



A Walk in the Woods

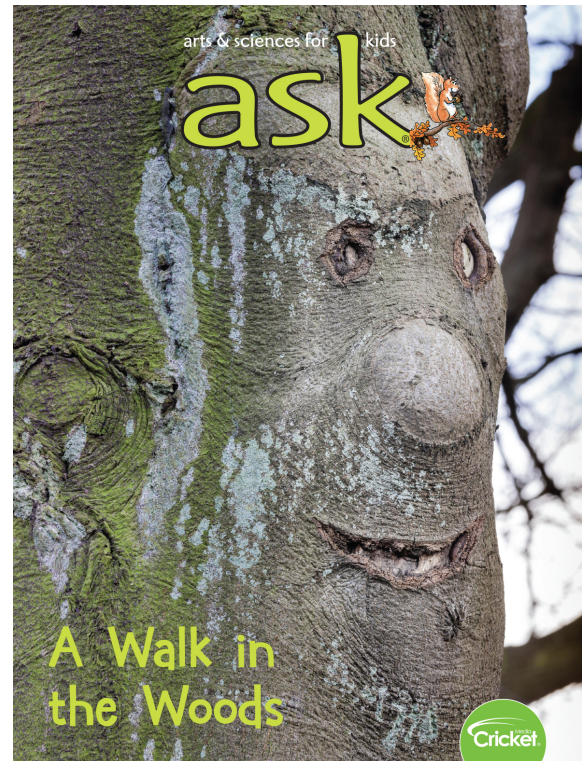
Lace up your hiking boots, grab your binoculars, and prepare to uncover some of the mysteries of the deep woods. Interesting articles about woodland plants and animals are accompanied by beautiful photographs that complement the text.

CONVERSATION QUESTION

What can we learn by studying woodland creatures and their environment?

TEACHING OBJECTIVES

- Students will read scientific explanations that address the natural mysteries of the woods.
- Students will learn how a young porcupine experiences the night.
- Students will learn how lichens are beneficial to our natural environment.
- Students will examine cause-and-effect relationships.
- Students will obtain and record relevant information.
- Students will collect evidence that supports scientific claims.
- Students will write an informational article explaining a researched mystery in science.
- Students will research how animals defend themselves against predators in nature.
- Students will create a theme-based acrostic poem.



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

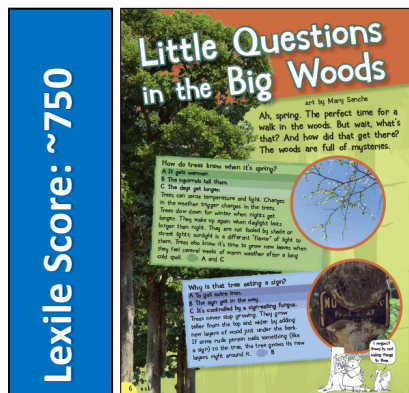
SELECTIONS

- **Little Questions in the Big Woods**
Expository Nonfiction, ~750L
- **Porcupette Explores the Night**
Expository Nonfiction, ~950L
- **A Liking for Lichens**
Expository Nonfiction, ~950L

Little Questions in the Big Woods

pp. 6–11, Expository Nonfiction

This article answers some interesting questions regarding the natural mysteries of the woods. Beautiful photographs enhance the content and clarify the answers.



RESOURCES

- It's Unbe-LEAF-able!

OBJECTIVES

- Students will read scientific explanations that address the mysteries of the woods.
- Students will examine cause-and-effect relationships.
- Students will write an informational article explaining a researched mystery in science.

KEY VOCABULARY

- **chlorophyll (p. 7)** a green substance in plants that enables them to use the energy from sunlight in order to grow
- **decomposers (p. 7)** organisms that break down dead or decaying organic material
- **larvae (p. 8)** insects in an early stage of development that differs greatly in appearance from the adult stage

ENGAGE

Conversation Question: What can we learn by studying woodland creatures and their environment?

Have students number a piece of paper from 1 to 10. Choose ten of the questions from the article and have students write a short response. This will activate prior knowledge of the topic, as well as serve as a motivating activity. Pause and discuss responses as answers are revealed in the article.

