TEACHER’S GUIDE

In This Guide
In this guide, you will find language arts and science 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 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/explorermag-resources, to find additional resources for extending your students’ learning.

Your Subscription Includes:
• Magazines    • Classroom Posters    • Projectable Magazine
• Interactive Whiteboard Lesson    • Teacher’s Guide    • Interactive Edition
  (additional subscription required)
Objective

- Students will ask and answer questions about key details in the text.
- Students will recognize that the first word in a sentence is capitalized and will recognize and name end punctuation.

Your Bones

**LANGUAGE ARTS**

**Resources**

- Language Arts Master (page 4)

**Summary**

Your bones hold you up, help you move, and protect you. Your backbone supports your body. Some bones help you move. Joints connect bones. They help you bend and move. Some bones protect what is inside you, like your heart and lungs.

**WORD WORK**

**Sight Words:** you, have, in, a, to, do, up, help, with, that, too, make, run, jump, be

**BUILD VOCABULARY AND CONCEPTS**

- arm bones
- backbone
- leg bones
- skeleton

The words above are used in the article and may be new to students. Use the following routine to introduce the words to students. Go through the routine, one word at a time. Pronounce the word. Ask students if they know the word. They can respond with a thumbs up or a thumbs down. Define each word, using student-friendly language. Post the word on a word wall. Tell students they will be adding more information about each word, such as drawings, photos, descriptions, and definitions, as they learn more. After reading, as a class, you may want to add information about each word to a word wall.

Encourage students to tell what they know about the words and to use the words as they talk about their own experiences and the article.

**READ AND DISCUSS**

Read the article “Your Bones” 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 text aloud to students. After reading the text on page 3 ask: **What do you think we will learn about the bones of the body as we read on? (what the bones do)**

Ask: **Where are your bones?** *(Possible answer: under your skin)* Point out to students the different X-ray pictures on the pages. Ask: **What parts of the body do each of these pictures show? (foot/ankle, hands, spine/skull/ribs).** Students may not know all of these, so let them know they will learn more and see more pictures of the bones in the body as you read on.

Pages 4–5

Ask: **What do some bones do? (hold you up)**

**What bone helps hold you up? (backbone)** Point to the skeleton diagram. Ask students to point to the bones on the diagram as you read each label. Then have students point to where these bones are on their own body.

Pages 6–7

Ask: **What did you learn about bones and joints on these pages?** *(Some bones help you move, such as arm bones and leg bones. Joints connect bones. They bend.) What kind of movement do the pictures show? (skating, playing tennis)*

Point to the X-ray picture on page 6. Read the label and ask students to point to the joints on the picture. Then have them point to their own knees and bend and move their knees. Have them move their arms as if they were playing tennis.

Pages 8–9

Ask: **What do your bones make up? (your skeleton)**

**What do bones help you do? (walk, run, and jump)**

As a class, write a sentence about bones, such as **Bones help you move.** Guide students to recognize that a sentence begins with a capital letter and ends with a period.

**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 your bones.
- Draw something you learned about your bones.
Your Bones

SCIENCE

Objective
• Students will learn that people have bones. Bones help your body stand and move.

Resources
• Science Master (page 5)

Science Background
The human body has 206 bones. More than half of these bones are the small bones in the hands and feet. The hands have 54 bones (27 in each hand), and the feet have 52 bones (26 in each foot). The largest/longest bone in the body is the thighbone, or femur. The smallest/shortest bone in the body is in the ear. It is called the stirrup. The focus of this article is on some of the bones that help hold the body up (backbone) and help the body move (arm bones and leg bones).

ENGAGE
Engage students in a discussion about movement. Ask them to run in place, do a few jumping jacks, and bend and touch their toes. Ask: What parts of your body do you use when you run, do jumping jacks, and bend over to touch your toes? (legs, arms, back)

EXPLORE
Ask students if they know where the bones in the body are. Then ask: Have you or anyone you know ever broken a bone? If so, which bone? (Students may mention bones they have broken, or they may point to the place on the body where a bone was broken.) Guide students in a discussion about what happens when a bone breaks. Students who have broken a bone might mention that they couldn’t use their arm or leg until the bone healed. Lead students to understand that strong, healthy bones allow us to stand and move easily.

