

Planet Earth

Young learners will read about the progression of life on Earth and how this big blue marble became our home. Bright graphic features in this issue of *Click* help illustrate the concept of Pangea and provide a basic introduction to our planet's five major biomes.

CONVERSATION QUESTION

What can we learn from studying the Earth?

TEACHING OBJECTIVES

- Students will learn about the progression of life on the planet Earth.
- Students will study the world's largest landmasses.
- Students will learn about the five major biomes of the Earth.
- Students will demonstrate the ability to properly sequence a studied process.
- Students will construct explanations from a science-based text.
- Students will classify information using facts from the text, as well as deductive reasoning skills.
- Students will write narratives to develop imagined experiences.
- Students will practice the mathematical concept of a whole being equal to the sum of its parts.
- Students will learn how color can be utilized to represent specific information on a map.



In addition to supplemental materials focused on core STEM skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and crosscurricular activities.

SELECTIONS

- Earth! My First 4.54 Billion Years Narrative Nonfiction, ~350L
- Supercontinent!
- Expository Nonfiction, ~750L
- Where on Earth?
- Expository Nonfiction, ~950L

Earth!

My First 4.54 Billion Years

pp. 8–13, Narrative Nonfiction

Known by many names, most of us simply refer to Earth as "home." Students will learn how our beautiful blue planet has matured over millions of years to finally support life as we know it.



RESOURCES

• Amazing Earth

OBJECTIVES

- Students will learn about the progression of life on the planet Earth.
- Students will demonstrate the ability to properly sequence a studied process.
- Students will write narratives to develop imagined experiences.

KEY VOCABULARY

- explosive (p. 9) able or likely to burst apart
- ginormous (p. 9) extremely large
- *species* (p. 13) a group of animals or plants that are similar

ENGAGE

Conversation Question: What can we learn from studying the Earth?

Explain that this article tells about how Earth has changed since it was "born" billions of years ago. Discuss with students how they have changed since they were born. Then point out that the article contains some very BIG numbers. Take this opportunity to review the place-value chart. Remind students that as digits are moved to the left on the chart, numbers become 10× larger, and as digits are moved to the right, they become 10× smaller. Practice this skill with the class. Have students underline the BIG numbers in the article and assist them in placing these numbers on the place-value chart.

INTRODUCE VOCABULARY

Display and read aloud the key words. Have students share ideas about the meanings. Inform the class that they will encounter these words in the article. Challenge them to predict the content of the article. Then display and read aloud the definitions. Remind students to look and listen for the key words in the article.

READ & DISCUSS

Read the article aloud, pausing when answers to the questions below are revealed. Help students revisit the predictions they made earlier.

- 1. How were the continents formed?
- 2. What are some of the earliest life forms?
- 3. Why does the Earth say, "It's not always easy being Earth" (p. 12)?
- 4. How are humans different from any other creature on Earth?

CONCEPT/SKILL FOCUS: Sequence and Process

INSTRUCT: Review the article on pages 8–13 and remind students that there is an evolutionary process that is responsible for life forming on Earth. Distribute the *Amazing Earth* graphic organizer and instruct students to refer back to the illustration on pages 10–11 to accurately sequence the progression of life on our planet.

ASSESS: Circulate as students are working on the graphic organizer and discuss the information in the illustration. As necessary, help students use the dashed lines in the illustration to figure out the order in which plants and animals appeared on Earth. Finally, have students work in pairs to use their organizers to retell the sequence of evolution.

EXTEND

Language Arts Remind students that in this article, the planet Earth talks to readers. Read aloud the article's first sentence. Then help students write a class story from the perspective of an animal or object, such as a sneaker, an ant, or a soccer ball. Draw a picture of the object and discuss what its thoughts, feelings, likes, and dislikes might be. Then use these sentence frames to start: *Hi! I am*_____. *I like*_____. *I don't like*_____. *I feel happy when*_____. *I am glad I am a*_____.

Sequence: Write or draw the plants and animals in the order they appeared on Earth. The illustration on pages 10–11 will help you.



http://www.cricketmedia.com/classroom/Click-magazine

Supercontinent!

pp. 16–20, Expository Nonfiction

Similar to a giant jigsaw puzzle, the world's landmasses have been interlocked and broken apart. This article guides young readers to examine the shapes of the Earth's largest regions of land and introduces them to the theory of Pangea.



RESOURCES

The Pangea Puzzle

OBJECTIVES

- Students will study the world's largest landmasses.
- Students will construct explanations from a science-based text.
- Students will practice the mathematical concept of a whole being equal to the sum of its parts.

KEY VOCABULARY

- continent (p. 16) a large area of land on Earth; Earth has seven continents
- *supercontinent* (p. 17) a very large area of land made up of more than one continent
- *subcontinent* (p. 17) a smaller area of land that is part of a continent

ENGAGE

Conversation Question: What can we learn from studying the Earth?

As this article focuses on the splitting of Pangea into continents, puzzles are an excellent prereading motivational activity. Place a variety of simple puzzles on the tabletops and floor and allow students to rotate through the stations. Then discuss how students used shapes, colors, and images to figure out which puzzle pieces fit together. Display a world map and point out the shapes of the continents and where they may have been joined.

