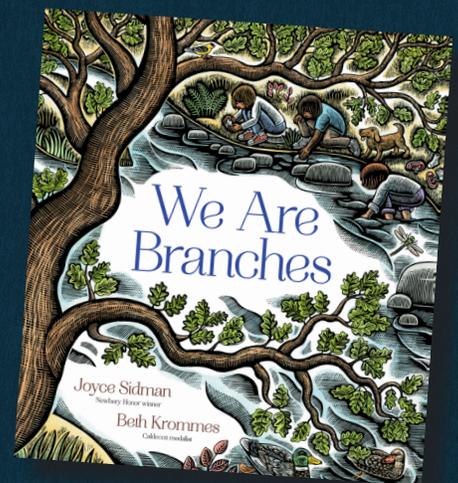
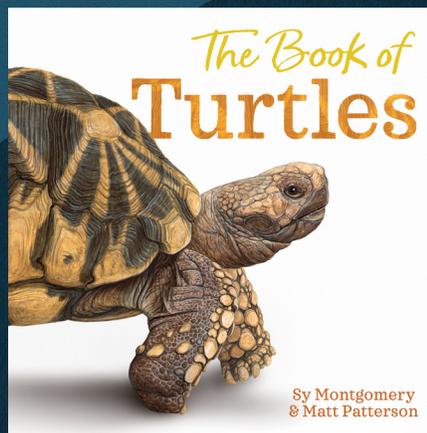
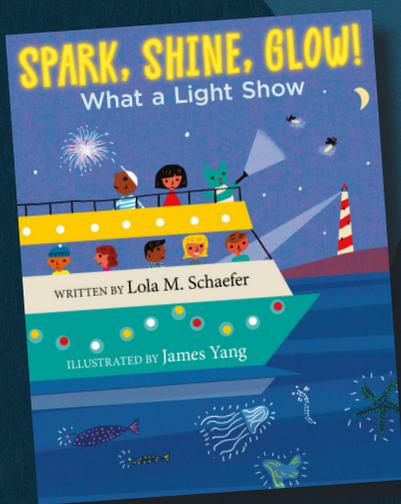


PICTURE THIS:

Illuminating the World Around Us

CLASSROOM KIT

Nonfiction picture books that inspire children by introducing them to new concepts and creatures



PICTURE THIS: ILLUMINATING THE WORLD AROUND US

Children learn and grow through their experiences, explorations, interactions with others, and through literature. Nonfiction books provide children with knowledge that becomes a foundation for their experiential learning. This encourages children to wonder, to ask questions, and to seek answers, and inspires children by expanding their world and introducing them to new concepts and creatures.

Nonfiction picture books are especially captivating for young readers. Through vivid images and engaging text, children learn about their environment, how animals and people interact within that environment, how humans can impact the world, and how the world can impact us.

Each of these books shines a light on a concept or creature in nature. **SPARK, SHINE, GLOW!** encourages readers to explore the properties and sources of light. **THE BOOK OF TURTLES** teaches readers intriguing and unusual facts about this amazing animal. **WE ARE BRANCHES** helps readers recognize where and how branching out occurs commonly and naturally in our world.

In a classroom or library, these nonfiction picture books can be read aloud to younger students, while older students can read the books independently or in small groups.

ACTIVATE STUDENT LEARNING

Introduce each book by asking students questions. Do they know that light can be invisible? Do they think that a turtle can live to be 250 years old? Do they know that there are branches inside their body? Asking questions will capture the students' attention and give them a focus as they read or listen to the books.

While reading these books, pause to let the students ask their own questions and share their reactions to the facts described in each book. Have the students look closely at the pictures and discuss what they learn from both the text and the illustrations.

A 3-column **KWL** chart can be used to organize the students' questions and ideas. Before reading the book, ask students what they **Know** about the concept or creature featured in the book and record their thoughts in the first column. Then, ask the students what they **Wonder** or **Want to know** and record their ideas in the middle column. Finally, after reading the book, ask the students what they have **Learned**. Record their new knowledge in the final column of the chart. Refer to the middle column to determine if the students can now answer some of the wonderings. After introducing the KWL chart, you can also ask students to create their own individual KWL charts. They should fill in the first two columns before reading the book and record their new knowledge in the last column after reading the book.

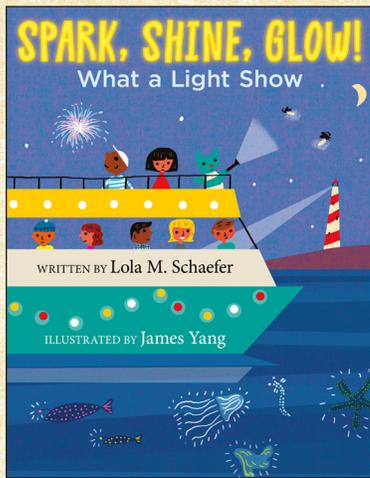
Another way to activate the students' prior knowledge is to create a **schema map**. Before reading the book, have students record facts they think they know about the featured concept or animal on an index card or sticky note. Display their ideas on a bulletin board. As you read and discuss each book, highlight the correct facts, update or remove the incorrect facts, and add new facts as the students learn more.