Some students may mention that they saw a picture or an X-ray of their broken bone. Have them share what that looked like. You could let students know there are X-ray pictures of some of the bones of the body in the article “Your Bones.”

EXPLAIN
Read the article to students.

After reading, have students explain and describe what bones do. Have them fill in the blanks in the following sentences.

• Bones _________. (hold you up)
• Bones _________. (help you move)
• Bones make up your _________. (skeleton)

Have students point to the bones on the skeleton on page 4 that help them do each of the following things.

• Which bone helps hold you up? (backbone)
• Which bones help you move? (leg bones)

ELABORATE
Spend more time exploring the bones and joints of the body. Have students show movements they can make using these bones and joints:

• legs and knees
• arms and elbows
• hands and wrists
• feet and ankles

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

• What do bones do?
• Draw a way you can move thanks to your bones.
Bones hold you up.

Bones protect you.

Bones help you move.

Bones hold you up.

Trace the sentences. Circle the capital letter. Circle the period.

LANGUAGE ARTS: What Do Bones Do?

Name _________________________________________                                                                                                    Date _______________________

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SCIENCE: Bones of the Body

Cut out the words. Paste each word to label the skeleton.

arm bones leg bones backbone
Peek in a Pool

Objective
• Students will describe the relationship between photographs and text.
• Students will recognize and form plural nouns by adding /s/.

Languages Arts

READ AND DISCUSS
Read the article “Peek in a Pool” 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 aloud to students. After reading the text on page 11, have students look at the picture and ask: What do you see in the picture? (Students should mention the water, the rocks, the shore, and the sea stars.) Let students know they will be finding out more about some of the animals that live in a tide pool.

Pages 12–13 After reading the text on page 12, ask students to look at the photo of the crab. Say: The text says the crab has red claws. Point to the red claws. After reading page 13, ask students to look at the photo of the sea snails. Say: The text says one of the sea snails hides in its shell. Point to the sea snail that is hiding in its shell.

The text on page 12 refers to one crab, and the photo shows one crab. Guide students to recognize that adding /s/ to the end of the word “crab” indicates more than one: crab--one crab; crabs--more than one crab. The text for sea snails on page 13 refers to more than one sea snail, so the /s/ has been added to sea snail to indicate more than one: sea snail--one sea snail; sea snails--more than one sea snail.

Pages 14–15 After reading the text on these pages, have students look at the photos. Ask: How do tube feet help sea stars? (They help them hold on to rocks.) What do sea urchins have? (sharp spines)

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 new you learned about a tide pool.
• Draw a tide pool and one of your favorite tide pool animals.

Resources
• Language Arts Master (page 8)

Summary
Tide pools are pools of water that are found on rocky shores. Many different animals live in tide pools. Crabs, sea snails, sea stars, and sea urchins live in tide pools. Tide pool animals have different body parts that help them live there.

WORD WORK
Sight Words: a, is, it, on, in, this, one, they, have, there, too

BUILD VOCABULARY AND CONCEPTS
• tide pool
• crab
• sea snail
• sea star
• sea urchin

The words above are used in the article and may be new to students. Use the following routine to introduce the words to students. Go through the routine, one word at a time. Pronounce the word. Ask students if they know the word. They can respond with a thumbs up or a thumbs down. Define each word, using student-friendly language. Post the word on a word wall. Tell students they will be adding more information about each word, such as drawings, photos, descriptions, and definitions, as they learn more. After reading, as a class, you may want to add information about each word to a word wall.

Encourage students to tell what they know about the words and to use the words as they talk about their own experiences and the article.
ENGAGE
Ask students if they have ever been to the ocean. If some of them have, ask them to describe what the ocean is like. Guide them to talk about the ocean. Some students may even mention the tides, if they have experienced them. Ask: What different sea animals and sea plants did you see? Did you see rocks or rocky shores? Begin to share with students information about the ocean. Tap into their experiences with the ocean and some of the living things that can be found in and around the ocean.