INTRODUCE VOCABULARY

Post and review the key terms. Guide students to recognize that all of the words are nouns that are helpful for determining and summarizing the main idea of this article. Students can use the back of the paper from the ten-question activity above to list other important “Woods Words” as they read.

READ & DISCUSS

Read the article aloud with the class. Have students reread the article in small groups and answer the questions below.

- Explain why the forest is “great at recycling.”
- What are different types of lumps on trees called?
- Why do some trees have holes through them?
- What happens when plants make sugar?
- How does the shape of the tree tell its life story?

CONCEPT/SKILL FOCUS: Cause and Effect

INSTRUCT: Lead the students in a discussion that guides them to recognize the many cause-and-effect relationships (relationships in which one event makes another event happen) that are presented in this article. Introduce the graphic organizer, *It's Unbe-LEAF-able!*, and advise students that they will be searching through the article for such relationships. Allow students to share ideas and assist each other in locating suitable passages in the text.

ASSESS: Circulate and converse with students as they are working. Collect and review the worksheets to evaluate individual understanding of cause-and-effect relationships. Consider arranging peer remediation groups if necessary.

EXTEND

Language Arts Have students mimic the Question & Answer format of this article to create their own informational article about a science topic of their choice. (Ex: “Little Questions in the Big Oceans,” “Little Questions in the Big Universe,” etc.) Encourage the class to include pictures that help young readers to more easily understand the answers, as well as complement the text.

It's Unbe-LEAF-able!

Use information from the article, "Little Questions in the Big Woods," to record the cause-and-effect relationships presented.

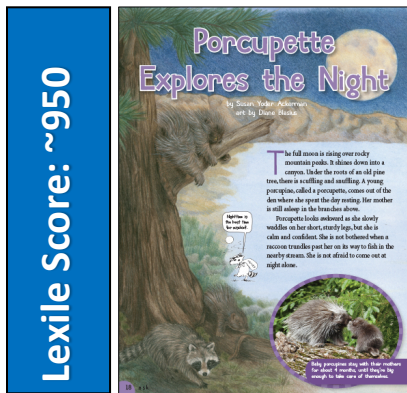
Page #	Cause/Behavior	Effect(s)/Result(s)
7	Green sugar-making cells (chlorophyll) fade.	Red and yellow pigments cover the leaves.
7		Trees grow lumps.
8	Insects lay their eggs on leaves.	

Ask® Teacher Guide: March 2020

Porcupette Explores the Night

pp. 18–21, Expository Nonfiction

Students will learn how young porcupines are just beginning their day, as young humans are lying down to sleep. Waddle through the woods with Porcupette and gather information about this interesting woodland creature.



RESOURCES

- Chillin' and Quillin'

OBJECTIVES

- Students will learn how a young porcupine experiences the night.
- Students will obtain and record relevant information.
- Students will research how animals defend themselves against predators in nature.

KEY VOCABULARY

- **scuffling** (p. 18) moving in a hurried, scrambling manner
- **slinks** (p. 21) to move smoothly and quietly
- **trundles** (p. 18) moves slowly or heavily
- **waddles** (p. 18) walks with short steps and a clumsy swaying motion

ENGAGE

Conversation Question: What can we learn by studying woodland creatures and their environment?

Display the title of the article, “Porcupette Explores the Night.” Underline the word “porcupette” and ask the students if they know the meaning. Reveal that it is the name for a young porcupine. Give the students three minutes to list as many parent–baby animal names as they can. (Ex: dog-puppy, bear-cub, kangaroo-joeey, etc.) Share responses.

INTRODUCE VOCABULARY

Post and discuss the key terms. Lead students to notice that all of the words describe movement, usually referring to animals. Challenge them to answer the same question for each vocabulary word: “What animal moves in this way?”

READ & DISCUSS

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

- What do porcupettes eat?
- How do porcupines climb trees?
- Why do porcupines raise the quills on their back?
- How do the quills help porcupines to be good swimmers?
- What is the size of a newborn porcupine? A full-grown porcupine?

