March 2016

click

opening windows for young minds

Pond life

MAGAZINE ARTICLES

Contents

Teacher's Guide for *Click: Pond Life*

OVERVIEW

In this magazine, readers will learn about ponds and the plants and animals that live in and around them. **Click: Pond Life** *includes information about how a pond changes during the year, how beavers preserve a pond, how to take a closer look at pond life, and how a family builds a pond in their own backyard.*
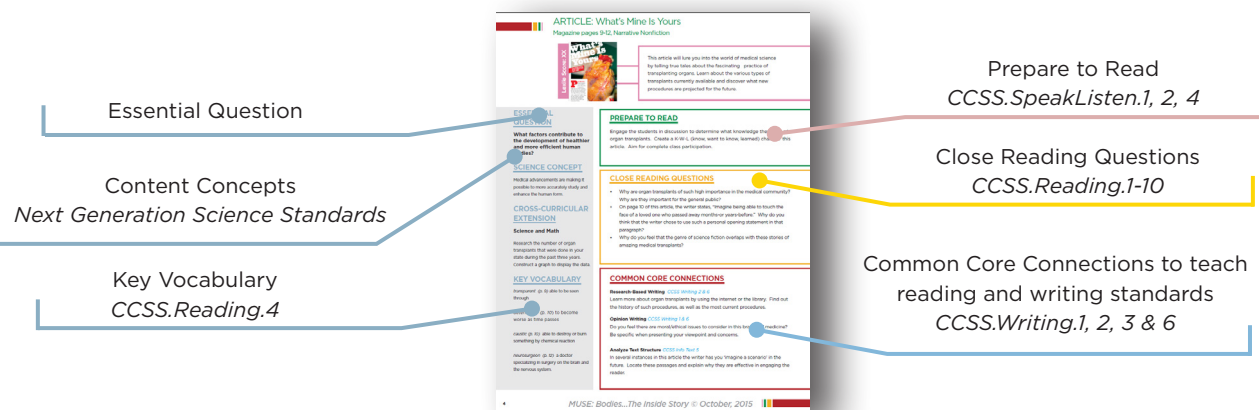
ESSENTIAL QUESTION:

How do plants and animals depend on each other in a pond ecosystem?

We invite you to use this magazine as a flexible teaching tool that is ideal for interdisciplinary learning of social studies and science content and core literacy concepts. Find practical advice for teaching individual articles or utilize a mini-unit that helps your students make cross-text connections as they integrate ideas and information.

READ MULTIPLE ARTICLES PAGES 4 – 8

Each article in this magazine is well-suited for teaching Common Core literacy concepts and content area knowledge. For each individual article page in this guide, you'll find the following:

Essential Question

Content Concepts
Next Generation Science Standards

Key Vocabulary
CCSS.Reading.4

Prepare to Read
CCSS.SpeakListen.1, 2, 4

Close Reading Questions
CCSS.Reading.1-10

Common Core Connections to teach reading and writing standards
CCSS.Writing.1, 2, 3 & 6

TEACH A MINI-UNIT PAGES 10 – 12

Magazine articles can be easily grouped to make cross-text connections and comparisons. Our Common Core mini-unit guides students to read and discuss multiple articles and integrate ideas and information (CCSS.ReadingInfoText.9). Discussing multiple articles (CCSS.SpeakListen.1, 2, 4) prepares students to write informational texts to share and publish in a variety of ways (CCSS.Writing.2).