Students can also organize the facts they learn by using a template or graphic organizer. The template should have a place for the students to record the main idea or theme of the book, as well as spaces to write supporting or relevant details.

After reading these nonfiction picture books, plan a culminating project for the students. These projects can include creating posters, reports, or digital presentations. You might plan a "You Are the Teacher" Day and have the students devise a unique way to share their new learning with their classmates and to illuminate a new concept or idea.

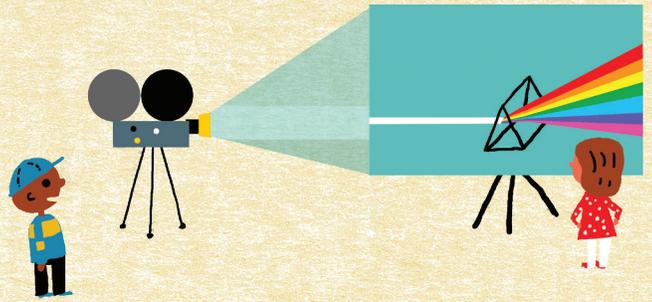


Teaching materials in this kit were prepared by Sue Ornstein, an educational consultant with more than 30 years of elementary teaching experience.



Spark, Shine, Glow! What a Light Show

By Lola M. Schaefer
Illustrated by James Yang



ABOUT THE BOOK

Through simple, rhyming text, this book explores the complex topic of light and makes it accessible to young readers. *Spark, Shine, Glow!* describes the characteristics of light, different types of light, how we use light, and why it is so important to us.

DISCUSSION QUESTIONS

1. Where do you see light?
2. What tools use light to operate?
3. What do you think is our largest source of light?
4. How do plants use light?
5. Read the first three pages. Where is the light coming from on these pages?
6. What are some things that are **transparent**? What are some things that are **opaque**?
7. What does the word **visible** mean?
8. What kind of light is **invisible** to us?
9. What are some things that **reflect** light?
10. What does **refract** mean? Where can we see refracted light?
11. Why is light so important?

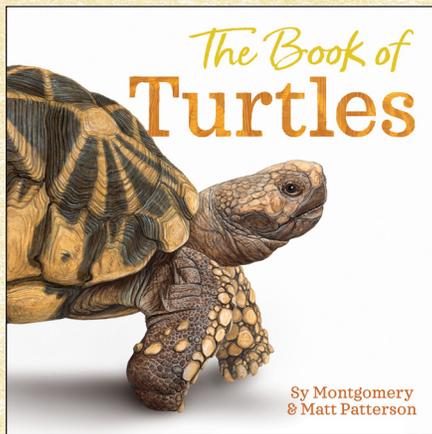
CLASSROOM ACTIVITIES

Light the Way. Brainstorm a list of light sources and discuss which are natural and which are artificial. Divide a large piece of chart paper in half. Create a class chart that depicts **natural light sources** (e.g., sun, stars, fire, lightning, fireflies, jellyfish) on one half of the chart, and **artificial light sources** (e.g., lamp, flashlight, laser, television, fireworks)

on the other half. Have the students draw, paint, or cut out pictures from magazines or web images to create the chart.

As I See It. Define and discuss the terms **transparent**, **translucent**, and **opaque**. Then give small groups of students a collection of materials. Ask them to determine which items are transparent (e.g., clear plastic cup, eyeglasses, magnifying glass), which are translucent (e.g., small colored bottle, lampshade, sheet of tissue paper), and which are opaque (e.g., eraser, book, coin) and sort them into three different groups. Then meet as a whole class to compare results and have the students explain their thinking. Have a flashlight available to test an item that is questionable.

Look in the Mirror. Discuss how light rays reflect or bounce off objects, which enables us to see them. Darken the classroom and give groups of students a flashlight and a small mirror to observe how light is **reflected**. Have them turn on the flashlight and place it on a desk or table. Then they should put the mirror in front of the light beam. What happens to the beam? Can they light various objects in the classroom by turning only the mirror and not moving the flashlight? What do they observe and why do they think this happens?

