Ask® Teacher Guide: July/August 2023

Lunch Gone Wild

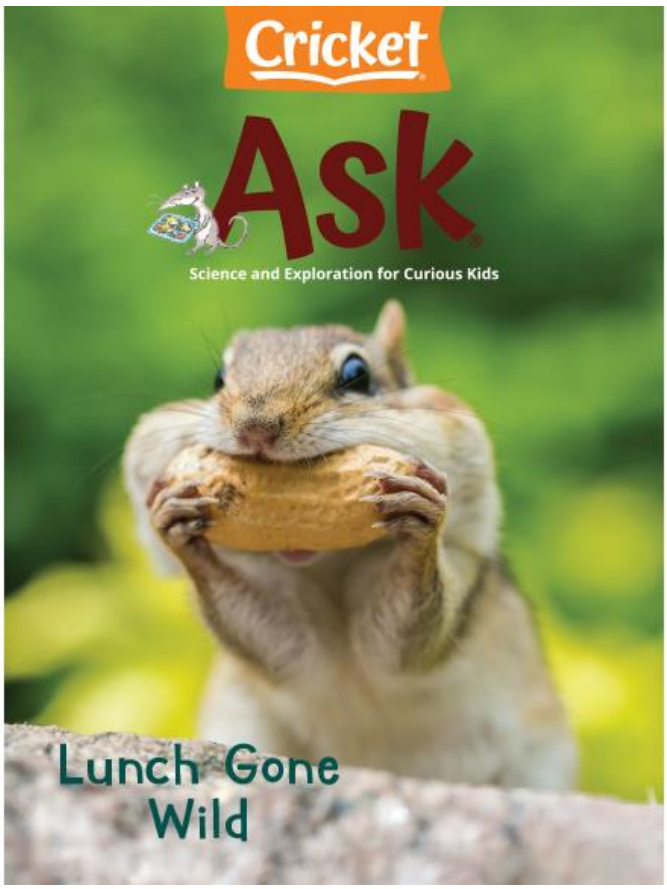
When feeling hungry, humans have countless food choices, preferences, and delivery systems. This issue of ASK magazine explores how plants and animals in the natural world obtain their dietary requirements.

CONVERSATION QUESTION

How are nutritional needs met in the wild?

TEACHING OBJECTIVES

- **Students will learn about the varied diets of wild animals.**
- **Students will learn about a snake's digestive process.**
- **Students will learn about carnivorous plants.**
- **Students will classify information.**
- **Students will obtain information from a nonfiction text.**
- **Students will construct explanations.**
- **Students will use the USDA's MyPlate plan to create a healthy menu.**
- **Students will write a shape poem.**
- **Students will create a theme-based comic strip.**



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

- **At the Animal Clean-Plate Club**
  Expository Nonfiction, ~890L
- **How to Swallow a Crocodile**
  Expository Nonfiction, ~870L
- **When Plants Get Hungry**
  Expository Nonfiction, ~920L

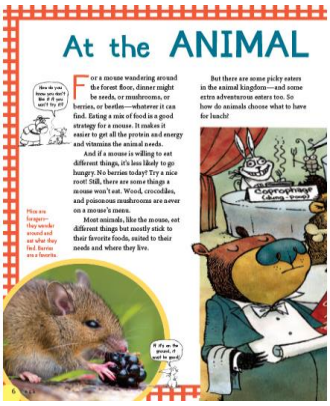
Ask® Teacher Guide: July/August 2023

At the Animal Clean-Plate Club

pp. 6–13, Expository Nonfiction

From carnivores to herbivores to scavengers, all animals fulfill an important role in the natural world. Students will read about many types of animals and explore their eating habits.

Lexile Score: ~890L



RESOURCES

- Classifying Information: Animal Appetites

OBJECTIVES

- Students will learn about the varied diets of wild animals.
- Students will classify information.
- Students will use the USDA's MyPlate plan to create a healthy menu.

KEY VOCABULARY

- ***forager* (p. 6)** an animal that wanders around searching for things it can eat
- ***milkweed* (p. 11)** a type of North American plant that has white juice
- ***varied* (p. 13)** including many different things

ENGAGE

Conversation Question: How are nutritional needs met in the wild?

Pose the question to the class: "Are you a picky eater or an adventurous eater?" Tally the results. Guide a discussion based on the advantages and disadvantages of each. Then have students consider the animal world and discuss how being a picky or adventurous eater could determine an animal's ability to survive. During the reading of the article, emphasize how a healthy ecosystem supports all types of eaters.

INTRODUCE VOCABULARY

Post and discuss the key vocabulary. Provide groups of students with actual Scrabble tiles or print out a letter/value sheet online. Have students list the point value for each word and total the sum. Then instruct them to put the three words in order from lowest value to highest value. During a quiet period, allow students to revisit the issue to locate and define the word that has the highest point value.

READ & DISCUSS

Reinforce comprehension of the concepts presented in the article by using the following questions to direct discussion.

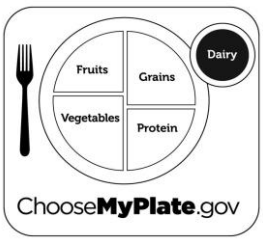
1. Why is it advantageous for an animal to be willing to eat different things?
2. Why do meat-eaters have to be fast and strong?
3. Explain this sentence from page 8: "In a balanced ecosystem, there is an eater for every available kind of food."
4. What body adaptations can an animal that eats mainly one food develop?
5. How do vultures play an important role in cleaning up nature's messes?

SKILL FOCUS: Classifying Information

INSTRUCT: Guide students to obtain information from the text, captions, and photos in the article. Remind them that the article was written to teach readers about the diets and characteristics of different classes of animals. Students will use information from the article to complete the *Classifying Information: Animal Appetites* worksheet.

ASSESS: Review graphic organizers with the class and discuss.

EXTEND



Health: In 2011, the U.S. Department of Agriculture replaced the food pyramid guide with a simpler tool called MyPlate. The MyPlate plan is basic and includes eating fruits, vegetables, grains, and protein at each meal and limiting the amounts of fats and dairy consumed. Divide the class into three groups: Breakfast, Lunch, and Dinner. Have each group come up with seven different menus for their meal—one menu for each day of the week. Then have students combine their menus into a full week of healthy eating.

Animal Appetites

Classifying Information Refer to the article to find details about each classification of animal. Complete the chart with facts and details.

Animal Classification	Diet	Teeth	Digestive System	Animal Examples
Carnivore				
Herbivore				
Omnivore				

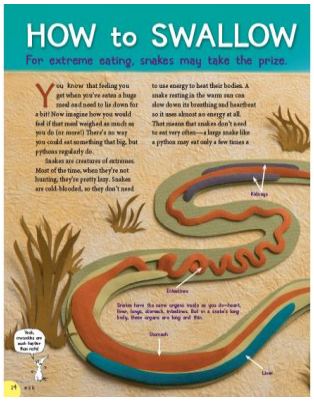
Ask® Teacher Guide: July/August 2023

How to Swallow a Crocodile

pp. 14–17, Expository Nonfiction

Readers will learn that a snake's digestive process goes far beyond bite-chew-swallow. Captioned diagrams accompany this interesting article.

Lexile Score: ~870L



RESOURCES

- Obtain Information: S-s-s-swallow!

OBJECTIVES

- Students will learn about a snake's digestive process.
- Students will obtain information from a nonfiction text.
- Students will write a shape poem.

KEY VOCABULARY

- ***cold-blooded* (p. 14)** having a body temperature that is similar to the temperature of the environment
- ***unwary* (p. 15)** not aware of or careful about possible problems and dangers
- ***expel* (p. 16)** to push or force something out

ENGAGE

Conversation Question: How are nutritional needs met in the wild?

Construct a K-W-L chart (Know-Want to Know-Learned) to record what students know about snakes and what they would like to know about these slippery critters. Return to the chart after completion of the reading/activities and have students add details about what they have learned. If there are remaining questions about snakes, allow the class to use books and the internet to find more information.

INTRODUCE VOCABULARY

Post and discuss the three vocabulary words and definitions. Have students Think-Pair-Share with a partner. Give them the following directives, one at a time:

1. What are the pros and cons of being a **cold-blooded** animal?
2. Describe something that might happen to an **unwary** animal?
3. Use the word **expel** to explain how you breathe.

READ & DISCUSS

As a post-reading activity, lead a discussion using these questions:

1. Why is it that snakes don't need to eat very often?
2. What internal organs do snakes have?
3. How does hunting infrequently keep snakes safe?
4. How does a python move its food into the stomach?
5. How have a snake's jaws evolved to swallow large prey?

SKILL FOCUS: Obtain Information

INSTRUCT: Guide students to obtain information from the text, captions, and photos in the article. Remind them that the article was written to teach readers about the fascinating eating habits of a snake. Introduce the *Obtain Information: S-s-s-swallow!* worksheet. Instruct students to underline the word from the answer choices that accurately completes the sentence.
ASSESS: Review and discuss the answers that students chose to complete each sentence. Have them make corrections if necessary.

EXTEND

Language Arts: A shape poem (calligram) is a poem written in the shape of the poem's subject. Show examples from the internet. Then use these steps to guide students in writing snake-shaped poems:
1. **Brainstorm ideas:** Make a list of snake-related words and phrases that includes at least two facts from the article.
2. **Create the shape template:** Draw a simple line drawing of a snake. Encourage students to add coils and twists to create an interesting shape.
3. **Write the poem:** Use a lined sheet of paper to write and revise the poem. Remind students that using onomatopoeia, similes, and metaphors can make poems more interesting. Be sure the poem is edited for accuracy before moving to step 4.
4. **Write the poem onto the shape template:** Add color and a background.

S-s-s-swallow!

Obtain Information Read through the sentences and note the choice of answers. Revisit the article and then underline the correct answer to complete the sentence.

1. Most of the time when snakes are not **(hunting/eating/sleeping)**, they're pretty lazy.

2. The snake's heart and **(kidneys/intestines/liver)** swell up to pump more blood around to cells during digestion.

3. A python's sharp **(scales/teeth/tongue)** angle backward to help move food into the stomach.

4. Inside the snake, stomach **(acids/muscles/mucus)** break(s) down a meal to store as fat.

5. There are **(14/20/12)** known species of egg-eating snakes, most of them in Africa.

6. The snake's stomach and **(gallbladder/intestines/pancreas)** pour out digestive juices to help with digestion.

7. Snakes are **(warm-blooded/cold-blooded/herbivores)**, so they don't need to use energy to heat their bodies.

8. Pythons coil themselves around their prey and **(squeeze/bite/tail-whip)** their victims.

9. Snakes have evolved flexible **(skulls/jaws/throats)** to swallow their prey whole.

10. One big meal gives a snake enough energy to last many **(weeks/days/months)**.

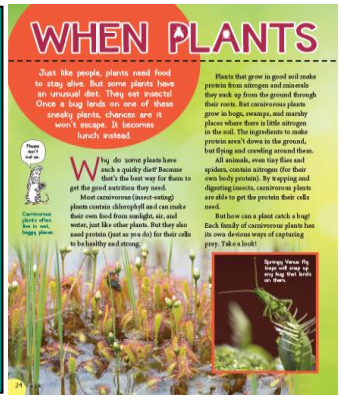
Ask® Teacher Guide: July/August 2023

When Plants Get Hungry

pp. 24–28, Expository Nonfiction

Plants need food to stay alive, just like people. Carnivorous plants grow in swampy areas where they are unable to get the nutrients needed to survive from the soil. Instead, they rely on crawling and flying insects to provide them with protein.

Lexile Score: ~920L



RESOURCES

- Construct Explanations: Tricky and Triggered

OBJECTIVES

- Students will learn about carnivorous plants.
- Students will construct explanations.
- Students will create a theme-based comic strip.

KEY VOCABULARY

- ***bog* (p. 24)** an area of soft, wet land
- ***luring* (p. 27)** persuading an animal to go somewhere or to do something by offering some pleasure or gain
- ***prongs* (p. 28)** long pointed parts

ENGAGE

Conversation Question: How are nutritional needs met in the wild?

Pose this simple question: *What do plants need to survive?* Students will likely respond with the common answers: sunlight, water, air, a proper climate, and nutrients. Introduce "When Plants Get Hungry" and tell students they will be reading about carnivorous (meat-eating) plants. Invite students to share background knowledge and discuss how plants could achieve this feat.

INTRODUCE VOCABULARY

List the three key terms on the board and have pairs of students define each word. Then post the definitions provided so that students may check their work. Have the pairs choose at least seven additional words from the article and procure definitions. Instruct them to create a mini-crossword puzzle using all ten words. Share puzzles with another class for use as a pre-reading activity for the article.

READ & DISCUSS

Post and discuss questions prior to reading. Have students read the article independently and answer the questions in full sentences.

1. What do plants need to make their own food?
2. How do carnivorous plants get protein?
3. What does a Venus flytrap display when it opens its leaves?
4. Why are pitcher plants like "swimming pools of death" for some unlucky insects?
5. How did Charles Darwin try to fool a sundew? Did it work? Explain.
6. What is the main difference between trigger traps, pitfall traps, and sticky traps?

SKILL FOCUS: Construct Explanations

INSTRUCT: Advise students to review the article and to study the different types of carnivorous plants under the three subheadings. Distribute the *Construct Explanations: Tricky and Triggered* graphic organizer. Tell students they will complete the chart with a partner. Students will need to provide clear explanations of how each plant catches its prey and digests its catch. In addition, they will need to provide an example of each type of plant.

ASSESS: Review the chart with the class and then allow students to view video clips of carnivorous plants in action.

EXTEND

Graphic Art: Have students use information from the article to create a comic strip featuring a carnivorous plant. The text can be humorous or strictly informational, but it must contain at least two facts about this category of plants. Students should brainstorm ideas and create a draft sketch before transferring their ideas onto a five-panel strip. Encourage students to be creative and to use clear text and interesting illustrations. Display finished strips in your science center or combine them into a class book.

Tricky and Triggered

Construct Explanations Refer to the article to locate information that provides explanations about the three types of carnivorous plants listed below. Provide an example of each type.

Trigger Trap	
How does it catch its prey?	How does it digest its prey?
Example:	

Pitfall Trap	
How does it catch its prey?	How does it digest its prey?
Example:	

Sticky Trap	
How does it catch its prey?	How does it digest its prey?
Example:	