CONCEPT/SKILL FOCUS: Obtaining Information

INSTRUCT: Elicit from the students that this text contains information to help the reader understand how a baby porcupine navigates the woods at night. Distribute copies of the *Chillin' and Quillin'* graphic organizer and have the class reread the article. Instruct them to highlight the passages that detail the specific information needed to complete the web.

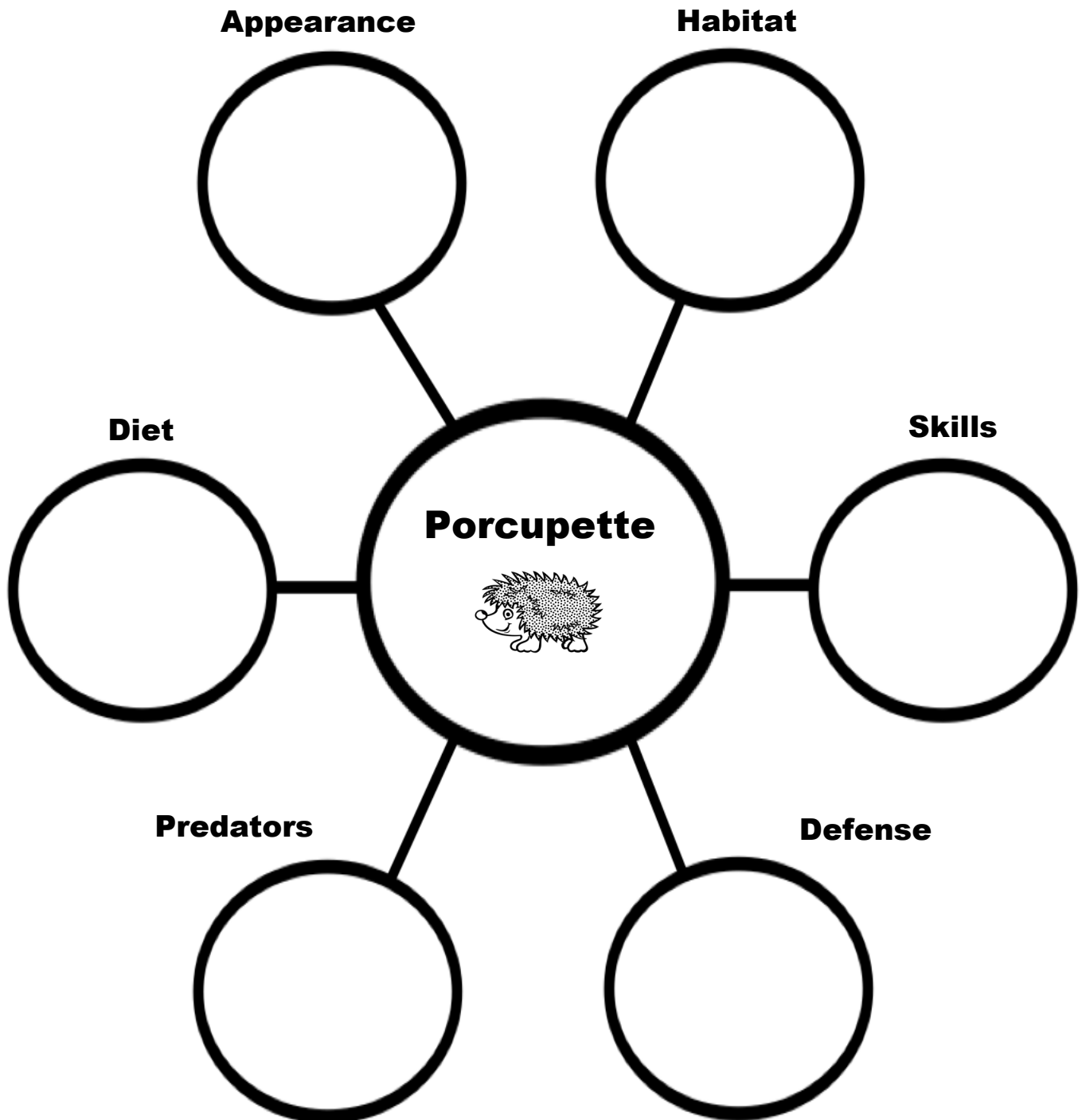
ASSESS: Circulate and have conversations with the students as they are completing their work. Collect and review their organizers. Arrange peer remediation groups if necessary.

