

Follow the Food Chain

TEACHER'S GUIDE

The Follow the Food Chain book series showcases food chains in four different ecosystems: a pond, ocean, rain forest, and desert. Through the use of diagrams and carefully chosen photographs, each book in the series teaches young readers how animals survive in their ecosystems through the transfer of energy through food. The Follow the Food Chain Teacher's Guide provides interactive lessons that help students learn more about how plants and animals gain energy to survive in their various ecosystems.

The lesson plans in the Follow the Food Chain Teacher's Guide are tailored towards students in grades 1 and 2. These lessons require students work both independently and collaboratively, and think critically about how plants and animals survive in the world around them. Students will learn how animals acquire energy to live in their different environments. Students will also gain a basic understanding of what a food chain is, and the importance of food chains for survival. Students will be able to share their new learning with their classmates in different ways throughout each lesson of the Teacher's Guide.

The lessons in this guide follow a sequential order that works to scaffold understanding. For this reason, it is recommended that they are taught together in sequence. Reproducible worksheets and assessment tools accompany each lesson plan. The titles in Follow the Food Chain include:

Who Ate The Butterfly?

Who Ate The Frog?

Who Ate The Penguin?

Who Ate The Snake?

PACING CHART AND VOCABULARY

Lesson Plan Title	Pacing	Vocabulary
Eating for Energy	1 class period	consumer energy
Following Food Chains	2 class periods	consumer desert energy food chain ocean pond predator prey rain forest
What Eats What?	1 class period	consumer desert energy food chain ocean pond predator prey rain forest

* 1 class period = 40 to 60 minutes

ACCOMMODATION STRATEGIES

Accommodations provide equal access to learning and equal opportunity to demonstrate what is learned. Accommodations allow a student access to the subject or course without any changes to the knowledge and skills the student is expected to demonstrate.

Educators are encouraged to adapt the instructional approach, activities, and assessments included in this guide to best meet the diverse interests, needs, and abilities of their students. Possible accommodations may include:

Instructional Strategies

- Break tasks into parts with accompanying time lines
- Provide extra time for processing of oral information
- Pair oral instructions with visual ones (writing or symbols)
- Pre-teach new vocabulary and regularly review previously taught vocabulary
- Provide model of completed work
- Frequently check with the student to get him/her started
- Provide oral and visual instructions and examples
- Provide a checklist of tasks for the student

Environmental Strategies

- Proximity to teacher
- Strategic seating
- Flexible or mixed-ability grouping
- Provide an alternative setting for learning that is free from visual and auditory distractions

Assessment Strategies

- Build in extra time to allow student to process questions asked and answers given
- Provide written instructions and rubrics for assignments
- Offer a choice of assessment activities so that the student can choose one suited to their strengths
- Space out or extend assignments to prevent student feeling overwhelmed
- Reduce the number of tasks used to assess skill or concept
- Allow students to use assistive devices or technology

LESSON 1

Eating for Energy

Curriculum Correlations

Common Core State Standards

RI.2.1
RI.2.4
RI.2.7

Next Generation Science Standards

2-LS4-1

Ontario Science and Technology

Grade 1 Understanding Life Systems: 3.1, 3.6

Materials

- Chart paper
- Marker
- Tape
- *Energy Sources Handout*
- *Eating for Energy Exit Card*

Setting the Stage

To begin this lesson, it is important that students understand what the basic needs of human beings are (food, shelter, and water). This may be an abstract concept for younger students, so it is best to choose the strategy that works best to set the stage.

- If you feel your students have knowledge of these needs, you could set the stage for the lesson by completing a brainstorming activity, asking students to share their ideas about the things that all humans need.
- If you feel that you students may have difficulty conceptualizing these needs, ask students questions to help guide their responses (i.e. ask what they do when they are hungry or thirsty, etc.). Once you have completed your discussion in the format that best fits your student's needs, explain that while all these basic needs are important, today we are going to talk about the importance of food.

Ask students why they think food is so important for humans. On a separate piece of chart paper, write down the different ideas that are shared.

Explain to students that **all living things need food to give them the energy to live, or they cannot survive.**

Ask students if they can think of other living things that need food/energy to live. If needed, use prompts to guide students in identifying plants and animals as living things. Explain to students that as a class, you will compare different energy sources for both plants and animals.

Objectives

Students will be able to:

- Identify sources of energy (food) for both plants and animals.

Activity

At the front of the room, label two separate pieces of chart paper. One should be titled “Plants” and one should be titled “Animals”.

Using tape, affix the terms from the *Energy Sources Handout* on the board. Explain to the class that together you will determine under which of the charts each term should go. After reading each term, allow students 1 to 2 minutes to discuss whether they think the word should go under the “Plants” chart or the “Animals” chart. Then, allow 1-2 minutes for a class discussion before adding the term to the appropriate chart.