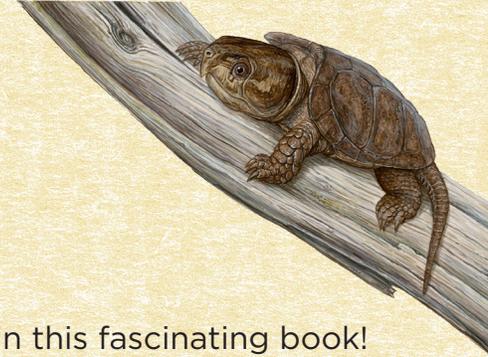


The Book of Turtles

By Sy Montgomery
Illustrated by Matt Patterson

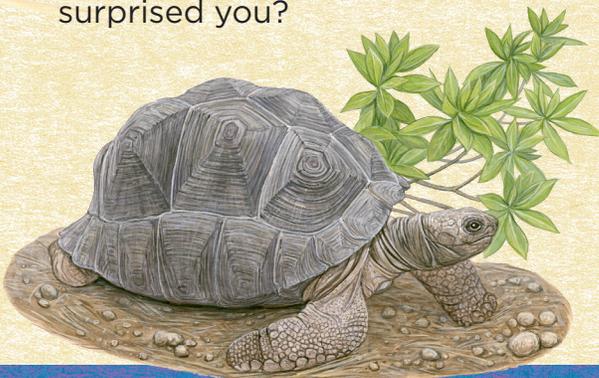
ABOUT THE BOOK

A torrent of turtle facts can be found in this fascinating book! Readers will learn about turtle anatomy, different species of turtles, turtle behavior, famous turtles, why some turtles are in trouble, and how you can help turtles. *The Book of Turtles* is a comprehensive guide to turtles!



DISCUSSION QUESTIONS

1. When did the first turtles live on our planet?
2. What makes the turtle unique?
3. What is the life span of a turtle? Why can they live so long?
4. How many species of turtles are there?
5. How do turtles and tortoises differ?
6. What is the largest turtle? The fastest turtle? The most colorful turtle?
7. Are turtles intelligent? How do scientists know?
8. Turtles don't have ears, so how do they hear?
9. Who are the celebrity turtles discussed in the book? Why are they famous?
10. How are turtles born?
11. Why are some species of turtles endangered?
12. How can we help turtles?
13. What is one fact about turtles that surprised you?

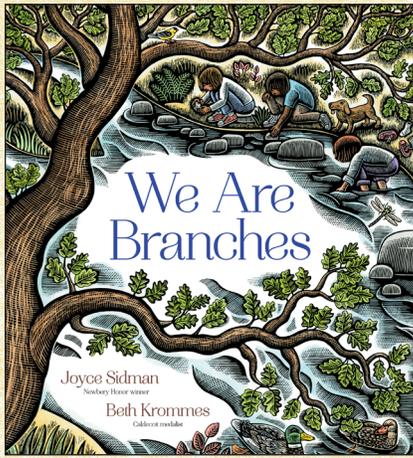


CLASSROOM ACTIVITIES

Turtle Talk. Many different species of turtles are introduced in this book. Have students work in pairs or individually to research a turtle species using books, periodicals, and websites. Younger students can write a few interesting or fun facts about their species, while older students should include facts about their turtle's habitat, life span, diet, appearance, behavior, and predators, along with any fun facts. Students can present their findings to the class.

Play It Safe. A turtle's shell acts as protective armor and keeps them safe. As a class or in small groups, have the students research other ways that animals protect themselves and stay safe. Create a class chart that shows the animals and their method of defense (e.g., spikes, camouflage, venom, horns).

Turtle Art. There are myriad ways to make a turtle, and here are a few suggestions. Young students can make a moving turtle by using paper plates and following this video: https://youtu.be/_MxH4SmfFfw. Students can learn how to draw a sea turtle with help from Art for Kids Hub: <https://youtu.be/6DXTWTbd8G4>. They can create a turtle using rocks (<https://youtu.be/kUsurino7NQ>) or clay (<https://youtu.be/DXsUXexLUVU>). Or students can choose their own medium and design their own turtle!



We Are Branches

By Joyce Sidman
Illustrated by Beth Krommes

ABOUT THE BOOK

Branches can be found throughout our world. Trees, roots, flowers, rivers, lightning, snowflakes, antlers, wings . . . all of these have branches. The lyrical text and the intricate illustrations show readers that branches can be found almost anywhere!

DISCUSSION QUESTIONS

1. What is a branch?
2. On each page, pause to have the students point out where they see branches.
3. Why is it important for trees and roots to branch out?
4. Read the pages that say, “We splinter rock and mud. We sprout in ice.” Why do you think these branches form?
5. Where have you seen branches?
6. What patterns do you see when you look at branches?
7. Do you know where we have branches in our bodies?
8. Read the pages at the end of the book. What do branches do?
9. How is branching “the shape of life”?
10. After reading the book, how have your thoughts about what branches are changed?

CLASSROOM ACTIVITIES

Branching Out. What does the phrase “branching out” mean? Define this with the class and begin a discussion about how the students can “branch out.” Explain that trees and plants grow when they branch out, and so do people! Ask the students if they think it

is hard to branch out and try something new. Why or why not? Have the students share at least one way they would like to branch out, such as learning a new skill or being open to trying a new experience.

Here Comes the Sun. Bring a small plant into the classroom. Place it by the window and ask the students to observe it. Check the plant daily and discuss any changes that the students notice. Do they see that the plant’s branches are bending toward the sun? Why do they think this occurs? (You can introduce the term “phototropism” to the class.) Turn the plant so it is leaning away from the sunlight. Ask the students to continue monitoring the plant so that they can again observe the movement of the plant’s branches.

Beautiful Branches. Read the paragraph on the last page about how branches repeat. Reread the last sentence: “These kinds of repeating patterns that look similar at varying scales are called fractals.” Discuss how fractals can be different sizes but have the same repeating pattern. Show the students some photographs of fractals in nature, and then challenge them to try drawing their own fractal.