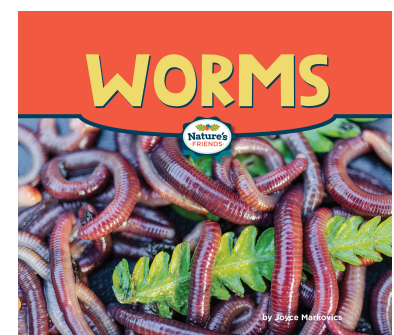
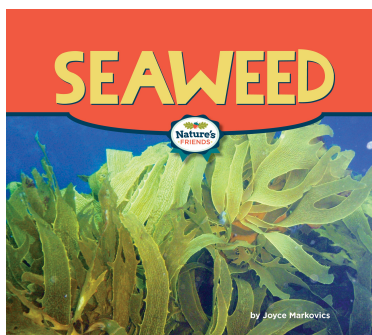
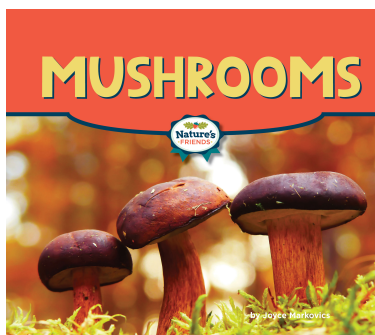
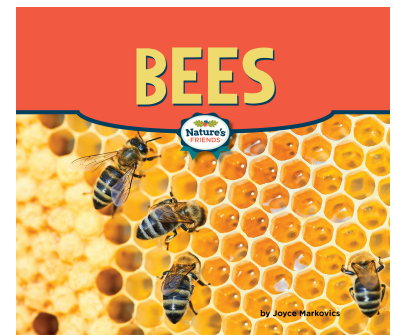
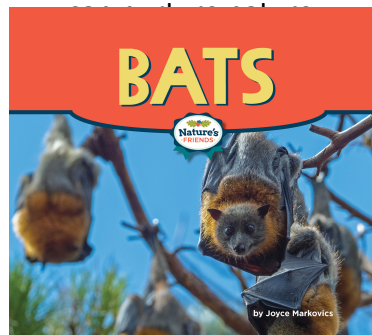
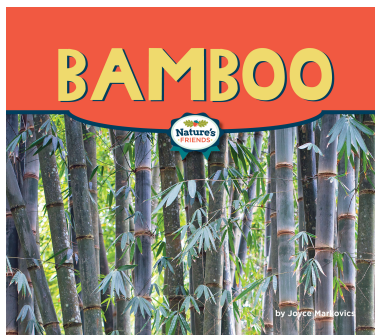


NATURE'S FRIENDS SERIES

by Joyce Markovics

SERIES DESCRIPTION

Did you know that nature has best friends? In the *Nature's Friends* series, learn how plants, animals, and insects help support a healthy environment and benefit human beings on earth. In addition, readers will uncover parts of nature that are being threatened and what they can do to help protect them. These colorful titles include sidebars, glossary, index, and an activity showing how readers



TEACHER'S NOTES:

In these teacher's notes, you will find resources to support students as they engage with each text. Each title in the *Nature's Friends* series is rich with information and details that help students learn about different components of the natural world. Students will learn about protecting endangered species and how plants, insects, and animals support the ecosystem by helping to create a healthy environment. These teacher's notes will help you provide students with opportunities to organize their thinking as they read each text so that they are able to absorb and discuss what they've learned.

Resources include:

1. **Graphic Organizer and Reading Response:** Helps students identify and absorb key information as they read and reflect on what they learned.
2. **Text Features Hunt:** Helps students locate text features used in each book and identify how it supports their understanding of the information presented.
3. **Comprehension Check/Quiz (for each title):** Helps students and teachers assess what has been learned. Questions can be used as discussion questions, a mini-quiz, or to further guide reading/re-reading of the text.

Graphic Organizer & Reading Response

Name: _____

Date: _____

Title and author: _____

Before Reading: What do you already know about this topic?

During Reading: What did you learn about this topic?

Heading Name: _____

Heading Name: _____

Heading Name: _____

After Reading: What was the most interesting thing you learned?

What vocabulary words did you learn?

Word	Meaning

Visualize: Draw a picture of something you learned from this text. Give it a caption.

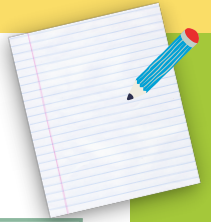
Caption:

Text Features Hunt

Name: _____

Date: _____

Locate text features used in each book and identify how they support the information presented.



Text Feature	Page #	What does it help you learn?
Title		
Table of contents		
Heading		
Sub-heading		
Bold text		
Italics text		
Photograph		
Caption		
Map		
Text box / Sidebar		
Glossary		
Index		

Name: _____

Date: _____



Bamboo

Answer the following questions about **Bamboo** by Joyce Markovics.

- 1 Which is **NOT** a characteristic of bamboo?
 - a. It is one of the fastest-growing plants in the world.
 - b. Its leaves keep the ground moist.
 - c. It has long roots.
 - d. Bamboo stems hold water.