SCIENCE CONTENT

CORE LITERACY

ARTICLES
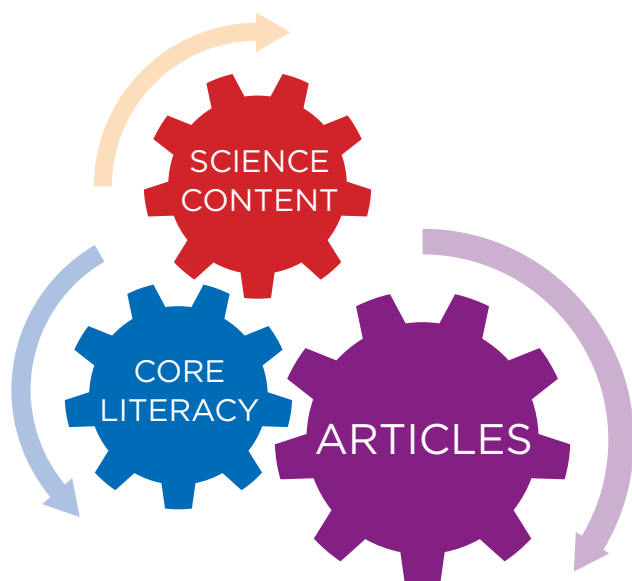
READING

Core literacy concepts, such as the ones found in the Common Core State Standards, help students access social studies and science content. Integration of both literacy thinking and content study offers students a great way to become experts in reading informational text and literature for content knowledge. This guide provides questions to cover many core literacy concepts.

Draw Inferences *(CCSS. InfoText.1)*
Describe Relationships *(CCSS.InfoText.3)*
Analyze Text Structure *(CCSS.InfoText.5)*
Interpret Visual Information *(CCSS.InfoText.7)*

Summarize *(CCSS.InfoText.2)*
Determine Word Meaning *(CCSS.InfoText.4)*
Understand Author's Point of View *(CCSS.InfoText.6)*
Explain Reasons and Evidence *(CCSS.InfoText.8)*

FOCUS STANDARD: CCSS.InfoText.9: Integrate Ideas and Information
Have students read multiple articles on the same topic from this magazine to build knowledge and make cross-text comparisons.

SPEAKING AND LISTENING

Use the articles in this magazine to spark meaningful discussions in person and online. Encourage deeper discussions where students can become topic experts *(CCSS.SpeakListen.1, 2, 4).*

DISCUSSION OPTIONS—IN CLASS OR ONLINE

Article Clubs: Form small reading groups of students reading the *same* article. Have students discuss the content, share ideas, and critically evaluate the text.

Jigsaw Clubs: Form small reading groups of students reading *different* articles. Invite students to share information and resources with each other.

Whole Class: Launch with an essential question. Encourage students to find and share evidence from different articles to build a greater understanding of the question.

WRITING

Use the articles in this magazine to prompt **informative/explanatory writing** *(CCSS.Writing.2).* Have students use evidence from the texts to share information about social studies, language arts, or science content in the articles. See the **Mini-Unit** section of this guide (pgs. 10 – 12) as well as the **Article Pages** (pgs. 4 - 8) for ways to incorporate writing into your instruction.

Click: Pond Life © March 2016

Lexile Score: 570

Click & the Kids

story and art by Betsy Page Brown

Amy   Martin   Click   Grandpa E.   the pond

Martin and Amy have a lot to discover and explore at the pond, even if they don't catch any fish.

ESSENTIAL QUESTION

How do plants and animals depend on each other in a pond ecosystem?

SCIENCE CONCEPT

There are many different kinds of living things in an ecosystem.

CROSS-CURRICULAR EXTENSION

Art

Cut out a big pond shape from blue or green paper. Have children color and cut out different plants and animals to add to the pond ecosystem.

KEY VOCABULARY

ingenious (p. 3) very smart or clever

invention (p. 3) a useful new device or process

PREPARE TO READ

Have students look at the illustrations in this cartoon. Ask them to name the different pond plants and animals they see. Discuss experiences the children have had at ponds or lakes.

CLOSE READING QUESTIONS

- Describe the setting. Where does this cartoon story take place? Use specific examples from the illustrations to help you.
- What does "babysitter for your fishing pole" mean in this cartoon story? Use the illustrations to help you.
- How does this cartoon story connect to the theme of pond life?

COMMON CORE CONNECTIONS

Key Ideas and Details *CCSS Info Text 1*
Talk with a partner and discuss how the plants and animals share the pond environment.

Interpret Visual Information *CCSS Info Text 7*
How does the way the word "splash" is written on page 4 of the cartoon help you understand the meaning of the word? How do the illustrations help support the word's meaning?
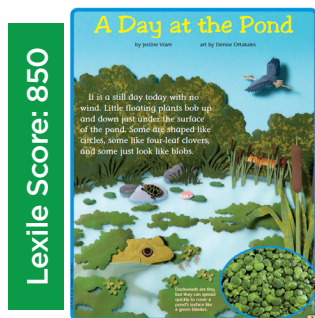
Narrative Writing *CCSS Writing 3 & 6*
Add your own cartoon square of "Click & the Kids" with illustrations and word bubbles. What else could the children have done or seen at the pond?

