

PBS Arkansas Shows

SciGirls	SciGirls showcases bright, curious, real tween girls putting science, technology, engineering and math (STEM) to work in their everyday lives.
Arthur	Arthur's goals are to help foster an interest in reading and writing, to encourage positive social skills, and to model age-appropriate problem-solving strategies.
Odd Squad	The show focuses on two young agents, Olive and Otto, who are part of the Odd Squad, an agency whose mission is to save the day whenever something unusual happens in their town.
Kid Stew	The purpose of the show is to inspire and enlighten kids of all ages to learn more about books, music, the arts, and science.
Cyberchase	Cyberchase is an ongoing action-adventure children's television series focused on teaching basic STEM concepts.
Apple Seeds	Garden-based learning reaches into a deep part of all of us. When young students plant a seed, watch it grow, harvest a vegetable and taste something that they had a hand in growing, they remember that experience.

Literacy Corner

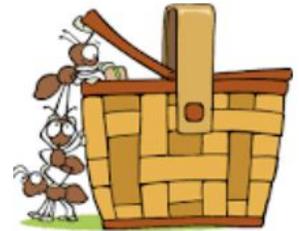
Choose at least 4-6 literacy learning opportunities to practice your reading, writing and communication skills.
Don't forget to grab a good book and **read daily.**



- **Read an Article:** Read "Gecko Feet & Space Robots" and answer the comprehension questions.
- **Robot Interaction Script:** In *SciGirls: Robots to the Rescue*, the girl scientists wrote a script for the robot to play tic-tac-toe. Think about a simple task that a robot could complete with a person. Write a script for the robot to interact with the person and complete the task. Be sure to include a greeting, clear directions, and a friendly goodbye in your script for the robot.
- **Words With Multiple Meanings:** In *SciGirls: Robots to the Rescue*, the scientists had some "bugs" to work out with their robot. The word "bugs" has multiple meanings. Write down as many meanings as you can, then write at least 3 sentences that highlight the different meanings of the word "bug." Use the word in as many different ways as you can when talking with others.
- **Describe a Tree:** In *SciGirls: Terrific Trees*, young scientists learn to record information about two trees that live in their area. Take time to examine a tree near you: describe the soil, estimate the size of the tree, provide details on the surroundings and observe animals in the canopy and on the trunk or the ground. Use this information to write a scientific description of the tree in its surroundings or use this information to write a poem about the tree.
- **Book Character Costume:** In *Kid Stew 104*, Sierra Decoratova participates in a cosplay contest. Each costume is made from recycled materials and pays tribute to a book character. Sketch your design for a costume that

represents your favorite book. Write a brief description of your design, including the book title, your inspiration for the design, and the materials used.

- **Make a Memory Game:** In *Odd Squad: Night Shift*, the boss is playing a game of Concentration with pictures. Use 20 index cards or scraps of paper to write matching sets of questions and answers. These can be vocabulary words and definitions, questions and answers about one of the shows you watched, etc. To play the game, take turns flipping over two cards and see if they match. If they match, keep the matching cards. If they do not match, turn the cards back over and remember what you just saw to make a match the next time.
- **Create a Recipe:** In *Appleseeds*, Ellen shares a recipe for her Super Green Mango Smoothie. She also requests great recipes from kids like you. Create a simple recipe and test it out. If it's yummy and nutritious, send it to Appleseeds, 1850 E Township St, Fayetteville, AR 72703 or ask an adult to share your recipe with Appleseeds, Inc. on Facebook.
- **Animal Sightings:** In *Cyberchase: The Migration Situation*, they gather data about "trillers" to understand why their migration was interrupted. With adult permission, spend fifteen minutes outside and record each animal you see: describe the animal, what is it eating, the location, and whether it is alone or with others.
- **If I Were the Size of an Ant:** In *Arthur: Happy Anniversary*, Arthur shrinks to the size of an ant. Pretend you are shrunk to the size of an ant and write a short story from that perspective.
- **FREE Choice-** Ask your child about his or her interests? Let them choose something to read, write or learn more about today.



Math Mania:

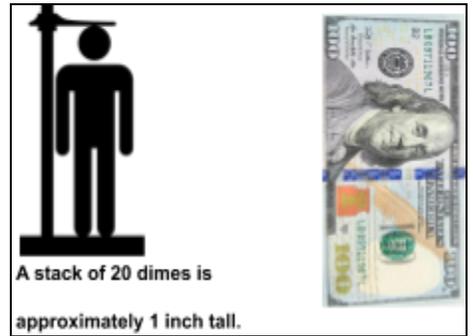
Choose 3 to 4 math learning opportunities to build and reinforce your math skills.