INTRODUCE VOCABULARY

Post and read aloud the key words and definitions. Have students notice the base word *continent* and the prefixes *sub-* and *super-*. Draw a T- chart on the board with the prefix headings and their meanings. Have the students supply words that you can list in each column.

READ & DISCUSS

Reinforce the concepts presented in this article by posing the following questions for discussion.

- 1. Why can't we notice the continents moving around?
- 2. Other than the shape of the continents, how do we know that the continents were once all joined together?
- 3. How are scientists making a prediction that a new supercontinent will be formed in approximately another 250 million years?

CONCEPT/SKILL FOCUS: Constructing Explanations

INSTRUCT: Advise students to review pages 18–19 and to study the three different clues that tell us the continents were once joined together. Distribute the graphic organizer—*The Pangea Puzzle*—and instruct the class to locate the subheadings in the article for each clue listed on the chart. They will use information directly from these sections of the text to complete the organizer.

ASSESS: Collect and analyze *The Pangea Puzzle* worksheet to further evaluate students' ability to construct explanations from the text. Consider peer remediation if clarification is necessary.

EXTEND

Mathematics As students have studied the breaking of land into smaller pieces, take this opportunity to review and practice the addition concept of a whole being equal to the sum of its parts. (Ex: 3=1+2, 3=2+1, 3=1+1+1) More advanced students can use other numerical operations to demonstrate this mathematical standard.

The Pangea Puzzle

Constructing Explanations: Write or draw how each clue showed scientists the continents were connected long ago. The information on magazine pages 18–19 will help you.

Clue	How does the clue show that continents were connected long ago?
Ancient layers of rocks	
Mountain ranges	
Lots of plant and animal fossils	

Your Continent Draw the shape of the continent you live on. What is the name of the continent? Use the back of this paper for your work.

Where on Earth?

pp. 21–25, Expository Nonfiction

This article provides young students with a world map that is color-coded to show the five major biomes on Earth. Characteristics of each biome are presented, including weather patterns and plant and animal life.



RESOURCES

• Where, Oh Where?

OBJECTIVES

- Students will learn about the five major biomes of the Earth.
- Students will classify information using facts from the text, as well as deductive reasoning skills.
- Students will learn how color can be utilized to represent specific information on a map.

KEY VOCABULARY

- biomes (p. 21) large areas of the world that share similar weather and types of soil and water
- aquatic (p. 21) underwater
- tundra (p. 21) a large area in the northern part of the world where there are no trees and the ground is always frozen
- *weather patterns* (p. 21) periods of time when the weather stays the same

ENGAGE

Conversation Question: What can we learn from studying the Earth?

Have students take a color walk around the classroom or school with the objective of noticing how colors are used to organize or group like objects. For example, different-colored bins may contain different types of books or art supplies and different-colored notebooks may be used for different subjects. Ask students why color is an effective way to categorize things. List responses.

INTRODUCE VOCABULARY

Display and read aloud the key terms and definitions. Then display a Tchart with the headings "A–M" and "N–Z." Guide students to notice that two of the key terms begin with letters from the first half of the alphabet and two with letters from the second half. Have students copy the chart and the write each key term under the correct heading. As a post-reading activity, challenge students to add other words from the article to their charts.

READ & DISCUSS

Have students study the text features in the article. Then read the article aloud and discuss the questions below.

- 1. How many major biomes are there? List them.
- 2. How do plants and animals help to identify the biome?
- 3. Why don't scientists always agree on how many biomes there are?

CONCEPT/SKILL FOCUS: Classifying Information

INSTRUCT: Remind students that the article was written to teach readers about the five major biomes on Earth. Introduce the *Where, Oh Where?* graphic organizer. Then lead the activity by demonstrating how to reread pertinent passages and mark the correct column. Inform students that the four plants and animals in the "Four More!" chart are not discussed in the article. Students will need to use their own reasoning skills to figure out which biome each is found in.

ASSESS: Collect and review information that the students have recorded on their graphic organizers. Remediate with a small group if necessary.

EXTEND

Geography Display a simple map of the classroom or the school. Show how color can be used to represent different areas on a map, for example quiet areas in the classroom, classrooms of different grade levels, and hallways. Have the class assist you in deciding how to color code your map. Then allow students to take part in the coloring. Emphasize the importance of making a key so that the map can be understood by others.

Where, Oh Where?

Classify Information Which biome does each plant or animal live in? Use information from the article to find out. Then write an **X** in the correct box.

plant/animal	Aquatic biome	Desert biome	Grassland biome	Forest biome	Tundra biome
pine tree				X	
camel					
fish					
arctic hare					
fir tree					
grasses					
zebra					
cactus					

Four More! Which biome do you think these animals and plants live in? Mark your chart. Then share your ideas with a partner.

plant/animal	Aquatic biome	Desert biome	Grassland biome	Forest biome	Tundra biome
polar bear					
octopus					
raccoon					
maple tree					