



WEEK 5
APRIL 27 - May 1
11:00 A.M. - 1:00 P.M.

PBS Arkansas Shows and Times	
National Parks	There was a time when "vacation" meant American Families packing the kids and sleeping bags into the station wagon, then heading out on lightly traveled roads to set up camp and enjoy the national parks. Today, national parks are more crowded than ever, attracting visitors from around the world. Each year, millions line up to visit Utah's national parks, and solitude is increasingly rare.
Expedition with Steve Backshall	Head into the unknown with naturalist Steve Backshall as he journeys to the world's last unexplored places and faces challenges around the globe, encountering extraordinary wildlife and meeting remarkable people along the way.
Breakthrough Ideas that Changed the World	Take a mind-blowing journey through human history, told through six iconic objects that modern people take for granted, and see how science, invention and technology built on one another to change everything.
Reconnecting Roots	Portraying American life across the past six generations, this series exhibits the American journey of unbounded progress with the hope of understanding how exactly we fit in and why.
ForEveryone.Net	A 33-year-old computer programmer named Tim Berners-Lee changed the world forever when he invented the World Wide Web in 1989. His visionary decision to make it a free and accessible resource sparked a global revolution in how we communicate and participate in public life.
A Year in Space	A Year in Space follows astronaut Scott Kelly's 12-month mission on the International Space Station, from launch to landing, as NASA charts the effects of long-duration spaceflight by comparing him to his identical twin on Earth, astronaut Mark Kelly.
Yoga in Practice	Designed to teach the foundations of yoga to the at-home student, and to encourage a daily yoga practice that is more than simply physical exercise. <i>(Grab a mat or a bath towel and follow along with the instructor. Only do what feels good and provides a gentle stretch. Don't over stretch or push too hard. Take a break when needed and pick back up when you are ready. Don't do the activities if you have an injury or condition that they could irritate. If you don't do the stretches, sit on the mat and focus on calm and steady breathing and relaxing the muscles in your body as they work through them on the screen. Anyone can do yoga; just do it at your own pace and do it safely.)</i>
Focusing the Universe	Significant events in modern astronomy, including the development of Steward Observatory in Arizona, the James Webb Space Telescope and the creation of mirrors for the Giant Magellan Telescope.
Around the Farm Table	A food and farming adventure, Around the Farm Table connects consumers to small, thoughtful farmers through storytelling, forgotten recipes and entertainment. Hosted by fourth-generation organic dairy farmer Inga Witscher.
Art of Crystal Bridges	When you think of world-class art collections, you may think Paris, New York, but maybe not Bentonville, Arkansas. The Crystal Bridges Museum of American Art has a mission that's helping to reshape the entire region.
Earth's Sacred Wonders	Many of the world's best-known landmarks have been inspired by faith and today more worshippers than ever are flocking to these sacred places.

Literacy Corner

Choose 4-6 literacy learning opportunities to practice your reading, writing and communication skills. Don't forget to grab a good book and read daily.

- **Presentation:** Time for YOU to be the expert! Make a presentation about something you learned this week. Be sure to include facts and pictures. This can be done on paper, poster, google presentation, etc. You can present for family at home or video chat with family and friends for a learning experience for all!



- **Protecting Land:** The episode "Beyond the Crowd" profiles National Parks in Utah. National and State Parks are tracts of land that are protected from development. Research a National Park or a State Park. When was it founded? What is the reason it was protected? Have you ever visited one? If so, what was it like? Why do you think it is important for land to be protected in this way?
- **Exploring:** In the episode "Flooded Caves," divers go underwater and into caves, exploring a typically inaccessible environment. If there were no restrictions on travel and you could go anywhere (space, bottom of the ocean, volcano, etc.), where would you go? Why do you want to go there? What do you think you would see? What is it about it that makes it inaccessible or difficult to get to?
- **Pitching an Idea:** In the episodes "The Car" and "The Telescope," you learned about breakthrough ideas that changed the world. Pretend you are pitching an idea for another episode in this series. Create a sales pitch, written or a presentation, that answers some of the following questions. What is the breakthrough idea you think has changed the world or your community? What information or facts would your episode need to include? Who are people you might interview? What expertise do they offer? What images are necessary to show the viewer?
- **My Future Career:** The episode "Education of a Nation" profiles learning the skills required for a specific industry or trade. If you could have an internship learning a skill or trade, what would it be? Where would you work? What skills do you currently have that will help you in this internship? Create a poster using pictures you draw or cut out from a magazine about what career, trade, or skill you would love to learn through an internship. **Extension:** Research opportunities for an internship for the skill or trade you are interested in pursuing or interview someone in that industry to learn about his or her training in that field.
- **Creative Writing:** A fairy tale is a common tale told to children about magical and/or imaginary beings in a far away land, and there are numerous fairy tales specific to various cultures and/or countries. First, think of two fairy tales that you know and like. (Examples include Cinderella, Snow White, Red Riding Hood, Jack and the Beanstalk, Stone Soup, Rumpelstiltskin, etc). Then, select a protagonist (main character) from one of the fairy tales and insert him or her into a different fairy tale. Rewrite the fairy tale with this additional character. How would he or she interact with the characters? How would he or she change the conflict or plot? *Check it Out:* This has been done before in the musical "Into the Woods" with music and lyrics by Stephen Sondheim. Look it up!
- **Read an Article:** Read the article, *The Art of Design*, and answer the comprehension questions.
- **Journal Writing:** Begin keeping a daily journal or diary on the current pandemic.
- **FREE Choice-** What are your interests? Choose a topic and create a document, presentation or performance that will teach someone else about your topic.