EXPLORE
Explore the concept of ocean life and talk about sea animals that live in or near the ocean. Discuss what these animals look like and their special body parts that help them live in the ocean, such as fins on fish, wings on seagulls, or shells on turtles. Tell students that these body parts help these animals stay alive by helping them find food or protecting them from other animals. Let students know that you are going to read an article about ocean tide pools and will find out about some sea animals that live there.

EXPLAIN
Read the article to students.

After reading, ask: What is a tide pool? [a pool of water on a rocky shore] What tide pool animals did we learn about? [crabs, sea snails, sea stars, sea urchins] Ask the following questions about each of the sea animals in “Peek in a Pool.”

- What special body part does a crab have? [red claws]
- How might claws help the crab? [to grab food]
- What special body part does the sea snail have? [a shell]
- How might a shell help the sea snail? [help it hide from other animals]
- Which sea animals have tube feet? [sea stars]
- How do tube feet help? [They help the sea stars hold on to rocks.]
- What special body part do sea urchins have? [spines]
- How might sharp spines help? [They might keep other animals away.]

You may want students to pantomime what it would be like to be some of the different tide pool animals using their special body parts: crabs grabbing food with their claws; sea snails hiding from other animals; sea stars holding on the rocks while the ocean waves push and pull them; sea urchins keeping other animals away with their sharp spines.

ELABORATE
Refer to the back page of the magazine to explore more about the tide pool animals students read about in “Peek into a Pool.” Students will learn about body parts that help protect sea urchins, crabs, sea stars, and sea snails.

Display the Peek in a Pool poster. Have students work in pairs to find the tide pool animals they read about in the article. If students wish to learn about other animals that live in tide pools, as a class, find and name each of the numbered living things on the poster.

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

- What are some animals that live in a tide pool?
- Draw a crab or a sea urchin. Label its special part.
Add an s to the end of each word that means more than one.

One

- crab
- sea star
- sea urchin

More than One

- crab
- sea star
- sea urchin
SCIENCE: Where Are the Animals?

Draw animals that live in a tide pool.
Objective

- Students will use a diagram of the solar system to locate and name the planets.

Resources

- Language Arts Master (page 12)

Summary

Jedidah Isler is a scientist. She studies space. Stars are in the night sky. They are in space. The sun is a star. It is in space. Planets are in space, too. Planets circle the sun. We live on planet Earth. Earth has one moon. The moon is not a planet. It circles Earth.

WORD WORK

Sight Words: round, has

BUILD VOCABULARY AND CONCEPTS

- space
- star
- planet
- moon

The words above are used in the article and may be new to students. Use the following routine to introduce the words to students. Go through the routine, one word at a time. Pronounce the word. Ask students if they know the word. They can respond with a thumbs up or a thumbs down. Define each word, using student-friendly language. Post the word on a word wall. Tell students they will be adding more information about each word, such as drawings, photos, descriptions, and definitions, as they learn more. After reading, as a class, you may want to add information about each word to a word wall.

Encourage students to tell what they know about the words and to use the words as they talk about their own experiences and the article.

READ AND DISCUSS

Read the article “Out in Space” 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.

When you read and discuss the article, focus on these questions for each two-page spread.

Pages 16–17  Ask: What did you learn about stars? (Sometimes you can see stars in the night sky. Stars are in space.)

Pages 18–19  Ask: What is the sun? (The sun is a star.)

Where is the sun? (The sun is in space.)

Pages 20–21  Ask: What else is in space? (planets) Which planet do we live on? (Earth)

Have students spend time studying the solar system diagram. Ask them questions about the different planets. Talk about the different sizes of the planets and the different characteristics of each planet; for example, color and other distinguishing characteristics such as Saturn’s rings.