- 2 Which sentence describes how bamboo is **hardy**?
 - a. Bamboo can withstand extreme temperatures.
 - b. Bamboo snaps in light winds.
 - c. Bamboo requires specific conditions to grow.
 - d. Bamboo must be maintained by farmers to ensure growth.

- 3 List 3 uses for bamboo:
 1. _____
 2. _____
 3. _____

- 4 Which animal feeds almost entirely on bamboo?
 - a. Sloths
 - b. Koalas
 - c. Chimpanzees
 - d. Pandas

- 5 True or False: There is no way to save bamboo forests once they are in danger.
True
False

- 6 Short answer: Describe how bamboo's fast growth can be **destructive**.



Bamboo - Answer Key

- 1 Which is **NOT** a characteristic of bamboo?
- a. It is one of the fastest-growing plants in the world.
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- a. Bamboo can withstand extreme temperatures.**
 - b. Bamboo snaps in light winds.
 - c. Bamboo requires specific conditions to grow.
 - d. Bamboo must be maintained by farmers to ensure growth.
- 3 List 3 uses for bamboo:
- Possible answers:**
bamboo shoots, tea, paper, cloth, sheets, towels, socks, bikes, cell phone cases, fishing rods, chopsticks, buildings, houses, flooring, bridges
- 4 Which animal feeds almost entirely on bamboo?
- a. Sloths
 - b. Koalas
 - c. Chimpanzees
 - d. Pandas**
- 5 True or False: There is no way to save bamboo forests once they are in danger.
- True
- False**
- 6 Short answer: Describe how bamboo's fast growth can be **destructive**.
- Possible responses may include:**
"Some running bamboos can spread over a large area. Their rhizomes can send out stems that smother native plants. They can damage property, like sidewalks."

Name: _____

Date: _____



Bats

Answer the following questions about **Bats** by Joyce Markovics.

- ① What is a bat colony?
 - a. A place in nature where bats live
 - b. A group of bats that live together
 - c. A species of bat
 - d. A sound that bounces off an object

- ② What kind of food do 70% of bats feed on?
 - a. Blood
 - b. Fish
 - c. Frogs
 - d. Insects

- ③ What does **echolocation** allow bats to do?
 - a. See in the dark
 - b. Communicate with other bats
 - c. Retrace their route
 - d. Distract predators

- ④ Which is **NOT** a way that bats benefit plant life?
 - a. Spitting out pulp and seeds from fruit
 - b. Pollinating flowering plants
 - c. Eating and clearing decaying plant life
 - d. Their poop is used as fertilizer

- ⑤ True or False: Without bats, many plants could die off.
True
False

- ⑥ Short answer: Describe 2 ways bats are currently at risk.



Bats - Answer Key

- 1 What is a bat colony?
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- 5 True or False: Without bats, many plants could die off.

True

False

- 6 Short answer: Describe 2 ways bats are currently at risk.

Possible responses may include: "Bat habitats are being destroyed due to forests being cut down and caves being disturbed. People kill bats out of unnecessary fear. Bats in North America are being killed by a fungus called White-Nose Syndrome that causes them to wake up from hibernation and starve to death."

Name: _____

Date: _____



Bees

Answer the following questions about **Bees** by Joyce Markovics.

- 1 What kind of plants do bees pollinate?
 - a. Flowers
 - b. Fruit trees
 - c. Vegetables
 - d. All of the above

- 2 Draw a line that matches each type of honeybee with its job in the colony.
 - Workers
 - Drones
 - Queen
 - Male bees that mate with the queen
 - Produces young
 - Collect the food, defend the colony, help raise young, care for queen

- 3 What do honeybees use to make honey?
 - a. Pollen
 - b. Nectar
 - c. Wax from the honeycomb
 - d. Glands in their body

- 4 Why do many people practice beekeeping?
 - a. For honey
 - b. To pollinate almond trees
 - c. For protection against robbers
 - d. Both A and B

- 5 True or False: Bees are essential to maintain plant life, but animals would be better off if bees went extinct.

True

False

- 6 Short answer: Describe 2 ways bats are currently at risk.



Bees - Answer Key

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 - d. Both A and B**
- ⑤ True or False: Bees are essential to maintain plant life, but animals would be better off if bees went extinct.
- True
- False**
- ⑥ Short answer: Describe 2 ways bees are currently at risk.

Possible responses may include: "Bees are dying due to loss of wildflower meadows and other areas where flowers grow. Extreme weather caused by climate change affects when plants flower, causing bees to miss peak pollination time. Honeybees are being killed by parasites and pesticides."

Name: _____

Date: _____



Mushrooms

Answer the following questions about **Mushrooms** by Joyce Markovics.