Extensions

- With the students, brainstorm the names of different plants and animals. These names could be added to each anchor chart, providing examples for the class to reference back to.

Wrap-Up

Explain to students that these charts will be displayed in the classroom to be used as anchor charts to help remember how plants and animals get energy to live, and that they will have opportunities to explore how different living things survive in different environments.

Hand each student an *Eating for Energy Exit Card*. Have them hand in the card for assessment.

Assessment

Assess student understanding during the activity through observation of participation. Clarify misunderstandings as needed. Assess *Eating for Energy Exit Cards* for understanding of science concepts.

Energy Sources Handout

MAKES OWN FOOD	DOES NOT MAKE OWN FOOD
GETS ENERGY FROM SUN	GETS ENERGY FROM AIR
GETS ENERGY FROM WATER	GETS ENERGY FROM PLANTS
GETS ENERGY FROM OTHER ANIMALS	

Name: _____

Date: _____

Eating for Energy Exit Card

How do plants get energy?

How do animals get energy?

Name: _____

Date: _____

Eating for Energy Exit Card

How do plants get energy?

How do animals get energy?

LESSON 2

Following Food Chains

Curriculum Correlations

Common Core State Standards

RI.2.1
RI.2.2
RI.2.4
RI.2.5
RI.2.7

Next Generation Science Standards

2-LS4-1

Ontario Science and Technology

Grade 1 Understanding Life Systems: 3.1, 3.2, 3.6
Grade 2 Understanding Life Systems: 3.1, 3.3

Materials

- *Follow the Food Chain* book series (class set)
 - ▶ *Who Ate The Frog, Who Ate The Butterfly, Who Ate The Penguin, Who Ate The Snake*
- *Follow the Food Chains Booklet* (one per student)

Objectives

Students will be able to:

- Identify four types of food chains
- Understand that animals eat other plant and animals for energy.

Setting the Stage

Begin the lesson by asking students to recall why food is important for both plants and animals. Students should identify that food is important because it gives plants and animals energy.

Remind students that plants make their own food, and animals cannot. Reinforce that animals depend on other plants and animals as food sources for energy. To show the dependence that animals have on other plants and animals for energy, their food sources are often organized into food chains. Advise students that a **food chain shows the plants and animals linked together by what eats what.**

Explain that today they will have the opportunity to explore four different food chains: a pond food chain, a desert food chain, an ocean food chain, and a rain forest food chain.

Activity

Provide each student with a copy of the *Follow the Food Chains Booklet*.

Begin by reviewing the pond food chain, referencing the graphic from pages 20-21 of the *Who ate the Frog* book (this same graphic is included in the student handout). Write the name of each link in the food chain on the board for students to copy on their handout. Show students how energy travels through the pond food chain by what eats what.

Complete this process for each of the other books in the series. For each, explain how energy travels through a food chain in that ecosystem.

Wrap-Up

Ask students to review their handout with their neighbor to ensure that all information has been inputted into their booklet. Once students are complete, collect the booklets to be saved for the next lesson. Please remind students to include their name on their booklet before handing it in.

Extensions

- Student could be provided with blank food chains and images to cut out and glue into each space. Please ensure you allow additional time if you choose to complete this activity.

Assessment

Assess student understanding during lessons using observational and anecdotal notes. Review *Follow the Food Chain Booklet* for completion. Review student work to clarify misunderstandings as needed.