Pages 22–23  Ask: What did you learn about Earth’s moon? (It is not a planet. It circles Earth.) What is in space? (Earth, Earth’s moon, planets, and the sun are in space.)

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 new you learned about space.
- Draw and label one thing in space.
Out in Space

SCIENCE

Objective
• Students will understand that the sun, moon, stars, and planets are in space.

Resources
• Our Solar System poster (Teacher’s Edition)
• Science Master (page 13)

Science Background
As a kid, Jedidah Isler liked looking at stars. When she was twelve years old, she decided she wanted to be an astrophysicist. Today, she has a Ph.D. in astrophysics and is a postdoctoral fellow and National Geographic Emerging Explorer.

There are many different objects in space. Our solar system is in space. It is made up of many objects, including the sun, planets, moons, asteroids, comets, and meteoroids. All of the planets revolve around the sun. The sun is the largest object in our solar system. Its light and heat make it possible for life on Earth. There are four inner planets—Mercury, Venus, Earth, and Mars. There are four outer planets—Jupiter, Saturn, Uranus, and Neptune.

EXPLAIN
Read the article to students.

After reading, have students explain and describe some things about space. Students should note some of the following:
• Stars are in space.
• The sun is in space. It is a star.
• Planets are in space. They circle the sun.
• Earth is a planet. We live on Earth.
• Earth has a moon. The moon is not a planet.
• The sun, the planets, and the moon are all in space.

ELABORATE
Share the Our Solar System poster with students. Have students work in pairs to use the solar system map to answer the questions.

1. How many planets are in our solar system? (eight)
2. Which planet is your home? (Earth)
3. Which planet is closest to the sun? (Mercury)
4. Which planet is farthest from the sun? (Neptune)
5. Which is the largest planet? (Jupiter)

EVALUATE
Assess students’ understanding with the Science Master for this article. You might also use the following prompts.
• What is in space?
• Draw Earth and the moon.

ENGAGE
To engage students in a discussion about space ask:
What do you see when you look up into the night sky? (Students are likely to mention stars and the moon.) What is in the sky during the day that provides light and heat? (the sun) Let students know that these objects—the stars, the moon, and the sun—are all in space.

EXPLORE
Discuss that stars appear small because they are far away. Ask: What do stars look like? (They look like many small points of light in the sky.) Let students know that stars are very far away from us. They appear small, but they are really very large. Explore the concept of how things close by appear larger than they do when they are far away. Ask: Have you ever been in an airplane? If so, have you looked out of the window before you started flying above the clouds? What did cars and buildings look like? Did they appear smaller or larger than they do when you are on the ground? Discuss with students.

EXPLORE
Discuss that stars appear small because they are far away. Ask: What do stars look like? (They look like many small points of light in the sky.) Let students know that stars are very far away from us. They appear small, but they are really very large. Explore the concept of how things close by appear larger than they do when they are far away. Ask: Have you ever been in an airplane? If so, have you looked out of the window before you started flying above the clouds? What did cars and buildings look like? Did they appear smaller or larger than they do when you are on the ground? Discuss with students.
LANGUAGE ARTS: The Planets

Color the sun and the planets. Circle Earth.
SCIENCE: What is in Space?

Draw a line to match each picture to a word.

- sun
- moon
- planet
ANSWER KEY

**Your Bones**

Language Arts: What Do Bones Do? page 4
Students should trace the sentences and circle the capital letter that begins each sentence and the period that ends each sentence.

Science: Bones of the Body, page 5
Students should correctly label the parts of the skeleton using the words in the word bank: arm bones, leg bones, backbone.

**Peek in a Pool**

Language Arts: More than One, page 8
Students should fill in the blanks with /s/ to form plurals.

- crabs
- sea stars
- sea urchins

Science: Where Are the Animals? page 9
Students should draw animals that live in a tide pool.

**Out in Space**

Language Arts: The Planets, page 12
Students should color the planets and circle planet Earth.

Science: What is in Space?, page 13
Students should draw a line to match each picture to a word.

- image of crescent moon → moon
- image of Saturn → planet
- image of sun → sun