



Summer Science Webinar

seasonal**science**



Thanks for joining us early.

The webinar will start
promptly at 4:00 p.m. ET

Welcome!

BECKER'S[®]



Summer Science Webinar

seasonal**science**



Welcome!

BECKER'S[®]

Before we get started...

- **Professional Development Certificate**

- Will be sent via email within 48 hours.

- **Questions**

- Use the **Q & A option** on the bottom of your screen to post a question

- **Polls**

- Don't be shy! Every voice counts!

- **Recording & More**

- A **recording** of this presentation will be made available to you after the webinar, as well as access to **step-by-step instructions** for the activities highlighted today, a **book recommendation** and a **resource list** at

<https://www.shopbecker.com/resource-cafe/workshops/>



About Me

- Certified K-8 Teacher
- 15 years as a science educator at The Academy of Natural Sciences in Philadelphia, PA





Standards Alignment

- Children have a natural desire to explore, to build, and to question. Through open-ended exploration, children interact with materials in nature and scientific materials/tools to explore and learn about their world. [\(ECERS-3\)](#)
- Children have an innate desire to experiment and investigate while gathering data to make conclusions. [\(PA Early Learning Standards\)](#)
- Adults facilitate children's development of those skills that support discovery and inquiry while promoting their natural curiosity.
- Children first construct scientific knowledge by using their five senses to interact with the environment. That is how they make sense of their world. [\(Head Start\)](#)
- Children's immediate environment and daily surroundings provide the best context for science learning. Some ways they do this include observing, measuring, investigating, sorting, and comparing. [\(PA Early Learning Standards\)](#)
- Adults scaffold children's thinking by asking open-ended questions that encourage problem-solving and critical thinking. [\(PA Early Learning Standards\)](#)
- Young children's inclination to be curious, explore, experiment, ask questions, and develop their own theories about the world makes science an important domain for enhancing learning. [\(Head Start\)](#)

Science for Littles

In preschool, science is more about practicing skills and fostering a love of science than content

- **Making Observations** is the #1 skill to practice in early education
- **Asking Questions** is #2!
- Other skills that can be fostered through science instruction in the ECE classroom:
 - **Cause and Effect**
 - **Following Directions**
 - **Order of Operations**
 - **Background Knowledge Acquisition**