Lexile Score: 850

Learn about the fish, turtles, and other living things that call a pond home.

ESSENTIAL QUESTION

How do plants and animals depend on each other in a pond ecosystem?

SCIENCE CONCEPT

All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.

CROSS-CURRICULAR EXTENSION

Science

Using details from the article, draw a food chain that starts with duckweed leaves and ends with a great blue heron.

KEY VOCABULARY

fierce (p. 9) eager to fight or kill

surface (p. 7) the upper layer of an area of land or water

PREPARE TO READ

Have pairs of students do a picture walk through the article, pointing to and naming living things as they go. Ask: What kinds of living things live in and around a pond? Have students identify plants and different kinds of animals inhabiting the pond.

CLOSE READING QUESTIONS

- How big is a grown-up minnow? Look back in the text to help you.
- What is the effect of a diving beetle storing air beneath its wings? Use the information on page 8 in the article to support your answer.
- Look closely at the illustrations. How do you think they were made?

COMMON CORE CONNECTIONS

Key Ideas and Details *CCSS Info Text 1*
How do the "silvery minnows" on page 8 of the article move through the water? Identify verbs, or action words, that describe their movement.

**Describe Relationships** *CCSS Info Text 3*
What is the connection or relationship between the duckweed leaves and the minnow? The minnow and the diving beetle?

Expository Writing *CCSS Writing 2, 6 & 7*
Choose a plant or animal from this article that interests you. Read to find out more information about how your chosen living thing lives and grows. What else does it eat? Where else can it be found? Write a brief description about your living thing including the new information you learned.

Lexile Score: 700
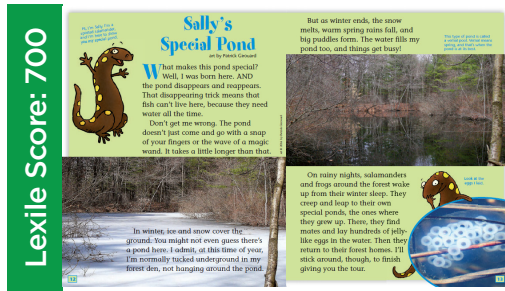
Meet Sally the spotted salamander. She lives in a pond. Read to find out how her home changes with each passing season.

ESSENTIAL QUESTION

How do plants and animals depend on each other in a pond ecosystem?

SCIENCE CONCEPT

Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.

CROSS-CURRICULAR EXTENSION

Art

Use the photographs in the article to draw, color, and label a picture of the pond during a season of your choice.

KEY VOCABULARY

disappears (p. 12) stops being visible

frilly (p. 14) having wavy edges

gills (p. 14) the body part that a fish uses for breathing

reappears (p. 12) appears again after not being seen for a period of time

vernal (p. 13) of, relating to, or occurring in the spring

PREPARE TO READ

Have students name the seasons of the year. Have them look through the photographs in this article to find pictures that may be connected with each season. Ask: *What do you think happens to the pond in each of the seasons? What do you think happens to Sally the spotted salamander?* Have students make predictions, and then read to find out whether their predictions are correct.

CLOSE READING QUESTIONS

- Why do you think Sally the spotted salamander named her daughter *Verna*? Look back at the caption on page 13 of the article to help you.
- What are gills used for? Use the text to support your answer.
- Who is narrating this story? How do you know? Point out the words in the story that help you understand point of view.

COMMON CORE CONNECTIONS

Summarize Main Ideas *CCSS Info Text 2*
With a partner, take turns summarizing the main ideas about what the pond is like during each of the seasons. Use the article to double check details.

Describe Relationships *CCSS Info Text 3*
What is the connection or relationship between salamanders and gills, and salamanders and lungs? How do gills and lungs affect where a salamander is able to live?

Explain Reasons & Evidence *CCSS Info Text 8*
What reasons and evidence does the article give in describing how the pond disappears and reappears?

