WEEK 7
May 11-15
11:00 A.M. - 1:00 P.M.

PBS Arkansas Shows and Times	
The Favored Strawberry	What could be sweeter than a freshly picked strawberry? Scarlett and sumptuous, and grown on a crown of green, this masterpiece among plants begs to be savored.
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.
Watching our Water: The Challenge to Keep it Clean	From Colorado into Nebraska and Iowa and down to the Gulf of Mexico, what contaminates the water and what are some practical solutions to keep it clean?
Tide	The tides are one of the Earth's most mysterious forces of nature, and have been harnessed by man for environmental, social, and economic uses.
Expeditions with Patrick McMillan	This series overflows with compelling wildlife and wilderness footage captured in the United States and beyond. McMillan's passion and contagious enthusiasm for the natural world is evident as he journeys across America.
Engineering Everywhere	Kids will explore food production problems related to population growth and the engineering process behind making ice cream.
Nature	NATURE brings the beauty and wonder of the natural world into your home, becoming in the process the benchmark for natural history programs.
Untamed	From black bears to eagles to opossums, “Untamed” takes viewers inside the Wildlife Center of Virginia with the aim to provide a perspective on natural and manmade challenges that wildlife face.
Himalaya: Kingdoms of the Sky	The Himalaya is the highest mountain range on earth. Here the air is the thinnest, the wind the strongest, the storms the fiercest. Yet extraordinary animals and remarkable creatures do make a home here.
Earth Focus	An environmental news magazine that features investigative reports and in-depth stories about our changing environment and how it affects people around the world.
America from the Ground Up	America from the Ground Up was filmed on location at archaeological and historical sites throughout the U.S. and Canada. Join us in the search for clues to America's hidden history.

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.

- **Design an Advertisement**: In *Engineering Everywhere: Growing Up/Food for Thought*, we learned about creative ways to make ice cream. Both Vincent, from JP Licks, and Ash Chan, from Churn[2], discussed experimental flavors they have tried before, such as apple pie and coffee with doughnuts. What new flavor of ice cream do you think would be good? Design an advertisement for this new flavor. What will you call it? How does it taste? Who would like this flavor? Where can you buy it, and how much does it cost? Share your idea with a family member or friend and find out if they think they would like to try it!

- **A Healthy Recipe**: In *Engineering Everywhere: Growing Up/Food for Thought*, Caleb Harper explains all of the variables that work together to create a healthy plant: water, light, nutrients, etc. He called this a "plant recipe." What do you think is needed for a person to be healthy? Create a recipe for a combination of variables that work together to help a person be healthy. You can include items used in the plant recipe--water, sunlight, and nutrients--but add other variables, as well.

- **Make a T-Chart:** In *Expeditions with Patrick McMillan: Sound, The Fullness of Nature*, Patrick described the sounds of several birds and frogs. He also explained how environmentalists use sound to evaluate the health of an environment. Make a T-chart comparing the sounds he described to the sounds you hear in your back yard or neighborhood. What is similar? What is different? Would you say that your environment sounds healthy like the places Patrick visited? Explain why.

- **Rewrite a Song**: In *Reconnecting Roots: National Parks Progress and Preservation*, we hear several songs that talk about preserving natural land structures. At the end of the show, the performers sang a song where they had rewritten some of the words of Woody Guthrie's folk song, "This Land is Your Land." Take a song that you know very well and rewrite the lyrics to explain the importance of preserving nature.

- **Interview a Family Member or Friend**: In *Watching our Water: The Challenge to Keep it Clean*, we learn about the challenges that farmers have with finding ways to fertilize their crops without the nitrogen getting into the drinking water. One of the farmers says, "If you can make me better at what I'm doing, I'm in." That means that he is willing to listen and learn from someone if it will help him be better at his job. Think about a skill you would like to learn or improve on. Interview someone who knows how to do that skill very well. Ask them how you can improve.

- **Write a story**: In *Earth Focus: Adaptation to Global Water Shortages*, we see several examples of people who come together to solve a problem and make life better for communities. Write a story about a group of people who have to find a solution to a problem in their neighborhood. Remember to include all of the story elements. Where is the setting? Who are the characters? What is the problem they must solve? How do they solve the problem? What happens in the end?

- **Read an Article**: Read the article, "Importance of Fresh Water" and answer the questions.

- **Journal Writing**: Begin keeping a daily journal or diary on the current pandemic.

- **Create a Storyboard**: In *The Favored Strawberry*, we explore the various ways that people grow strawberries around the country. Pick the location and method that you find most interesting and create a storyboard, or comic strip, to explain the process from planting to picking.

- **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.

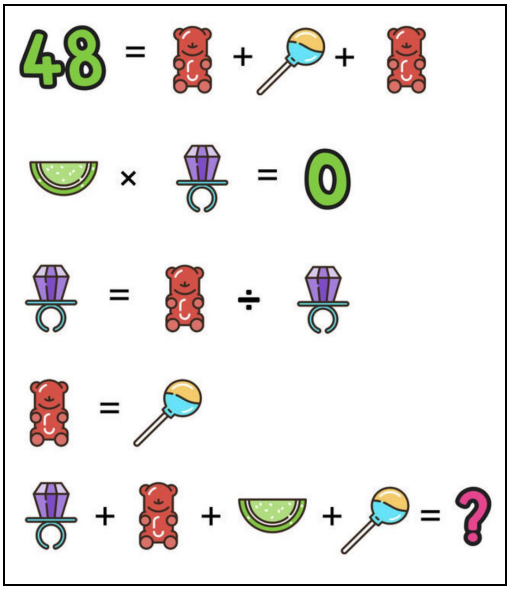
- **Khan Academy:** If you have internet access, it is recommended that your child utilize the Khan Academy modules with built-in instruction to support math learning at least 3 days a week. Select your grade level or type in the web address and select the GET STARTED button. (Counts as one each day) If needed students may select a different grade, regardless of age.

  5th grade math https://www.khanacademy.org/math/cc-fifth-grade-math
  6th grade math https://www.khanacademy.org/math/cc-sixth-grade-math
  7th grade math https://www.khanacademy.org/math/cc-seventh-grade-math
  8th grade math https://www.khanacademy.org/math/cc-eighth-grade-math
  Algebra I

- **A Cranberry Craving:** On Thanksgiving Thursday Carissa ate some cranberries. The next day she couldn't stop thinking about how good the cranberries were and ate seven more cranberries than she had eaten on Thursday. Each day after that she ate seven more cranberries than the day before. By the following Wednesday night she had eaten a total of 161 cranberries for the whole week. How many cranberries did Carissa eat on Thanksgiving Thursday?
  Carissa would probably get sick eating so many cranberries!. If she were to continue this pattern each day eating seven more cranberries than the day before, on which day would she eat 499 cranberries for her daily total?

- **Ice Cream Scoop**: In shops with lots of ice-cream flavors there are many different flavor combinations, even with only a 2-scoop cone. With 1 ice-cream flavor there is 1 kind of 2-scoop- ice cream, but with 2 flavors there are 3 possible combinations (vanilla/vanilla, chocolate/chocolate, and vanilla/chocolate).
  - How many kinds of 2-scoop cones are there with 10 flavors?
  - What about "n" flavors?
  - Create a drawing that represents your thinking.

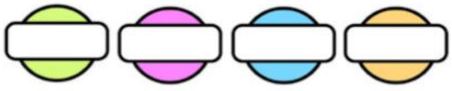
- **Puzzle Math:** Use your math skills to find the value of each symbol and the ? in the puzzles to the right.

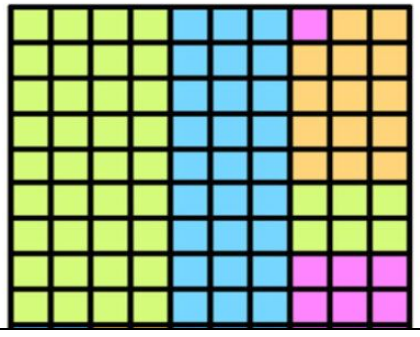


- **I Spy**: Take a walk and play "I SPY" using math symbols, 2-D geometric shapes (Ex: circle, triangle, rectangle), and 3-D geometric shapes (Ex: cube, cylinder, cone). Can you find items in the shape of math symbols or geometric figures? As you walk, record all the math symbols and geometric shapes you see.

- **A Jar of Pennies:** Start the activity by collecting a jar or a cup of pennies. Answer the following questions using your jar or cup of pennies that you collected:
  - How many pennies did you collect?
  - If you took two pennies out every day how many days would it take you to empty your jar?
  - What about one every two days?
  - What if you shared your pennies amongst yourself and three friends, how many pennies would each of you get?
  - If someone doubled your collection of pennies, how many pennies would you have?

- **Brain Teaser**: If the diagram to the right represents 250, find the value of each color.





- **Height and Shoe Size**: The bones of the feet can tell a lot about a person. What do feet reveal about a person's height? Forensic anthropologists team up with law enforcers to help solve crimes. Let's combine math with forensics to see how. Create a chart that lists name, height, and foot length.
    1. Have some adults remove their shoes and stand with their backs against a wall and the heels of their feet touching the base of the wall.
    2. Measure their height. Record on the chart.
    3. Measure the length of the adult's left foot from the wall to the tip of the big toe. Record on the chart.
    4. Examine the numbers. Do you see a pattern?
    5. Divide the length of each person's left foot by his/her height. Multiply the quotient (the answer to the division problem) by 100. What do you get? You may want to use a calculator for this activity.

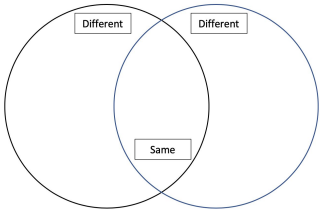
  The results of your calculations should be about 15, illustrating that the length of a person's foot is approximately 15 percent of his or her height.
  Find out the approximate height of some of your friends by measuring their foot and charting it on a spreadsheet. Use this proportion for your calculations: 15/100 = Length of Foot/x (person's height).

THINK like a Scientist!

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

- **Common Sense:** In the video, *Untamed: Bears,* Mr. Ed Clark from the Wildlife Center of Virginia states that common sense works well outdoors if more people would use it. Bears and people are living closer together than ever before, which causes problems. Please **identify** and **describe** two to three common sense actions mentioned in the video that humans can take to reduce human/bear interactions.

- **Seaside Camping:** After viewing *Understanding the Tide*, you and your family are planning to go camping on an ocean beach for a week. **List** some factors you must consider before setting up your tent site? Hint: You do not want to go to sleep and end up in the ocean. If possible, **draw** a model of the beach and where you would set up camp. **Explain** why you chose that location.



- **Frogs vs. Toads:** After viewing, *Sound: The Fullness of Nature Part 1*, **use** a graphic organizer to compare and contrast frogs and toads.

- **Sound Exploration:** After viewing the video, *Sound: The Fullness of Nature,* **use** your sense of hearing to **explore** nature. Find a quiet spot outside. Sit, close your eyes and listen to the birds for about five minutes. **Record** your observations in your science notebook. (*How many different birds can you hear and see? Did you notice any* patterns *on the birds? Were there any stripes or spots on the head or wings?*) **Sketch** any patterns you observed. Can you **identify** different bird species by their songs?

- **Water Challenge:** After viewing, *Watching our Water: The Challenge to Keep it Clean*, explain some solutions farmers tried to ensure fertilizers and pesticides do not affect the potable water for their community. Which solution do you think worked the best and why?

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.

Mindo Cloud Forest

Importance of Fresh Water

(From ReadWorks.org)

In the Americas, Asia, and Africa, there's a special kind of forest. It's rare, beautiful, and incredibly important to the animals and plants living there, and the humans who live nearby.

It's called the cloud forest. Cloud forests, like the name implies, can be found in the clouds on the slopes of mountains. Because they are often shrouded in warm mist, cloud forests are very humid and wet places. But that's what makes these forests so valuable.

Like rainforests, cloud forests experience rainfall, but they also capture water straight from the air. Water condenses on the leaves of the plants (sort of like dew on the grass in the morning) and drips through the canopy to the floor. If you stand in a cloud forest, you'll hear the constant drip of water, even if it's not raining. The water captured is pure and unpolluted, and flows through the ground into streams and then rivers.

Some people call cloud forests "water towers," because they are so important for providing water to nearby villages and cities. In the capital of Honduras, Tegucigalpa, four out of 10 people get their water from La Tigre National Park. That's about 340,000 people drinking cloud forest water! And there are a lot of other big cities that get some of their water from cloud forests, like Quito, Ecuador; Mexico City, Mexico; and Dar es Salaam, Tanzania.

In Guatemala, most of the water comes from the Sierra de las Minas Biosphere Reserve. More than 60 permanent streams flow from the reserve downhill to settlements, villages, and cities. People drink the water, use it for cooking, and irrigate their farm fields with it. In Kenya, people rely on the water from cloud forests to provide electricity by harnessing the energy of rivers that flow from Mount Kenya.

But it's not just humans who rely on cloud forests. While they only make up 2.5 percent of the world's forests, they are home to a stunning array of animals and plants. There are more species of hummingbirds in cloud forests than anywhere else in the world. Colorful birds, lizards, moss, and ferns live here; plus plants that grow on trees, called bromeliads. There's even a bear called the spectacled bear, named for the markings on its face. It's the only bear that lives in South America, and there are only a few thousand remaining because of habitat destruction and hunting.

We don't even know all of the plants, animals, and insects that live in cloud forests, yet we keep discovering new ones. In the 1990s, scientists discovered two bird species that only live in cloud forests. One is the Jocotoco Antpitta, or Grallaria ridgelyi, which lives in Ecuador in a small patch of cloud forest. Another is the Scarlet-banded Barbet, or Capito wallacei, which was discovered in Peru living on just one mountain. Scientists also discovered a new type of cow and barking deer in the cloud forests of Laos and Vietnam.

As you can see, cloud forests are extremely special places. But they are also very fragile and face a wide array of threats. Local poor people clear the forest so that they can grow subsistence crops. They also hunt endangered and threatened animals for meat, and cut down trees to heat their homes and cook. Commercial farmers convert the land so that they can grow fruits, vegetables, and coffee beans. Cloud forests are cleared and turned into pasture for cattle. Building roads and gem mines also severely damages the cloud forests.

Once cloud forests are cleared, the damage can be irreversible. The cloud cover, which is so essential to the growth of these forests, disperses. The soil degrades and erodes, washing down the mountain slopes. Many species vital to the ecosystem die off. What is left behind is a barren, dusty slope unsuitable for farming and unable to support animals, plants, or even people.

You can think of cloud forests sort of like little habitat islands, bounded by other types of forests and habitats on all sides. Many species are unable to leave one patch to travel to another. Once one patch is completely cleared, many species of plants and animals can go extinct, without ever being seen or studied by people like us. Some of the plant species lost could have been a new medicine or edible crop.

Scientists estimate that each year, 1.1 percent of the world's total cloud forest land is cleared for logging and timber falling. But even more worrying is the threat of climate change. Cloud forests form at very specific altitudes and rely on certain temperatures to thrive. If world temperatures rise, cloud forests would have to move up to a higher altitude where the temperatures are cooler in order to adjust. Some cloud forests are on mountain peaks with nowhere to climb and would die out. Climate change could also lessen cloud cover, which cloud forests rely on to grow. Because of this, the rate of loss could double.

As you can see, cloud forests are essential, providing water, food, and medicine to the people living in, around, and near them. So why would local people destroy them? To understand why, you have to put yourself in the shoes of a poor local farmer.

Imagine that you have no electricity or gas to heat your home or cook your meals. You do not have an oven or stove, so you get wood from the forest to build a fire. You also need food, and you cannot find a job that pays enough to buy any. There might not be a grocery store anywhere nearby, either. Therefore, you clear some forest next to your home so that you can plant fruits, vegetables, and grains. You also hunt local animals to eat. You would probably be excited to have a road built through the forest to your village, so you can easily go to a nearby city, or reach a hospital if you or someone in your family has an emergency.

If only a few people did these things, it might not be a problem. But the population is growing fast, and when thousands of people clear the forest and hunt animals, it becomes a crisis. Scientists fear we might lose cloud forests altogether, along with the water and other services they provide.

To combat the problem, some governments have designated certain stretches of cloud forest as protected, and it's illegal to clear or log them. This can help preserve cloud forests against mining companies and large commercial farmers. But it can be hard to enforce these rules against local populations. To work with local populations of people is more effective, providing them with other ways to get food and energy so that they can leave the cloud forests intact.

It is also effective to educate the local population on how cloud forests provide fresh water and what happens when they are cleared. For example, in the indigenous community of Loma Alta in Ecuador, once the people understood that the cloud forest is necessary to provide water for farms at lower altitudes, they worked together successfully to protect it.

Cloud forests are too valuable of a natural resource to lose. With laws to protect them, education, and economic support for local people, we might be able to save them—plus the animals and plants they support—before it's too late.

© 2013 ReadWorks®, Inc. All rights reserved.

Comprehension Questions

1. The loss of cloud forests is harmful to the surrounding ecosystem.
What evidence from the passage supports this statement?

A. When cloud forests are cleared away, the soil degrades and erodes. What is left behind is a dusty slope that is unable to support animals, plants, and people.
B. Cloud forests live among the clouds on the slopes of mountains. They are often surrounded by warm mist, which makes them very humid and wet places.
C. The Jocotoco Antpitta, or Grallaria ridgelyi, lives in Ecuador. The Scarlet-banded Barbet, or Capito wallacei, lives in Peru. Barking deer live in Laos and Vietnam.
D. Commercial farmers sometimes clear cloud forests so that the land can be used as pasture for cattle. Other times, cloud forests are cleared to build roads

2. Why might providing economic support to people living near cloud forests help save the forests?

A. People living near cloud forests would be less likely to care about protecting animals like the Jocotoco Antpitta and the Scarlet-banded Barbet.
B. People living near cloud forests would be less likely to clear away parts of the forest to try to support themselves.
C. People living near cloud forests would be more likely to buy cars and build roads through the forest to drive on.
D. People living near cloud forests would be more likely to buy gems dug from the ground by mining companies.

3. What is this passage mainly about?

A. how people in Tegucigalpa, Quito, Mexico City, and Dar es Salaam get their water
B. the history of the Sierra de las Minas Biosphere Reserve in Guatemala
C. the mining companies and commercial farms that threaten cloud forests around the world
D. cloud forests, the threats they face, and what can be done to save them

4. Choose the answer that best completes the sentence below.
Cloud forests are home to unusual animals, _____ spectacled bears and barking deer.

A. previously
B. such as
C. as a result
D. third

5. Name an animal that is found only in cloud forests.

6. How are cloud forests valuable to human beings? Support your answer with evidence from the passage.

7. Are cloud forests too valuable of a natural resource to lose, as the author claims? Explain why or why not, using evidence from the passage.