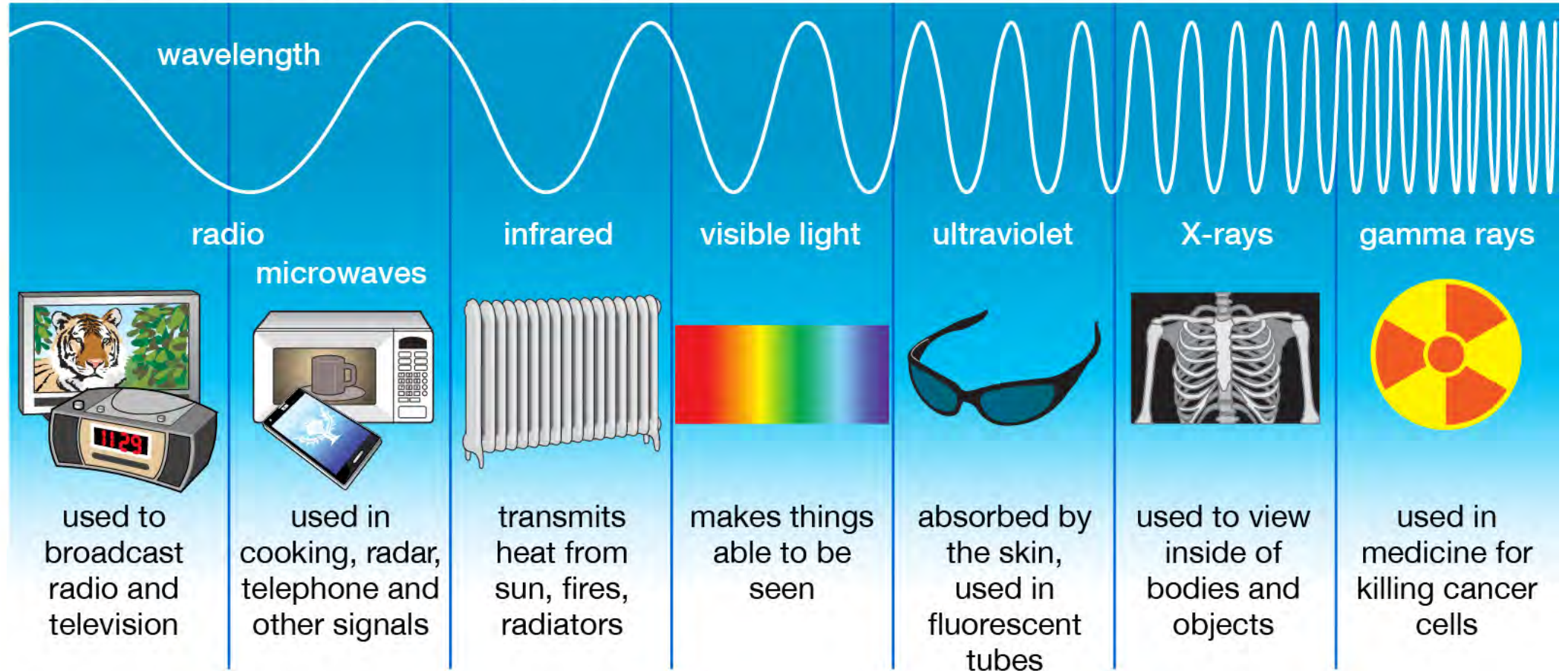
Poll

Are your science lessons mostly demonstrations or hands-on experiments?



Hands on Science: The Sun

Types of Electromagnetic Radiation



Hands on Science: The Sun



































UV light and Sunscreen

Supplies

- UV sensitive beads
- Plastic Cups
- Cling Wrap
- Sunscreens with different SPF ratings
- T-shirt
- Sunglasses
- Spray Sunscreen
- Sunshine or a UV flashlight

Tips:

- Make predictions (and try to get to the why of those predictions)
- Change the variables- time of day, area of the playground, cloudy day, length of time
- Label everything as you build the experiment
- Bring the cups inside before you peel back the plastic!

How to Protect Yourself					
					
	UV Rating 1-2 Low	UV Rating 3-5 Moderate	UV Rating 6-7 High	UV Rating 8-10 Very High	UV Rating 11+ Extreme
Use UV-Blocking Sunglasses					
Wear Sunscreen					
Wear a Hat					
Wear Protective Clothing					
Stay in shade near midday					
Reduce time in the sun					
Avoid the sun between 10am-2pm					

Hands on Science: The Sun

Sun Prints

Tips

- Flatter objects will give a clearer outline
- Mix natural and manmade objects
- Experiment with layering
- Watch out for windy conditions (and impatient little artists)
- Let the paper dry flat in the classroom
- The images will sharpen up as the paper dries



Natural objects

- Leaves and Petals
- Sticks and Stems
- Rocks and Sand
- Crystals and Gems
- Feathers and Bark

Manmade Objects

- Flat toys and Shapes
- Washers and Tools
- Cookie cutters and Foil
- Paper and Fabric

Hands on Science: The Sun

Poll

How likely are you to use these sun activities in your classroom?



Book Break: Nonfiction Books

Uses of Nonfiction Books:

- In centers
- Small group instruction
- Send home for book lending
- Supplemental to story time



Choosing Nonfiction Books

- Offer both illustrated books and books that have photographs
- Look for diagrams with arrows, numbers, timelapse images
- Provide books above reading/comprehension level- if they have good pictures!
- Errors? Just correct and tape over it!