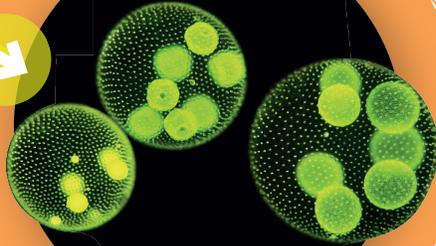
Pond Food Chain

Follow who eats what

1



2



3



7



4



6



5



Ocean Food Chain

Follow who eats what

1

2

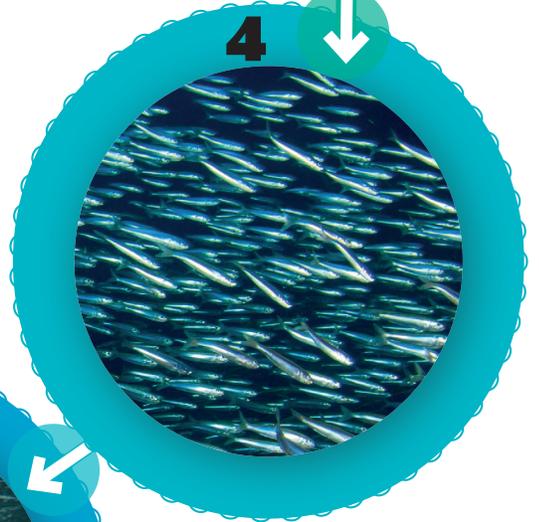
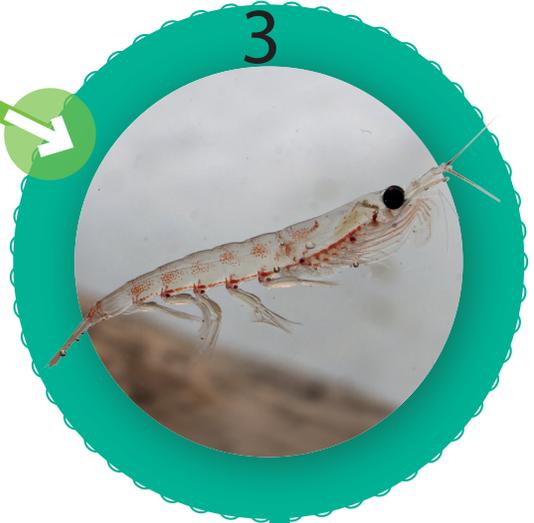
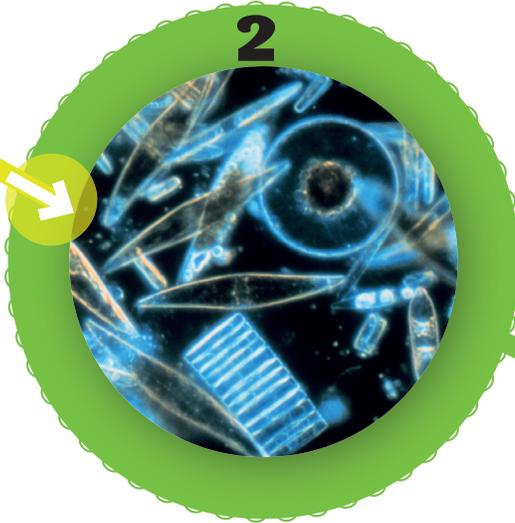
3

7

4

6

5



Rainforest Food Chain

Follow who eats what

1



2



3



7



4



6



5



Desert Food Chain

Follow who eats what

1



2



3



4



6



5



LESSON 3

What Eats What?

Curriculum Correlations

Common Core State Standards

RI.2.1
RI.2.2
RI.2.4
RI.2.5
RI.2.7

Next Generation Science Standards

2-LS4-1

Ontario Science and Technology

Grade 1, Understanding Life Systems: 3.1, 3.2, 3.6
Grade 2, Understanding Life Systems: 3.1, 3.3

Materials

- *Follow the Food Chain* book series (class set)
 - ▶ *Who Ate The Frog, Who Ate The Butterfly, Who Ate The Penguin, Who Ate The Snake*
- Completed *Follow the Food Chains Booklets* (collected after the last lesson)
- *Animals Handout*
- *Our Animal's Food Chain Handout* (one per student)
- *Follow the Food Chain Checkbrick*

Objectives

Students will:

- Identify what their assigned animal consumes for energy
- Understand the type of environment their assigned animal lives in.

Setting the Stage

Ask students to recall the four different types of food chains discussed during the last lesson. Guide students in identifying the following types of food chains: pond, ocean, rainforest, and desert. Write the names of these four different food chains on the board.

Explain to students that today they will complete an activity that allows them to explore the energy sources of one animal in more detail.

Activity

Divide your class into partners. Return the completed *Follow the Food Chains Booklet* from Lesson 2. Assign each partner group one of the animals on the *Animals Handout*.

- Try to evenly distribute the animal types (there may be some double-ups).

Provide each partner group with a copy of the *Our Animal's Food Chain" Handout*. Each group of two will complete one handout to be submitted for assessment.

Using their *Follow the Food Chains Booklet* for reference, have students complete the *Our Animal's Food Chain Handout*. Please review this handout with students before they begin. Students can also use any of the books from the *Follow the Food Chain* series to assist in completing the handout.

Wrap-Up

When students have completed their handouts, ensure both partners have written their name at the top of the page. Collect all handouts from your students. Review the importance of food chains in transferring energy for plants and animals.

Extensions

- Students could group themselves based on the food chains their assigned animals fall into. They could then arrange themselves to show the sequence that energy is passed. This would promote a more interactive discussion of how their food chains are organized.

Assessment

Assess *Our Animal's Food Chain" Handout* using the *Follow the Food Chain Checkbrick*.