EXTEND

Science On pages 20–21, the article explains how Porcupette uses her quills to protect herself against a predator. Instruct students to explore the defense mechanism of other woodland creatures. Encourage students to illustrate and share their research.

Chillin' and Quillin'

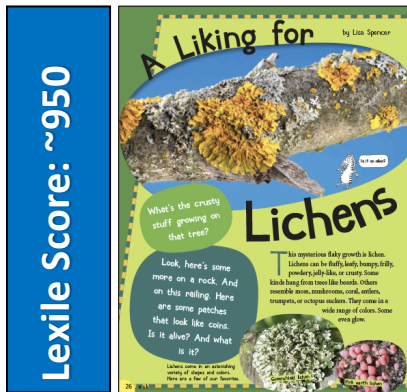
Use information from the article, "Porcupette Explores the Night," to complete the web.



A Liking for Lichens

pp. 26–28, Expository Nonfiction

Students will read about the mysterious, flaky growth that can thrive in almost any climate . . . including outer space! Lichens may be small, but they are important to all life on Earth.



Lexile Score: ~950

RESOURCES

- What's Not to "Lich"?

OBJECTIVES

- Students will learn how lichens are beneficial to our natural environment.
- Students will collect evidence that support scientific claims.
- Students will create a theme-based acrostic poem.

KEY VOCABULARY

- **algae** (p. 27) simple, single-celled aquatic plants that contain chlorophyll but lack true stems, roots, leaves, and tissue
- **colonize** (p. 28) the occupation of a habitat by a biological community
- **resemble** (p. 26) to look like or seem like

ENGAGE

Conversation Question: What can we learn by studying woodland creatures and their environment?

Read aloud the following paragraph from the article, omitting the word "lichens": "(Lichens) can appear fluffy, leafy, bumpy, frilly, powdery, jelly-like, or crusty." Pause for student reflection, then continue, "They come in a wide range of colors, and some kinds can even glow or hang from trees." Have students predict the content of this nature article using the clues. Revisit prediction as a post-reading activity.

INTRODUCE VOCABULARY

Post and discuss the key terms. After the initial reading of the article, stress the vocabulary words when discussing the topic by using the following questions:

- What can **resemble** a lichen?
- What does lichen provide for **algae**?
- What are the benefits of lichen being the first to **colonize** new islands?

READ & DISCUSS

Pose the following questions to the students to facilitate meaningful discussion following the reading of the article.

- Explain how lichen are not one thing, but a partnership between very different life forms.
- Why do fungi need algae and cyanobacteria?
- Where do lichens grow?
- How are lichen and moss alike and how are they different?
- How are lichen important to the Earth?

CONCEPT/SKILL FOCUS: Collecting Evidence

INSTRUCT: This article presents the reader with an abundance of detailed information regarding the role of lichens in nature. Present the *What's Not to "Lich"?* graphic organizer and tell students that they will be recording evidence from the text to support the given claim. Encourage students to work with a partner to reread the article and to gather accurate information.

ASSESS: The objective of this lesson is to help students practice the skill of collecting evidence from science-based texts. Collect organizers when completed to evaluate their abilities to use evidence to support a claim.

EXTEND

Poetry Review the strategies for creating an acrostic poem. (An acrostic poem is one in which the first letter of each line spells out a word or a message.) Instruct students to use the word LICHENS to create an acrostic poem that includes words, ideas, and facts studied in this article and/or in this month's issue of ASK magazine.

What's Not to "Lich"?

Use information from the article, "A Liking for Lichens," to collect evidence that supports the scientific claims.

Claim: Lichens are helpful to animals.

Claim: Lichens can help us monitor air quality.

Claim: Lichens were important to humans in ancient times.

Claim: Lichens are important to humans in modern times.