- ① How do fungi absorb nutrients?
 - a. From the sun
 - b. From insect pollinators
 - c. Through rootlike mycelium
 - d. From rainwater

- ② What ailments have mushrooms been found to fight?
 - a. Heart disease
 - b. Cancer
 - c. Diabetes
 - d. All of the above

- ③ How can we help mushrooms thrive?
 - a. Protect the places where they live
 - b. Step on mushrooms to spread their spores
 - c. Clean up dead trees to make more room
 - d. Pick mushrooms

- ④ List 3 ways fungi can be used.
 1. _____
 2. _____
 3. _____

- ⑤ True or False: All fungi produce mushrooms.

True

False

- ⑥ Short answer: Describe how fungi are nature's recyclers.



Mushrooms - Answer Key

1 How do fungi absorb nutrients?

- a. From the sun
- b. From insect pollinators
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3 How can we help mushrooms thrive?

- a. Protect the places where they live**
- b. Step on mushrooms to spread their spores
- c. Clean up dead trees to make more room
- d. Pick mushrooms

4 List 3 ways fungi can be used.

Possible responses may include:

"Breakdown plastic, get rid of toxic waste, get rid of radioactive materials, replace plastic and Styrofoam, make leather, making medicine like penicillin, statins, and steroids,"

5 True or False: All fungi produce mushrooms.

True

False

6 Short answer: Describe how fungi are nature's recyclers.

Possible responses may include: "Fungi break down plant matter, decompose dead animals, and turn dead things into nutrients. They release chemicals back into the soil. Because they get rid of dead things they make room for new plants to grow. Mycelia make it easier for plants to absorb nutrients and receive water."

Name: _____

Date: _____



Seaweed

Answer the following questions about **Seaweed** by Joyce Markovics.

① Which animal is an enemy of the kelp forest?

- a. Sea otter
- b. Snail
- c. Sea urchin
- d. Sea star

② List 3 living things that depend on seaweeds for nutrients.

- 1. _____
- 2. _____
- 3. _____

③ Why is seaweed a better resource to make fuel than gas?

- a. Burning gas creates pollution
- b. Seaweed grows in the water and doesn't use up land
- c. Seaweed absorbs carbon dioxide
- d. All of the above

④ What can humans do to slow climate change and help seaweeds?

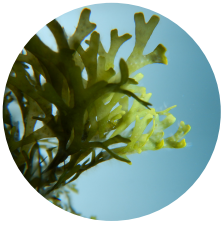
- a. Bike or walk to work or school instead of driving
- b. Fly to more tropical places
- c. Throw plastic in the garbage
- d. Pick more flowers

⑤ True or False: Seaweeds are a kind of ocean plant life.

True

False

⑥ Short answer: How does climate change put seaweeds in danger?



Seaweed - Answer Key

① Which animal is an enemy of the kelp forest?

- a. Sea otter
- b. Snail
- c. Sea urchin**
- d. Sea star

② List 3 living things that depend on seaweeds for nutrients.

Possible responses may include: "Snails, crabs, abalone, sea urchins, seals, sea otters, gray whales, fish, seagulls, terns, egrets, small birds, sheep, cows, pigs, humans."

③ Why is seaweed a better resource to make fuel than gas?

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⑤ True or False: Seaweeds are a kind of ocean plant life.

True

False

⑥ Short answer: How does climate change put seaweeds in danger?

Possible responses may include: "Climate change warms the air and the ocean. This makes it harder for certain animals to survive and easier for others that harm seaweeds, like sea urchins. Climate change has also increased the amount of strong storms. These storms can rip kelp from the sea floor and tear it into blades."

Name: _____

Date: _____



Worms

Answer the following questions about **Worms** by Joyce Markovics.

- 1 Worms are invertebrates because they don't have...
 - a. A brain
 - b. Veins
 - c. A backbone
 - d. Teeth

- 2 How do worms help to enrich soil?
 - a. The movement of their bodies mixes different layers of soil together.
 - b. They eat unwanted bugs underground.
 - c. The slime on their body leaves nutrients behind.
 - d. They water plant roots as they move.

- 3 List 3 living things that like to eat worms:
 1. _____
 2. _____
 3. _____

- 4 What do people use worm compost for?
 - a. To feed nearby animals
 - b. As fertilizer to grow new plants
 - c. As material to build buildings
 - d. To disgust their family members

- 5 True or False: **Tilling** soil helps earthworms by moving them to new areas of soil.

True

False

- 6 Short answer: Describe what the world might look like without worms.



Worms - Answer Key

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- a. A brain
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a. The movement of their bodies mixes different layers of soil together.

- b. They eat unwanted bugs underground.
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- d. They water plant roots as they move.

3 List 3 living things that like to eat worms:

Possible responses may include: "skunks, foxes, snakes, badgers, moles, frogs, salamanders, snails, beetles, birds, people,"

4 What do people use worm compost for?

- a. To feed nearby animals
- b. As fertilizer to grow new plants**
- c. As material to build buildings
- d. To disgust their family members

5 True or False: **Tilling** soil helps earthworms by moving them to new areas of soil.

True

False

6 Short answer: Describe what the world might look like without worms.

Possible responses may include: "The soil would be less fertile, so plants would struggle to grow. Farms would have difficulty growing crops causing there to be less food for people. Animals who depend on worms for nutrients would also struggle to find food."