Math Mania:

Choose 3 to 4 math learning opportunities to build and reinforce your math skills.

- **ALEKS:** If you have internet access, it is recommended that your child utilize ALEKS with built-in instruction to support math learning at least 3 days a week. <https://www.aleks.com/login>
- **Khan Academy:** If you have internet access, it is recommended that your child utilize the Khan Academy modules with built-in instruction to support math learning at least 3 days a week. Select your grade level or type in the web address and select the GET STARTED button. (Counts as one each day) If needed students may select a different grade, regardless of age.
[6th grade math](https://www.khanacademy.org/math/cc-sixth-grade-math) [https://www.khanacademy.org/math/cc-sixth-grade-math](https://www.khanacademy.org/math/cc-seventh-grade-math)
[7th grade math](https://www.khanacademy.org/math/cc-seventh-grade-math) [https://www.khanacademy.org/math/cc-seventh-grade-math](https://www.khanacademy.org/math/cc-eighth-grade-math)
[8th grade math](https://www.khanacademy.org/math/cc-eighth-grade-math) <https://www.khanacademy.org/math/cc-eighth-grade-math>
[Algebra I](#)

- **Integer Addition Battle:** 2 players. *Materials:* Deck of Cards, Ace = 1, Jack = 11, Queen = 12, King = 13, Red cards = negative, black cards = positive.
How to Play: Each person turns over two cards then adds the values together. The player with the highest value hand wins all 4 cards. Continue play until all cards have been used. The player with the most cards wins. (Remember: $2 + 3 = 5$, $-2 + -3 = -5$, $2 + -3 = -1$, $-2 + 3 = 1$)

- **Math Puzzle:** Find a value for each icon in the area model below so that it represents the value of 144.

Area Model = $(10 + \text{pretzel}) (5 + \text{honey})$

Pretzel = ?

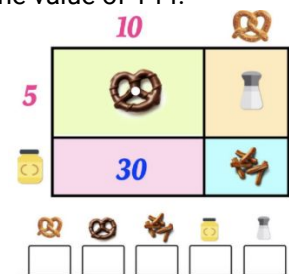
Chocolate Covered Pretzel = ?

Pretzel Sticks = ?

Honey = ?

Salt = ?

Explain your reasoning.

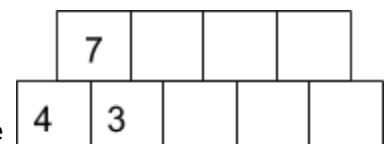


- **Least Common Multiple War:** 2 players. *Material:* Deck of cards (Remove Aces)
A new twist on the card game WAR! Divide the cards in half. Each player gets a stack. Player one flips over a card and then player two flips over a card. The players then race to find the LCM. The player who finds the LCM first and can PROVE it, "wins" both the cards. If the same number is "flipped over," place the cards back in the stack separately and try again. The player with the most cards (after going through the deck) WINS!

- **Nine Squares**

Materials: 9 cards with 1 - 9, piece of paper with squares (like example)

Place the numbers 1 through 9 in the squares below in such a way that the numbers in any square in the upper row is equal to the sum of the numbers in the two squares immediately below it.



- **String 'Em Up:** *Materials:* String, tape measure

For your family, predict whose arm span is greater than, less than, or equal to their height. Write down your predictions. Use a piece of string and a tape measure to measure each person's arm span and height. What do you notice about your predictions? Find the ratio of arm span to height for each person. Is there any pattern to the results? Did the age of the family member have any effect on the ratio of arm span to height? Explain your thinking.

- **Movie Popcorn Prices:** At the movies, there was a sign for popcorn deals. If you and your family go to the movies often, which is the best deal for the family? Which is the best deal for just you? Explain your reasoning.

Small popcorn - \$6.89

Medium popcorn - \$7.89

Large popcorn - \$8.89

Refillable Bucket - \$21.99 (free refills on day of purchase, \$4.89 refills on other days)

Premiere Movie Member - \$15.00 yearly fee per person (Free refills on Large popcorn purchase)



THINK like a Scientist!

Choose at least 2 -3 science learning opportunities for the week.

- **Concave/Convex:** After viewing *Breakthrough Ideas that Changed the World: The Telescope*, look around your house and see if you can find an example of a concave or convex lens. Hold a clear glass half full of water at eye level. With your other hand, hold a pencil vertically just behind the glass. Looking toward the lower half of the pencil (the part behind the water), view the pencil's image. Looking toward the upper half of the pencil (the part above the water line), view the actual pencil. Is the image located farther away, closer to, or at the same distance from you as the pencil itself? Explain your observations. Make a drawing of what you see.
- **Saltwater vs. Freshwater:** After reviewing *Flooded Caves*, the divers experienced differences in the water as they reached the halocline area on their dive. Fill a clear glass or jar with water. Make observations as you try to see through the container of water. This container of water represents the divers viewing through fresh water. Make some saltwater in another container. Pour the saltwater into the container of freshwater to see this phenomenon. This represents the divers viewing through the salty water of the halocline. Make observations as you try to see through the container with the salt water added. What do you notice? What do you wonder? Experiment with different amounts of salt in the water. Write down your observations.
- **Heirloom Findings:** After watching *Around the Farm Table: Poultry, Porcine and Pasta*, locate with an older relative any heirlooms you may have in your home. Talk about who the heirlooms came from and why they are important to your family history. Take pictures of the heirlooms to record this information for future generations.
- **Ecological Transition:** After viewing *National Parks Beyond the Crowd*, think about ecological transition zones that exist between very large areas or very small areas. Go to your outdoor place, see if you can find a small ecological transition zone and describe the changes you see between the types of soil, plants and animals in the two zones. (Examples: the area where pavement changes to soil, or where an area with trees turns into a grassy area.) Make a venn diagram to show the differences.



FUN ZONE

- ★ **Get active-** dance, do exercises, create an obstacle course, go for a walk or run.
- ★ **Perform-** Write and perform an original song or dance.
- ★ **Play** a family game (Uno, Heads Up, Battleship, Chess, etc...)
- ★ **Create a masterpiece-** Paint or draw
- ★ **Check out the PBS.org** for additional learning opportunities for each show.



PAIRED TEXT



The Meadowlands in New Jersey

The Meadowlands

When they described the swamp at the end of Schuyler Avenue, the adults in Sarah's life seemed confused. Whenever she asked about it, Sarah's dad would chuckle.

"You'd better stay away from the Meadowlands," her father said.

Sarah's sixth grade teacher, Mr. Morrison, said only parts of the Meadowlands are swamps. He explained to the class that the Meadowlands are precious wetlands, one of the last places near New York City where birds migrating from Florida could stop and rest.

"The Meadowlands once had a lot of garbage dumps, which polluted the water pretty badly," Mr. Morrison said. "But most of the dumps are closed now. And the habitat for wild birds is recovering."

From her yard in the winter, the Meadowlands was as her dad described: brown, dead-looking weeds with Doritos bags lying at the water's edge. By springtime, however, the reeds turned green and flowers grew along the shoreline.

So which one is it, Sarah wondered. Is the Meadowlands a big, ugly, dangerous swamp? Or is it a beautiful oasis of birds and flowers? Despite her dad's warnings to stay away, Sarah wanted to see for herself. She went under the porch and dragged out her dad's old fiberglass canoe. She threw the paddle and an old pink life jacket into the boat and dragged it across the yard, down Schuyler Avenue to the edge of the swamp.

Whatever it was, she saw now, the Meadowlands was big. Sarah always thought of it as the swamp at the end of her street. Now she realized that the wetlands actually stretched to the north and south, and she couldn't see either end. Directly across the water, the skyscrapers of Manhattan seemed to line the opposite shore, even though they were actually twelve miles away.

Sarah could feel the fear in her throat. But she didn't want to drag the canoe back up the hill. She zipped the life vest up to her neck, pushed the boat into the water and jumped in.

Past the reeds, she found herself paddling in a shallow pond surrounded by muddy islands. She saw ducks, swallows, yellow flowers, purple flowers, white egrets. A blue heron, disturbed by the splashes of Sarah's paddle, jumped into the air, uncurled its long wings and flapped away.

"This is all so beautiful!" Sarah thought.

The canoe slowed down, as if caught by invisible hands. Sarah looked down and saw the boat was scraping along the muddy bottom. Clouds of brown mud rose to the surface with every paddle stroke, and inside each cloud little bubbles of gas burst when they hit the surface. It smelled like a combination of old paint and rotting food. Sarah nearly threw up. Soon she was stuck. She tried paddling backward to free the canoe from the mud, but each stroke released an overwhelming gas smell. She started to cry.

Just then something heavy and dark crashed through the weeds in front of the canoe. A hand pulled the reeds apart, and out poked the head of Sarah's dad.

"Sarah! What are you doing out here?" he called.

Sarah tried to explain, but all she could do was cry.

“Well, it’s a good thing you dragged the canoe—you left a trail in the gravel a mile wide,” her dad said. “Here, take this rope.”

He threw a yellow plastic rope, and after a few tries, Sarah grabbed it. Her dad pulled, and the boat skidded over the mud to shore. Sarah worried that her father would be furious. But when he offered his hand to help her out of the boat, he laughed.

“I did the same foolish thing when I was your age,” he said. “Did I ever show you the otter den?”

Sarah wiped tears from her cheek and shook her head no.

“Well, c’mon. I’ll show you,” her dad said. “The swamps can be pretty disgusting, but there’s some beautiful stuff in here. You just have to know where to look.”

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Inside and Outside Carlsbad Caverns

Imagine watching hundreds of thousands of bats swirl around you, swarming to form a large, black mass that flies off into the horizon. At Carlsbad Caverns in New Mexico, this scene is a regular occurrence. The caverns, located in a United States National Park, are home to around 400,000 Mexican free-tailed bats that fly out into the night sky each evening at dusk to feed on nearby moths and insects, returning at dawn to their caves. The spectacle draws crowds from around the world into the Chihuahuan Desert, where the park is located. One such visitor was Laurel Mathews, who once visited the caves with her family on a road trip.



“At the entrance to one of the caves, there’s stadium seating for visitors to watch the bats,” she remembers. “We waited a long time to see them. Finally, they started circling out of the cave and they flew off—out came more and more and more, all of them flying in loops and then out into the sky. It was amazing that there were so many!”

Laurel also remembers the sound the bats made, describing the high, screeching noise. “It was really creepy, but also really cool,” she says.

Laurel recalls her family’s arrival at the Carlsbad Caverns National Park. “It didn’t look very spectacular when we first drove in,” she admits. “But then we started exploring the big network of underground caves.”

The formation of the caves is a result of a fossilized reef that existed 250 to 280 million years ago in an inland sea that has long since disappeared. Since limestone is typically made up of fragments of coral, a large limestone deposit eventually formed in the area. Today, you can still find several fossilized plants and animals in the caves’ limestone that date back to a time before dinosaurs walked the earth. Starting sometime between four and six million years ago, water from the earth’s surface began moving through the cracks in the stone deposit. There is a type of acid in surface water. When this water combined with rainwater, the two mixed to form another type of acid as a result of their chemical compositions. This acid slowly dissolved the limestone to eventually form the winding caves that exist today in Carlsbad Caverns. This is a very common process that happens to limestone—many caves all around the world exist in limestone deposits due to the stone’s solubility (the ability of a substance to be dissolved) in a mixture of water and acid.

Eventually, speleothems—formations that arise from mineral deposits in caves—began to take shape in the lower levels of the caverns. In fact, these speleothems existed during the last ice age, when instead of a desert, a pine forest sat above

the caves. Over the years, park employees and rangers have found clues that hint at the caves' history. For example, according to the National Park Service, people have found some bones of ancient ice age animals scattered around the entrance to some of the caves. In 2003, an employee found a part of a stone scraper dating back to the last ice age near a cave entrance as well. Clearly, the caves have a long history—researchers have discovered that American Indians first inhabited the area sometime between 12,000 and 14,000 years ago. Ever since then, the caves have been explored by several groups, including Spanish explorers in the 1500s, and later by American explorers and guides who drew attention from all across the country to the natural phenomenon.

Laurel remembers this phenomenon very well. "It took us between one and two hours to get all the way to the bottom," she says, recounting the windy pathway leading deeper and deeper into the heart of the caves. "The park had put in blue and red lights to highlight the beautiful rock formations."

Once they reached the bottom, Laurel says that she had to take an elevator to get back to the top. "My ears popped so much in the elevator!" she remembers. "It took a really long time to reach the top; I didn't realize how far down we were until we were on our way back up."

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Paired Text Questions

Use the article "The Meadowlands" to answer questions 1 to 2.

1. What does Sarah see when she takes the boat into the Meadowlands? Be sure to mention at least three details from the text in your answer.
2. This story gives the reader some information about the Meadowlands. How do Sarah's thoughts and actions affect what the reader learns about the Meadowlands?

Use the article "Inside and Outside Carlsbad Caverns" to answer questions 3 to 4.

3. What is one thing that Laurel says she saw when she visited the Carlsbad Caverns with her family?
4. This article gives the reader information about the Carlsbad Caverns partly by using quotes from Laurel. What is one thing the article describes without using any quotes from Laurel?

Use the articles "Inside and Outside Carlsbad Caverns" and "The Meadowlands" to answer question 5.

5. Contrast the ways that these two texts inform the reader about a natural place. Use details from both texts to support your answer.