Making the Most of Nonfiction Books

- Post-it questions
- I Spy
- Make a classroom documentary or encyclopedia
- Provide complementary images to cut, laminated images to draw on, etc.

Book Break: Nonfiction Books



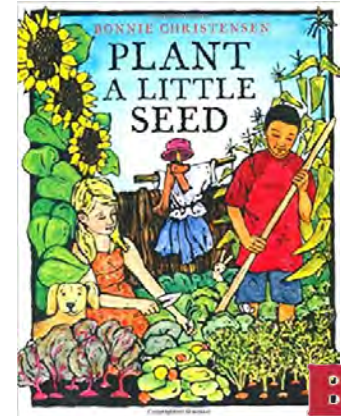
Acorn Books



Jane Porter



Carol Thompson



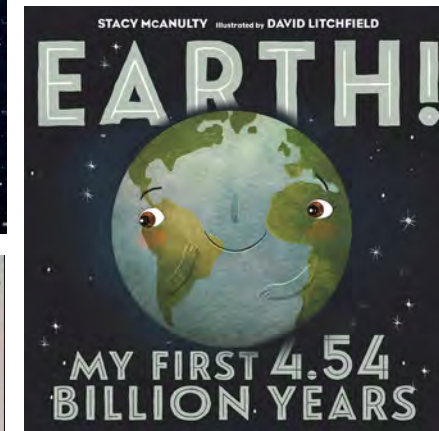
Bonnie Christensen



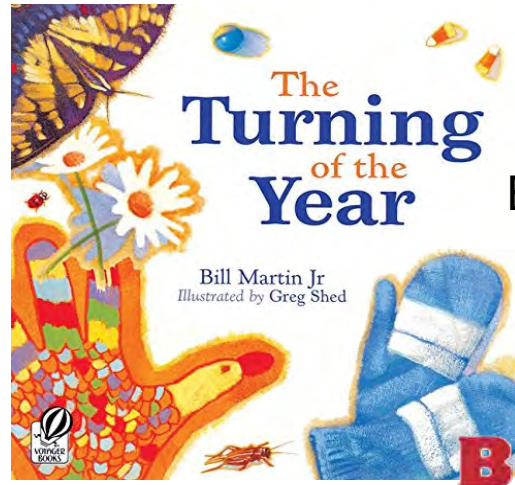
Kristen Foote



Stacy McAnulty

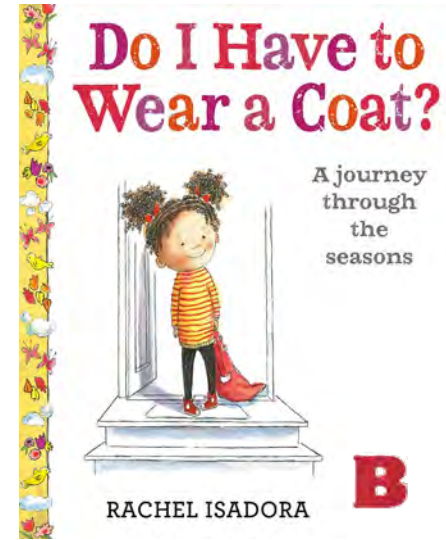


Book Break: Four Seasons Books

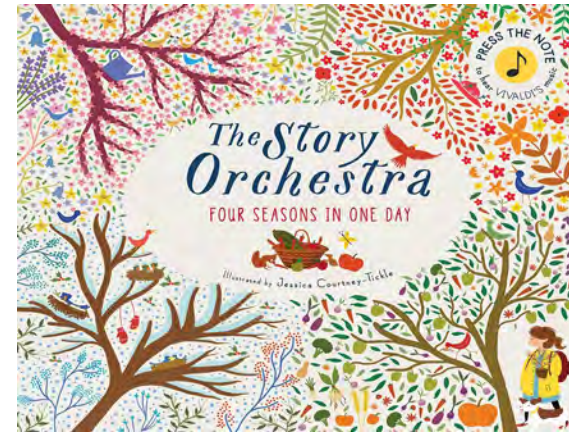
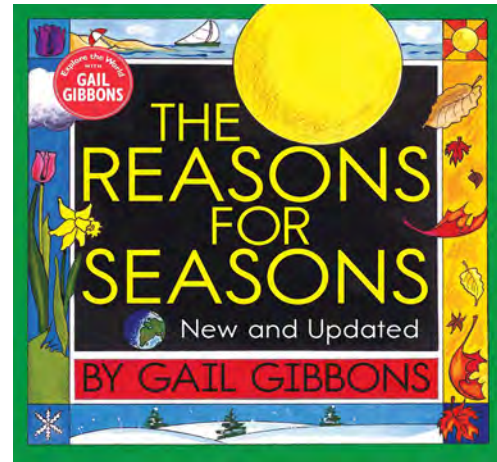


Bill Martin Jr.

Rachel Isadora



Gail Gibbons



Jessica Courtney-Tickle



Hands on Science: Nighttime Learning

The Moon

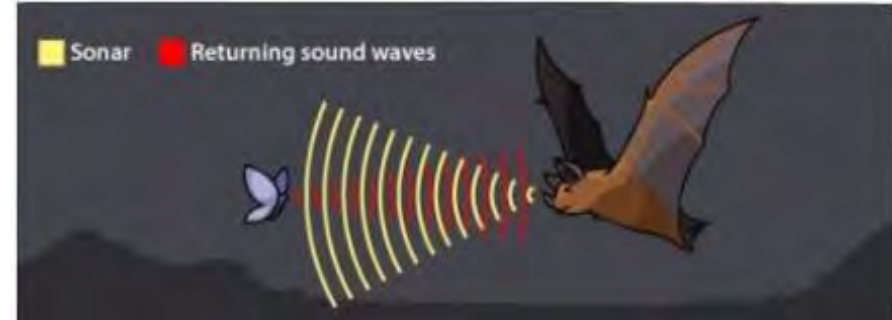
- **Craters on the Moon:** Fill a baking pan with about an inch of flour. Sprinkle coco powder over the surface of the flour. Drop small objects- marbles, stones, pom poms- into the pan. What happened?
- **Classroom in Orbit:** Choose students to be the sun, the Earth, and the moon. Can the moon orbit the Earth while the Earth orbits the sun?
- **Phases of the Moon Ball:** Paint a ball with one white side and one black side. Let students take turns being the Earth and the sun. The Earth stands in middle and the moon orbits the Earth. The sun will stay still during this demonstration and is in charge of making sure the white side of the side of the moon is always facing the sun.

Hands on Science: Nighttime Learning

Nocturnal Animals

Bat and Moth

Play a slowed down version of “Marco Polo.” The player who is “it” will be the bat and will call out the word “BAT!” All of the other players need to respond “MOTH!” so the bat has a chance to echolocate them!



Owls

Eyes: Build “Owl Eyes” by fastening two toilet paper tubes together like a pair of binoculars. What can you see if you stand in one spot with your owl eyes? What about without them?

Ears: Pick a sound- it can be snapping, breaking a stick, or a shaker egg. That will be the animal your owl is hunting. Have your students stand close to you. Give a thumbs up if they can hear the noise. Step back 10 big steps. Make the sound. Can they hear it? Move farther back and try again. A great grey owl can hear a beetle rustling through grass about a half a mile away. How do your ears stack up?

Hands on Science: Nighttime Learning Glow!

Chemiluminescence:

Light that comes from a chemical reaction like glow sticks and fireflies (bioluminescence)

Glow Stick Science: Break three glow stick- make sure they are the same size and thickness- and place one in very cold water, another in room temperature water and a third in warm water. What happened?