Animals Handout

Damselfly	Raft Spider	Frog
Butterfly	Lizard	Opossum
Fish	Penguin	Leopard Seal
Rabbit	Rattlesnake	Roadrunner

Our Animal's Food Chain Handout

Names: _____

Name of our animal: _____

Circle the name of the environment that your animal lives in:

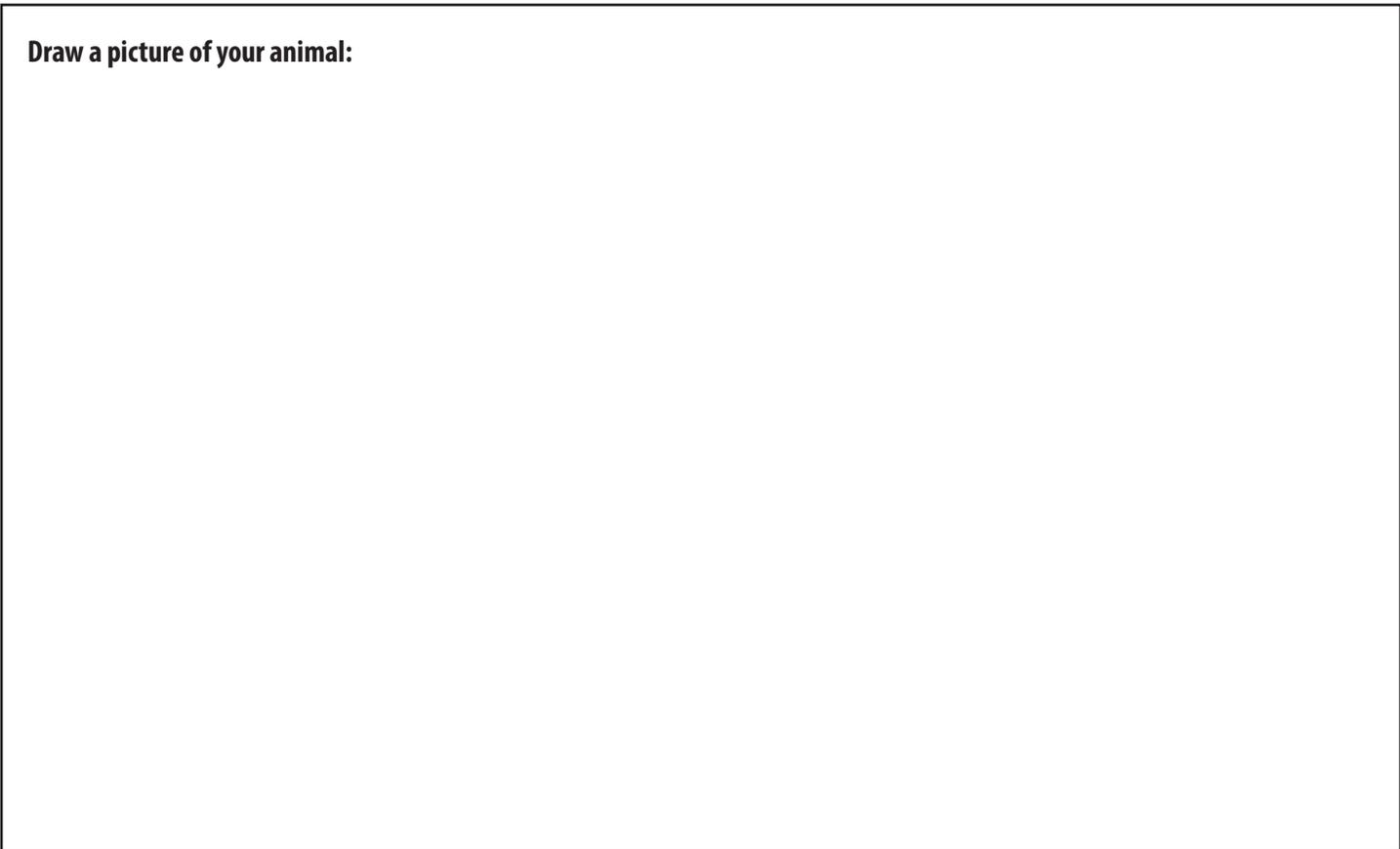
POND

OCEAN

RAINFOREST

DESERT

Draw a picture of your animal:



My animal can eat:

My animal can be eaten by:

Follow the Food Chain Checkbrick

Student names: _____

Date: _____

Criteria	YES	NO
Students recorded the name of their animal.		
Students accurately indicated the environment their animal lives in.		
Students indicated at least one animal their animal eats.		
Students indicated at least one animal their animal is eaten by.		

Additional comments:

Follow the Food Chain Checkbrick

Student names: _____

Date: _____

Criteria	YES	NO
Students recorded the name of their animal.		
Students accurately indicated the environment their animal lives in.		
Students indicated at least one animal their animal eats.		
Students indicated at least one animal their animal is eaten by.		

Additional comments:
