue them in order.

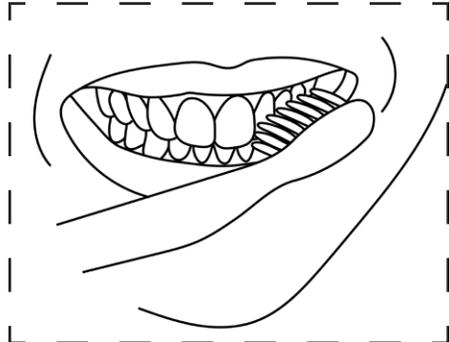
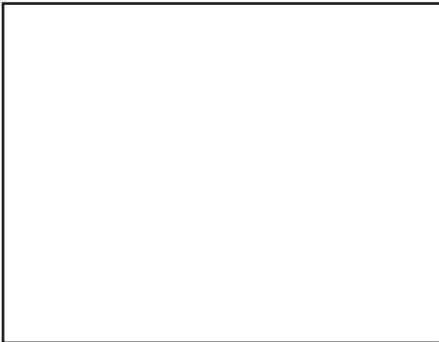
1. Wet toothbrush.



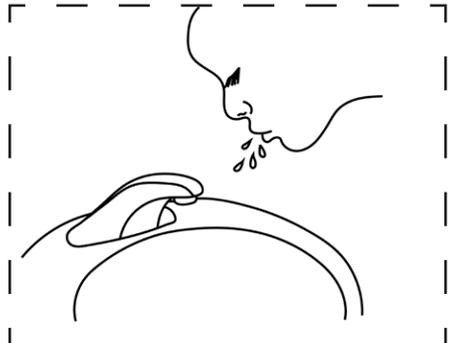
2. Put toothpaste on toothbrush.



3. Brush teeth.



4. Rinse mouth.



A Closer Look

LANGUAGE ARTS

Objectives

- Students will learn that observation is one way to explore our world.
- Students will describe the connection between scopes and observation.

Resources

- Observation Master (page 12)

Summary

Scopes are tools that help you take a closer look at nature. Scopes can help you see under the water, far away, and up close.

WORD WORK

Sight Words: *a, look, are, they, can, help, you, at, to, this, see, under, the, find, that, away, out, into, and, make, up, like, what, it, is, in*

BUILD VOCABULARY AND CONCEPTS

- **scope**
- **tool**
- **nature**

Introduce the vocabulary words to students by displaying them in the classroom on a word wall or on a board.

Do a picture walk through the article “A Closer Look” and point out pictures of the different types of scopes. Ask students to name some of the scopes they are familiar with. Many students will recognize a hand lens (or magnifying glass), binoculars, and a telescope. Let students know that a scope is a tool. Ask: **What are some other kinds of tools?** (*Students may mention tools such as hammers, screwdrivers, wrenches, and other tools used to fix things.*) Guide students to understand that a tool is often hand-held and is used for different tasks, depending on the purpose of the tool.

Discuss that the scopes in this article are used to study nature. Look at the pictures in the article and ask students what aspects of nature are shown in the pictures.

READ AND DISCUSS

Read the article “A Closer Look” aloud to students as they follow along. You may want to read the entire article first, and then reread the article, taking time to stop and discuss each two-page spread.

Pages 18–19 Read the text. Ask: **What does it mean to take a closer look?** (*It means to look carefully or to look at something at a close distance from your eyes.*) **What does the scope on page 19 help the girl do?** (*see tadpoles under the water*)

Pages 20–21 Read the text and have students describe what the people are observing in nature. Ask: **How do the scopes help?** (*These scopes help you see things that are far away, such as a bird in a tree or even the moon and the stars.*)

Pages 22–23 Read the text and have students describe what the people are observing in nature. Ask: **How do the scopes help?** (*The scopes make tiny things look larger. They help the people look at the flowers up close.*)

Talk with students about Manu Prakash, the man who invented the Foldscope. Ask students to discuss the advantages of having a microscope you can fit in your pocket.

TALK AND WRITE

Students can respond to the article by talking and writing. Use the following prompts to guide them. You might also want to use the Observation Master for this article.

- **Talk about something you learned about scopes.**
- **Write about or draw something you might see using a scope.**

A Closer Look

LEARNING FRAMEWORK

Objective

- Students will learn that people use different tools to observe things.

Resources

- Learning Framework Master (page 13)

Learning Framework

The National Geographic Learning Framework emphasizes the attitudes, skills, and knowledge children should learn from their experiences. Observation is a skill that is focused on in “A Closer Look.” Observation for kindergartners is addressed in this way in the Learning Framework:

- Children can categorize objects they observe.
- Children can place themselves in their surroundings, and make observations relative to their own location.
- Children employ simple equipment and tools to gather data and extend the senses.

ENGAGE

Some of your students may only think about tools in one way. Say: **Let’s see if we can create a list of different types of tools people use.** Ask students to think about tools used for different purposes. Create different categories of tools, such as the following, and then have students add tools to each of the categories.

Tools Used to Fix Things

Tools Used for Writing

Tools Used to Cook

Tools Used to Clean

EXPLORE

Have students look around the classroom and find tools used for different purposes. You can make a game of it and send groups of students on a hunt to search for tools used for different purposes. For example, some of the tools used for science class will be different from the tools used for art class.

EXPLAIN

Read the article to students.

After reading, have students discuss with a partner what they learned about scopes used to study nature. Ask: **Have you ever used any of the scopes mentioned in the article?** If any students have, ask them to share with the class what scope they used and what they used it for.

ELABORATE

If you have some of the tools mentioned in the article available in your classroom or school, use them with students. Spend time looking at some of the things in nature noted in the article. Find other things students might want to look at too. You might have students start a science notebook to draw or write about their observations.

EXTEND

Students can create their own telescopes.

Directions for making a telescope can be found at kids.nationalgeographic.com/explore/nature/make-a-telescope/

EVALUATE

Assess students’ understanding with the Learning Framework Master for this article. You might also use the following prompts.

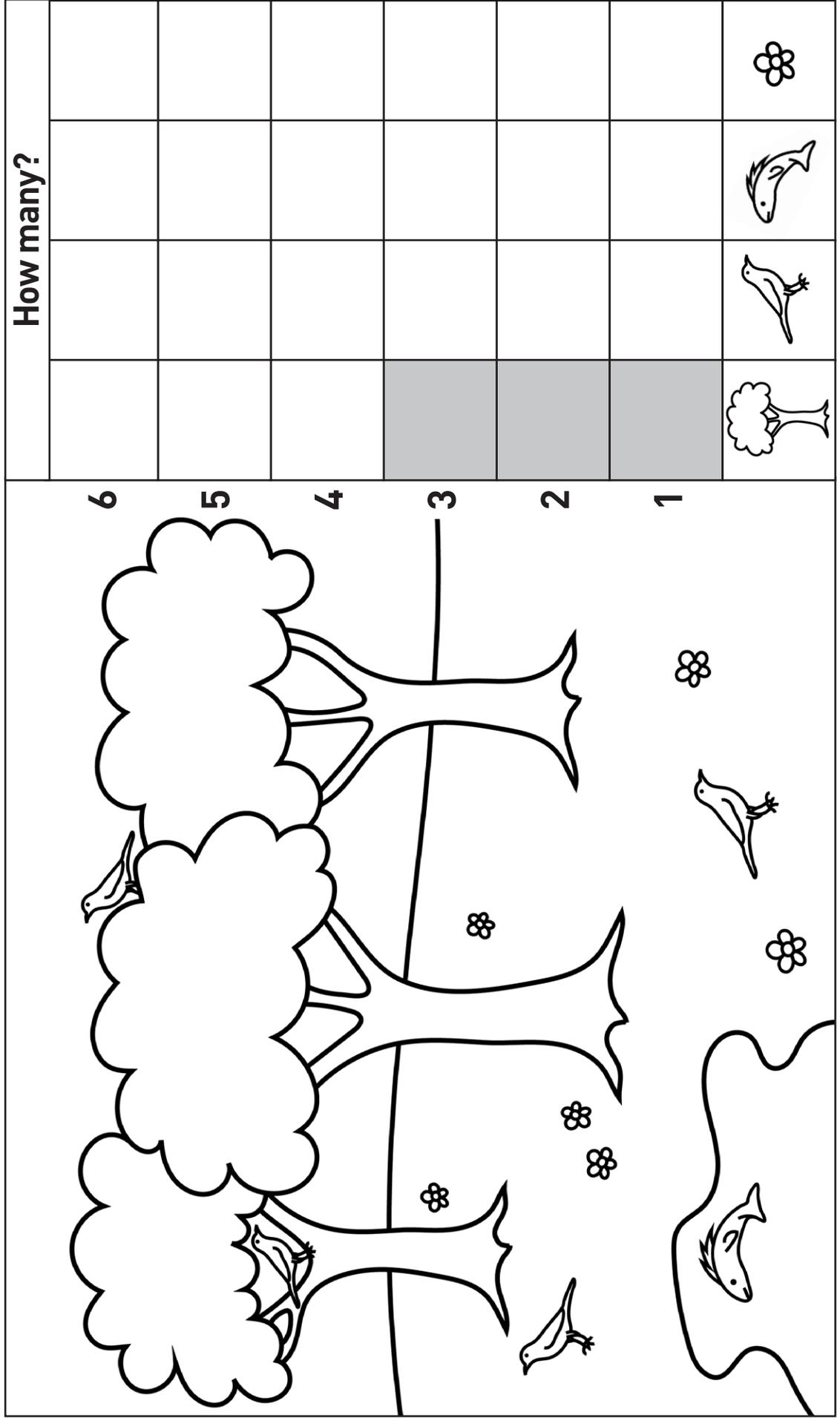
- **What are some things you use scopes to look at?**
- **How do scopes help us see things in nature?**

Name _____

Date _____

OBSERVATION: Nature Counts

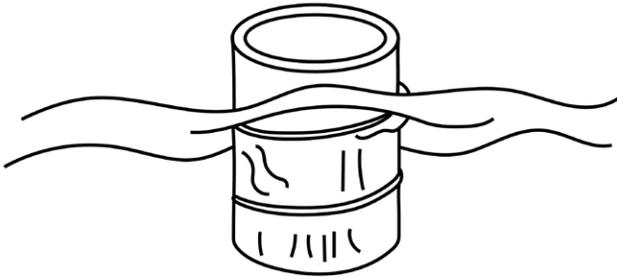
Observe. Count each animal and plant. Show your answers in the graph.



LEARNING FRAMEWORK: Look Closer

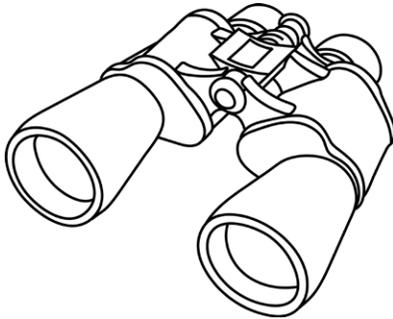
Draw what you can see with each scope.

underwater scope



under the water

binoculars



far away

hand lens



up close

ANSWER KEY

An Eagle Grows Up

Language Arts: Growing and Changing, page 4

Students should color the pictures to match the labels to show how eaglets grow and change.

Science: Alike and Different, page 5

Students should list how the eaglet and eagle are alike and different.

Making Chocolate

Language Arts: In the Right Order, page 8

Students should number the pictures in the correct order and then write about their favorite chocolate candy.

1. cut
2. open
3. dry
4. roast, grind, mix
5. mold
6. wrap

Social Studies: Step by Step, page 9

Students should cut out the pictures and put them in order.

A Closer Look

Observation: Nature Counts, page 12

Students should complete the graph.

- three trees
- four birds
- one fish
- six flowers

Learning Framework: Look Closer, page 13

Students should draw something they could see with each kind of scope.