Lexile Score: 750

Pond Family
by Buffy Silverman

Mother Beaver climbs out of her pond. Using her large tail to balance, she stands on her hind legs and gnaws on a small tree. Her sharp front teeth chisel through the tree's trunk. After a few minutes of chomping, the tree falls. Mother Beaver drags it to the water.

She holds the tree in her mouth and front paws. She paddles with her powerful hind feet and steers with her tail. The tree floats on the water's surface as Mother Beaver swims to her dam.

Have you ever wondered why we say "busy beavers"? To find out, read about how hard a beaver family works to preserve the pond where it lives!

ESSENTIAL QUESTION

How do plants and animals depend on each other in a pond ecosystem?

SCIENCE CONCEPT

Young animals are very much, but not exactly, like their parents.

CROSS-CURRICULAR EXTENSION

Writing

Write an acrostic poem with the word "beaver." Include details about beavers that you learned from the article.

KEY VOCABULARY

balance (p. 16) to make steady by keeping weight equal on all sides

cattail (p. 19) a tall plant that has long flat leaves and grows in wet areas

chisel (p. 16) to cut or shape (something)

gnaws (p. 16) bites or chews (something) repeatedly

PREPARE TO READ

Build background for students by asking: *What kind of work do you think beavers do?* Discuss students' responses. Have students do a picture walk of the article. Then have students identify photographs in the article of beavers doing work and discuss what work they think is being done. Encourage students to read with the purpose of confirming their responses.

CLOSE READING QUESTIONS

- What are the immediate and long-term effects of the beaver chomping on a tree for a few minutes? Go back to the text to support your answer.
- What words on page 17 of the article help you picture, or visualize, the beavers' dam?
- How long can beavers hold their breath underwater? Use the text to find your answer.

COMMON CORE CONNECTIONS

Determine Word Meaning *CCSS Info Text 4*
The article describes a mother beaver and her kits. What is a kit? How do you know?

Describe Relationships *CCSS Info Text 3*
What is the connection or relationship between a black bear, the mother beaver, and her family? How does a mother beaver relate danger to her family? How does her family react? How do you think the black bear reacts?

Integration of Knowledge and Ideas *CCSS Info Text 9*
How does this article connect to the theme of ponds? How is it similar to and different from the other articles? Why do the beavers need the pond? How does the pond's existence rely on beavers?

Lexile Score: 400

A Pond for Maddie
by Charnan Simon
art by Marcy Ramsey

Read about a girl, Maddie, and her family, and how they make a pond of their own. Learn about the living things needed to bring a pond to life.

ESSENTIAL QUESTION

How do plants and animals depend on each other in a pond ecosystem?

SCIENCE CONCEPT

Plants depend on water and light to grow.

Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

CROSS-CURRICULAR EXTENSION

Art

Draw or trace the pond at the bottom of page 32. Label the living things you see. Use details from the text to help you.

KEY VOCABULARY

artificial (p. 28) not natural or real, but made to seem like something natural

hollow (p. 34) empty inside, not solid

scum (p. 31) a layer of something unpleasant or unwanted that forms on top of a liquid

wafted (p. 32) moved lightly through the air

PREPARE TO READ

Have students look at the illustration at the bottom of page 32. Ask: *What things do you see in this pond?* Discuss the living things in and around the homemade pond and how it is similar to and different from a real pond.

CLOSE READING QUESTIONS

- What happens when water in an area such as a pond does not move around? Go back to the text on page 30 of the article to find your answer.
- How do lilies keep ponds clean? Look at the text on page 31 of the article to help you.
- Who is narrating this story? How do you know? Point out the words in the story that help you understand point of view.

COMMON CORE CONNECTIONS

Author's Point of View *CCSS Info Text 6*
What is the main purpose of this article? What is the author trying to explain or describe to you, the reader?

Draw Conclusions *CCSS Info Text 1*
Why is Maddie confused at the bottom of page 33 of the article? Why is a heater in Maddie's pond similar to cattails and reeds in a real pond?

Opinion Writing *CCSS Writing 3 & 6*
Choose a detail from the article about what it takes to make a pond. Would you enjoy helping Maddie and her family? Why or why not?

CROSS-TEXT CONNECTIONS WITH MULTIPLE ARTICLES

COMPARE ARTICLES

SYNTHESIZE: Guide students to compare the articles they read. Help students find the connections between pieces of information in multiple texts. Use prompts, such as the following examples, to have students work together to **Integrate Ideas and Information** *(CCSS.Reading.9)*.

- Make a two-column chart with the headings "Pond Plants" and "Pond Animals." Use information in the articles to find the names of living things found in and around a pond, and place them in the correct column. Compare your answers with a partner. Did you miss any?

- Create a list words that describe a pond. Look through multiple articles to find words that describe what living things at a pond look like, move like, smell like, sound like, and feel like. Share your describing words and the living thing they relate to with a partner.

- Use a Venn diagram to show similarities and differences between natural ponds and artificial ponds. Use information from "A Pond for Maddie" and at least one other article to help you make comparisons.

- Make a chart of the different pond plants described in "Click & the Kids," "A Day at the Pond," and "A Pond for Maddie." Identify each plant by name and include a color drawing of each plant.

- Create a list of "pond verbs." Look through the articles for action words that describe how fish, frogs, salamanders, and beavers move. Then choose a few to act out. Take turns with a partner acting out a verb while the other guesses. Did you guess the right animal?

EXPLORATORY LEARNING - FLEXIBLE MINI-UNIT DESIGN

The Mini-Unit comprises three stages of activities. The Engage activity builds background knowledge. Read and Compare allows students to make connections between articles. The Apply activity encourages students to use their new knowledge.

ENGAGE	READ AND COMPARE	APPLY

ENGAGE: **Engage students in the topic of what a pond is, pond life, and pond activities. Explore prior knowledge and engage curiosity by creating a chart like the one below. Add details and information as you work through the unit.**

Ponds	Pond Life	Pond Activities
• water • rocks • mud/sand	• cattails • fish • beavers	• fishing • building dams (beavers) • observing

Share the essential question:

How do plants and animals depend on each other in a pond ecosystem?

READ AND COMPARE ARTICLES: Begin with a focus article as a base for building content knowledge and model how to work through the text.

1) READ ALOUD: Use "A Day at the Pond" (pgs. 7–11) as a focus article, or choose a different article that works well for your teaching goals. Share the article summary on page 5 of this guide. Students can read their own copies of the article and use sticky notes to mark places they find interesting or have questions about.

2) DISCUSS THE ARTICLE: After reading, guide students to talk about the article. See the Article Pages for Close Reading Questions.

3) READ NEW ARTICLES: Help students choose additional articles to read based on their inquiry questions or what they find interesting. Refer to the Article Pages for summaries of each article within *Pond Life*.

4) COMPARE ARTICLES: After students have read multiple articles, guide them to make cross-text connections. Refer to page 9 to Compare Articles using prompts that help students integrate ideas and information.

CHOOSE A PURPOSE FOR READING

CLOSE READ *CCSS.Reading Info Text 1* Mark the text, noting important details and highlighting what interests, surprises, or confuses you.

UNDERSTAND MAIN IDEAS TO DEVELOP EXPERTISE *CCSS.Reading Info Text 2* Record the main ideas in the article. Note how these main ideas build on the main ideas from the focus article or other readings. How is your topic knowledge growing?

REVIEW GRAPHIC FEATURES *CCSS.Reading Info Text 7* Review the graphic features in the articles and explain how the pictures help you understand the vocabulary words and content.

APPLY: MAP OUT A POND

Use information from the articles and the graphic organizer to create a bird's-eye view of a pond. Show what a pond looks like, plant and animal life that can be found in and around a pond, and any other pond-related activities. Use details from multiple articles to create your map.

Materials: Pond Map Graphic Organizer, colored pencils

Step 1: Gathering Ideas

Make a list of things you want to include in your pond map. Look through the articles to find answers to these questions:

What kind of plants grow in your pond?

What kind of animals live in and around your pond?

What other activities do you want to happen at your pond?

Step 2: Sketching

Pretend you are a bird flying high above the pond. This will give you a "bird's-eye" view. Where do the different plants grow? Where are the fish? Are there any frogs or turtles sunning themselves on rocks? Is anyone fishing? Sketch in all of the details you want your pond to have. You will use this sketch to draw your map.

Step 3: Drawing the Map

Choose symbols, shapes, and colors to represent the living things in your pond. Using your sketch as a guide, draw these symbols on your map to show all the important parts of your pond.

Consider using brown lines to show cattails, a blue triangle to show fish, and a green circle to show water lilies. Make up your own ideas!

Draw in other activities that are happening at your pond.

Step 4: Map Key

A Map Key, or legend, tells what is on a map. In the Map Key in the corner of the graphic organizer, write labels on the lines and draw the symbol in the connected box.

Step 5: Share and Compare

Share and compare your map with others. How are they the same? How are they different?

NAME: _____

Name of Pond _____

Map Key

_____ ☐

_____ ☐

_____ ☐

_____ ☐

_____ ☐

_____ ☐

_____ ☐

ANALYZE GRAPHIC FEATURES

GRAPHIC FEATURE	PAGE LOCATION	HOW THIS FEATURE HELPED YOUR UNDERSTANDING

CONCEPT CHART

Show how reading multiple articles developed your understanding of the essential question or your own inquiry question.

ESSENTIAL QUESTION OR INQUIRY QUESTION:

ARTICLE 1:	ARTICLE 2:	ARTICLE 3:

artificial not natural or real, but made to seem like something natural

*"It's an **artificial** pond!" he called out. (p. 28)*

balance to make steady by keeping weight equal on all sides

*Using her large tail to **balance**, she stands on her hind legs and gnaws on a small tree. (p. 16)*

cattail a tall plant that has long flat leaves and grows in wet areas

*They munch on **cattail** … (p. 19)*

chisel to cut or shape (something)

*Her sharp front teeth **chisel** through the tree's trunk. (p. 16)*

disappears stops being visible

*And the pond **disappears** and reappears. (p. 12)*

fierce eager to fight or kill

*Diving beetles are so **fierce** they eat animals even bigger than they are. (p. 9)*

frilly having wavy edges

*See those **frilly** things sticking up around her head? (p. 14)*

gills the body part that a fish uses for breathing

*Those are **gills**. (p. 14)*

gnaws bites or chews (something) repeatedly

*…she…**gnaws** on a small tree. (p. 16)*

hollow empty inside, not solid

*"See how it's **hollow** inside?…" (p. 34)*

ingenious very smart or clever

*And here's an **ingenious** invention—a babysitter for your fishing pole. (p. 3)*

invention a useful new device or process

*And here's an ingenious **invention**—a babysitter for your fishing pole. (p. 3)*

reappears appears again after not being seen for a period of time

*And the pond disappears and **reappears**. (p. 12)*

scum a layer of something unpleasant or unwanted that forms on top of a liquid

*Their roots absorb nutrients so slimy pond **scum** can't grow. (p. 31)*

surface the upper layer of an area of land or water

*Little floating plants bob up and down just under the **surface** of the pond. (p. 7)*

vernal of, relating to, or occurring in the spring

*This type of pond is called a **vernal** pool. (p. 13)*

wafted moved lightly through the air

*The plants waved and **wafted** and bloomed. (p. 32)*

"A Day at the Pond"

- http://www.dec.ny.gov/docs/administration_pdf/lppondlifews.pdf

  See how many living things found in a pond you can find in this word search.

- http://www.doe.virginia.gov/instruction/gifted_ed/project_promise/science_curriculum/grade_one/handouts/life_science/pond_life_pictures.pdf

  Learn more about the food chain in a pond.

"Sally's Special Pond"

- http://files.dnr.state.mn.us/mcvmagazine/young_naturalists/young-naturalists-article/ponds/ponds.pdf

  Learn more about how ponds come to life during the season of spring.

- http://www.nps.gov/natr/learn/education/classrooms/loader.cfm?csModule=security/getfile&pageID=1265060

  View up close photographs of the spotted salamander's life cycle.

"Pond Family"

- http://dnr.wi.gov/org/caer/ce/eek/critter/mammal/beaver.htm

  Find out what makes the beaver busy!