Chatting Fireflies: Fireflies use their blinking lights to communicate with each other. Grab a flashlight and get to chatting like these bugs. Decide what “yes” and ”no” would look like for your little fireflies and strike up a conversation!



sciencewithtoys.wikispaces.com



Hands on Science: Nighttime Learning

Poll

How likely are you to use these “Nighttime Learning” activities in your classroom?





Book Break: Fiction Books

Books don't have to be factual to be impactful!

Fiction in ECE science instruction can help students to:

- Contextualize complex scientific ideas
- Think critically about real vs. imaginary
- Build emotional connections to content

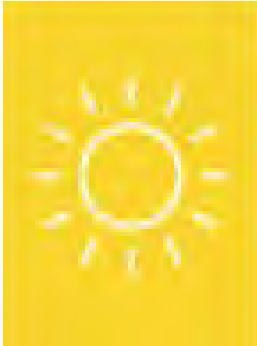


Choosing Science-Centered Fiction Books

- A realistic setting and plot are more helpful than realistic characters
- Look for books in which characters are curious, search for solutions through experimentation or research, or have one idea about something and change their minds when presented with evidence
- Pick books that are fun (and sometimes ridiculous!)



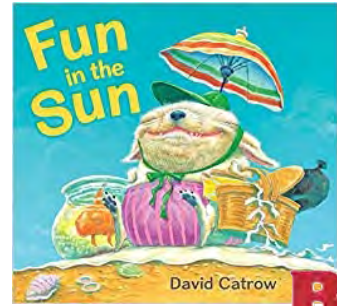
Making the Most of Fiction Books

- Pair with nonfiction books on similar topics
 - Change the setting, change the story
 - Questions, questions, questions!
- 

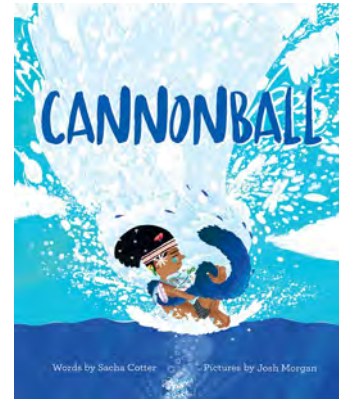
Book Break: Fiction Books



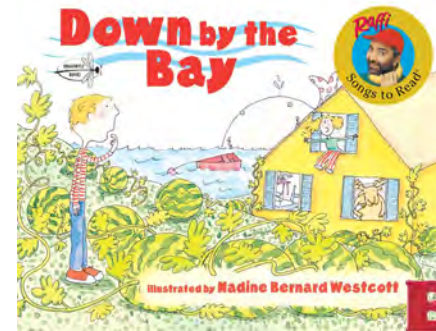
Jason Carter
Eaton



David Catrow



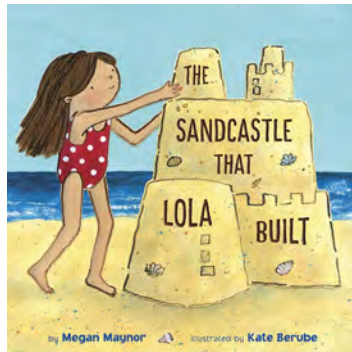
Sacha Carter



Nadine Bernard
Westcott



Jerry Pinkney



Megan
Maynor



Allison
Farrell



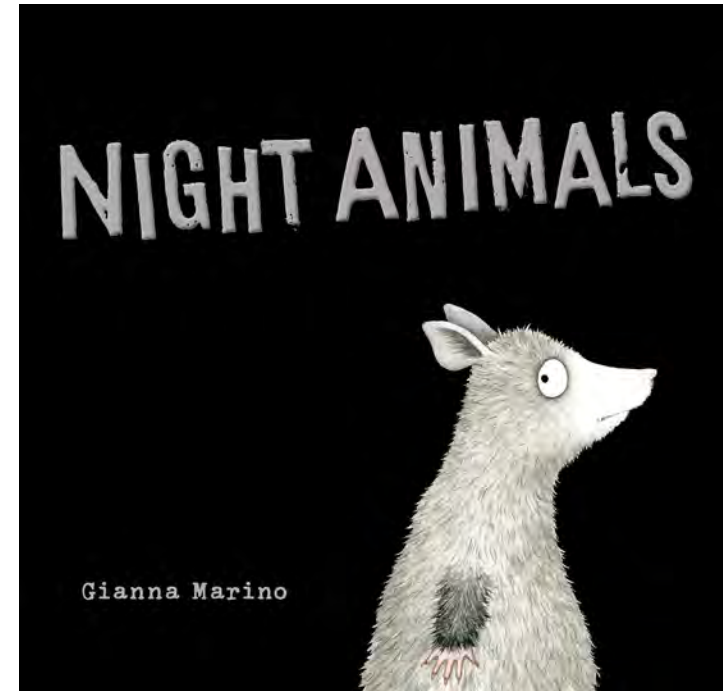
Jennifer K.
Mann



Book Break: Fiction Books



Lizi Boyd



Gianna Marino



Hands on Learning: The Colors of Summer

Rainbows without the Rain!

Making “rainbows” in the classroom is a great way to encourage experimenting and inquiry!

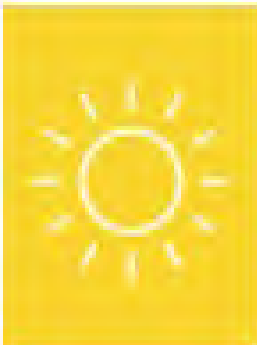
Supplies:

- Old or blank CDs and DVDs
- Prisms or acrylic crystals
- Flashlights, nightlights, LED lanterns, kid-safe desk lamps
- Construction paper
- Markers, crayons, colored pencils
- Water in clear plastic bottles, colored plastic bottles, mason jars
- DIY dark box (glue black paper to the inside of a cardboard box)
- Scrap paper



Hands on Learning: The Colors of Summer

Fireworks without the Fire!



Making observations: “Fireworks” in a Jar

Supplies:

- Jar or clear cup
- Warm water
- Vegetable oil or baby oil
- Fork
- Food Coloring

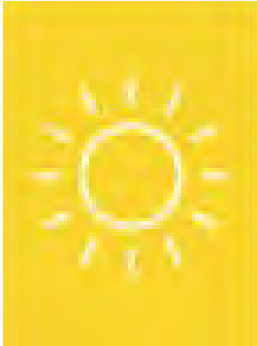
1. Fill your jar 3/4 full with warm water.
2. In a separate bowl add a few drops of food coloring to about 3 tablespoons of oil. Stir it up. (The food coloring will not mix with the oil.
3. Slowly pour the oil into the water and make observations!



Making Predictions: Splatter “Fireworks”

Supplies:

- Eyedroppers
- Water
- Food coloring
- Construction paper or watercolor paper
- Crayons

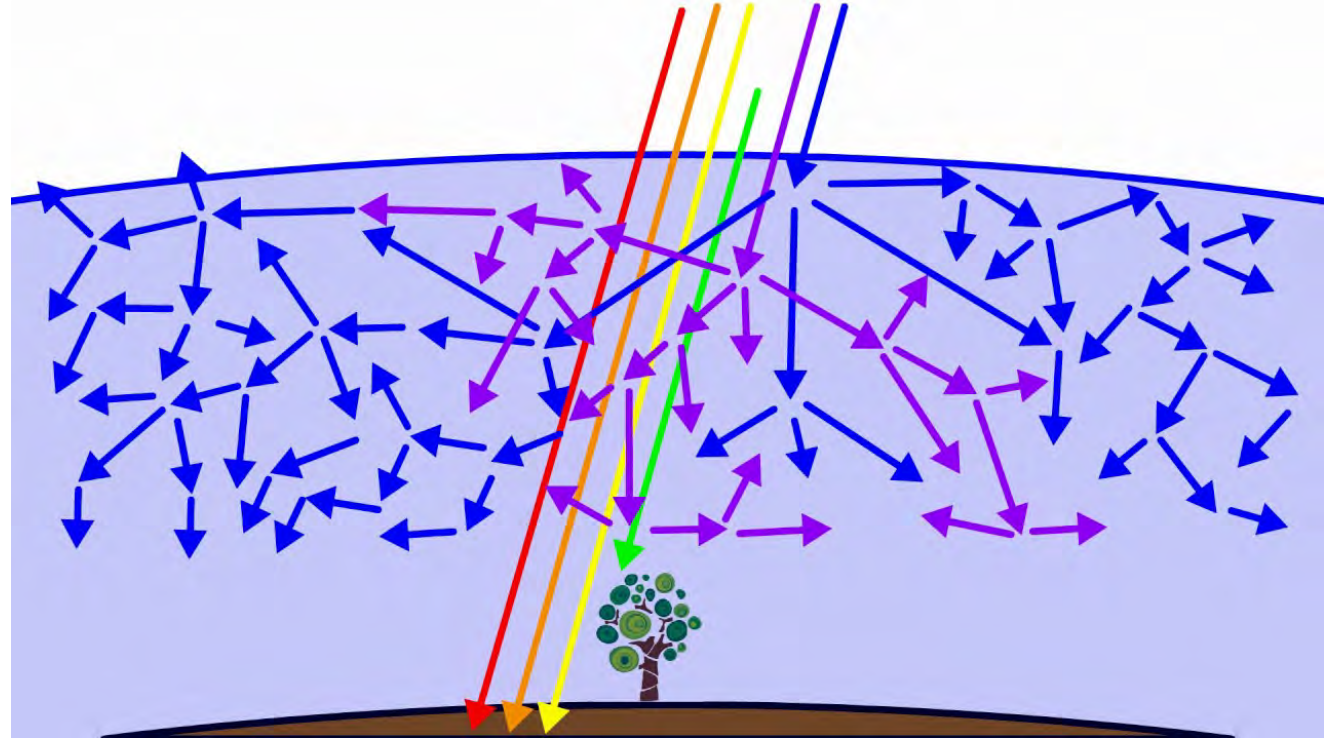
1. Mix the water and food coloring. Make it nice and bright!
 2. Tell your students that you will be dropping a single drop of water on the paper. Predict what will happen.
 3. Drip water from about 2 inches high. Explain that you will be dripping from higher next time. What do they think will happen this time?
 4. Repeat from different heights to make splatter-works!
- 

Hands on Learning: The Colors of Summer

Why is the Sky Blue?

Supplies:

- A glass of water
- A few drops of milk
- A flashlight- the light on your phone will work



Hands on Science: The Colors of Summer

Poll

How likely are you to use the “The Colors of Summer” activities in your classroom?



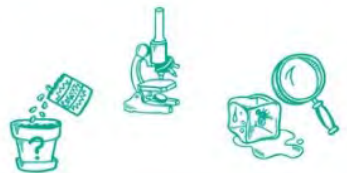
Visit ShopBecker.com

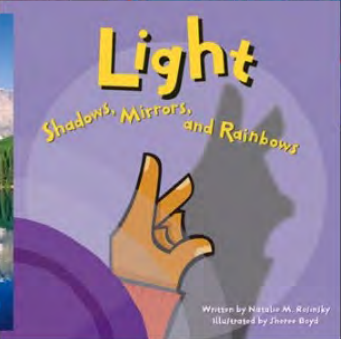
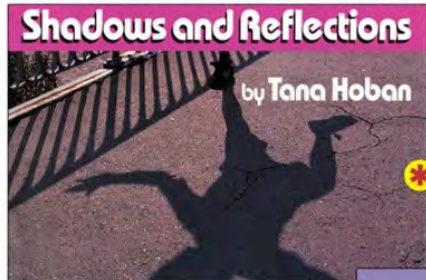
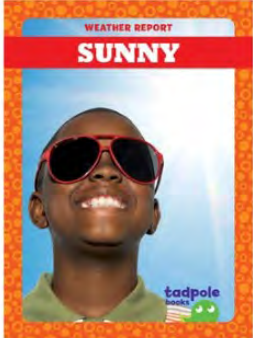
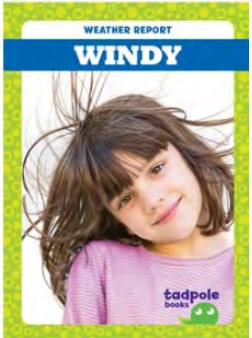
Promo Code
HOLLIE20

Scientific Inquiry

Date: _____

- 1. Question**
What are you trying to find out?
- 2. Prediction**
What do you expect to find out?
- 3. Experiment**
Plan an experiment or a test.
- 4. Observe and Record**
Draw what you see in your journal.
- 5. Conclusion**
What did you learn from your experiment?





BECKER'S®



Promo
Code
HOLLIE20

Seasons Book Set
603574

Becker's Seasonal Science Book
Set
BSS191920



BECKER'S®

Hollie's Kitchen Science Set?



Promo Code
HOLLIE20



Hollie's Kitchen Science Set

BSS111919

Kitchen Science

PROJECT
Bubble Snake

Instructions:

- 1 Mix 1/2 cup of dish soap into a 1/2 cup of water to make a very easy bubble solution.
TIP: You can use store bought bubble solution or your favorite bubble recipe.
- 2 Ask an adult to cut off the bottom of an empty plastic bottle.
TIP: If you're having trouble, warm up your scissors or knife before the first cut.
- 3 Stretch a sock over the cut end of your bottle. Use a rubber band to secure the sock.
- 4 Dip the sock end of your bottle into the bubble solution and blow into the mouth of the bottle to make your bubble snake!
TIP: Make sure young scientists don't suck in or they will get a mouth full of bubbles.

After the Experiment:
Did the Bubble Snake match your prediction of how it would look? What would happen if you added more soap? Less soap? What do you think you could change to make your Bubble Snake different next time?

Kitchen Science

RUBBLES

PROJECT
Bubble Snake

What you'll need:

Sock	Empty Plastic Bottle	Rubber Band (optional)
1 1/2 cup Dish Soap	1 1/2 cup Warm Water in a Bowl	Food Coloring (optional)

BECKER'S

Before you begin:
Think about bubbles. Where have you seen them? Inside your house? Outside? How do bubbles feel? What do you think a Bubble Snake will look like?

BECKER'S

Promo
Code
HOLLIE20



Becker's Science Center

BSS193110



Science Center

A PLACE FOR INQUIRY

18 Activity Cards

for Pre-K to Kindergarten

ITEM #BSS193130

Created collaboratively by Becker's
with Hilby Barstoffs, Science Educator.

BECKER'S

Science Center Activity Cards



Child-Friendly | Engaging Activities
Easy-to-Use | Investigations
Observations | Predictions
Experiments | Scientific Thinking

NEW! Science Center Activity Cards

BSS193130

Promo
Code
HOLLIE20

Coming Soon . . .



Science Center
ACTIVITY CARDS

BECKER'S

**Video How-To's
with Hollie**

The image is a promotional banner for educational resources. It features a red background with a pattern of small white circles. On the left, there is a white lightbulb icon with a brain inside, and a stack of three grey cards with a white play button icon. In the center, a young boy in a white lab coat and green safety goggles is looking through a green magnifying glass. To his right, a young girl in a white lab coat is smiling. In the bottom right corner, there is a circular inset photo of a woman with dark hair, smiling, wearing a green top. The text 'Science Center' and 'ACTIVITY CARDS' is in white and blue, 'BECKER'S' is in white, and 'Video How-To's with Hollie' is in blue.