- **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.
 - [2nd grade math](https://www.khanacademy.org/math/cc-2nd-grade-math) <https://www.khanacademy.org/math/cc-2nd-grade-math>
 - [3rd grade math](https://www.khanacademy.org/math/cc-third-grade-math) <https://www.khanacademy.org/math/cc-third-grade-math>
 - [4th grade math](https://www.khanacademy.org/math/cc-fourth-grade-math) <https://www.khanacademy.org/math/cc-fourth-grade-math>
 - [5th grade math](https://www.khanacademy.org/math/cc-fifth-grade-math) <https://www.khanacademy.org/math/cc-fifth-grade-math>
 - [6th grade math](https://www.khanacademy.org/math/cc-sixth-grade-math) <https://www.khanacademy.org/math/cc-sixth-grade-math>
- **Give Me:** Let's play a number sense game. For this game, you need two players. Player 1 gives the answer and player 2 comes up with a problem to fit the answer.
 - Round 1, player 1 says, "The answer is 20 - give me two numbers." Player 2 then comes up with the problem that has an answer of 20.
 - Round 2, player 1 says, "The answer is 68 - give me three numbers." Player 2 comes up with an addition problem that has an answer of 68.
 - Round 3, player 1 says, "The answer is 101 - give me three numbers and two operations." Player 2 comes up with a problem that has an answer of 101 and uses two operations.
 - Keep playing until you have been through all 3 rounds, then switch roles and play again using different numbers.
- **Math Scavenger Hunt:** In *Odd Squad: Put Me In, Coach*, the agents are asked to go and look for certain items. Let's go on a math scavenger hunt around the house! After you find an item that fits the description, write it down or take a picture. Here are the clues for each item to find: a circle, something square, something that comes in pairs, something that has symmetry, parallel lines, something that



tells time, a pattern, something that is twice as long as your foot, the number 5, and an even number. Go on the scavenger hunt again and see if you can find different items using the same clues.

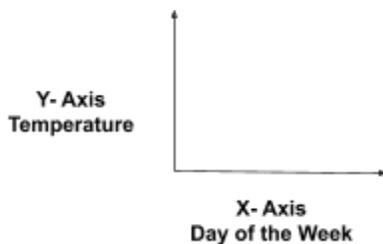
- **Which Would You Choose?** Would you choose a stack of dimes as tall as you OR a \$100 bill? Make your choice. Then calculate your height and how much money your stack of dimes would be to see if you made the right choice.



- **Problem Solving:** After a hard day of solving clues, the Odd Squad needed a water break. Olive’s water bottle had 24 ounces in it. After she drank “x” ounces of water, there were 10 ounces left. Select **all** of the equations that can be used to solve this problem.

- $24 \div 10 = x$
- $24 + 10 = x$
- $24 - 10 = x$
- $x + 10 = 24$
- $10x = 24 - 10$

- **Growing our Graphing Skills:** In *Cyberchase: The Migration Situation*, Digit and the CyberSquad were collecting data to find the missing birds. Let’s collect our own data and practice our graphing skills. Keep a journal and track the temperatures for the week. Each day, record the low temperature and the high temperature (Use a weather app, weather site, weather segment on the local news, etc.). At the end of the week, create a bar graph to represent your findings. The Y-Axis (vertical) of the graph can represent the temperatures and the X- Axis (horizontal) can represent the different days of the week. To make the high temperature look different from the low temperature each day, shade one bar a color and leave the other blank. Study your data and share your findings with someone.



- **What Do I See?: Multiplication**

Card Values:

Aces- 1 or 11

Face Cards- 10

1-10 Cards- Face Value

Shuffle and layout out all 52 cards face up in a 13 cards x 4 cards array. (No jokers) One player says I “see” two cards with a product of a number. The cards

have to be side by side either vertically or horizontally. Example, I see two cards with a product of 18. Then player two has to find the cards and remove them. Then the players switch roles. As the array gets smaller, cards will need to move closer together. The player with the most cards at the end wins the game. **Extension:** Give the face cards higher values (Ex: Aces - 25; Kings - 20; Queens - 15; Jacks - 12)

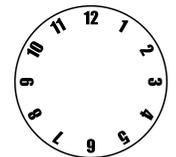
3	K	Q
A	2	6
3	9	

Vertical

3	K	Q
A	4	6
3	6	

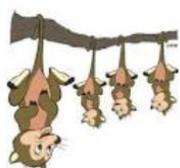
Horizontal

- **Clock Diary:** Let’s create a clock diary page to capture a memorable moment from our week. Grab a piece of paper and draw a clock face at the top of the paper. Choose a memorable time of the day and mark the time on the clock face you drew. Below the clock, write a brief description about the moment and then draw a picture to go with it.



THINK like a Scientist!

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



- **Use Your Senses:** Put your senses to use outside. Go outside and try to observe as many living things as you can for fifteen minutes. Look, listen, and smell. Record your observations in a table based on what sense you used to observe each animal.

- **Creature Power:** Animals have some amazing traits. Opossums have pouches to hold their babies, long tails to grab and hold onto things, and they’re not affected by snake poison! Be an animal

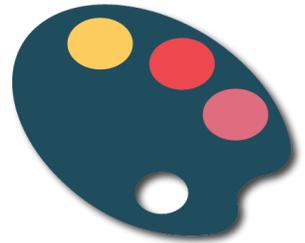
inventor by designing a new animal that has special traits that would allow it to live in trees. Make a sketch of your animal and write a short story about how its special traits help it to survive.

- **Dig-Dug:** Soil is important for all life on Earth. Plants grow in soil and they provide us with food for eating and materials for building our houses. So, what's in soil? Go outside and make observations of the soil around where you live. If you have a garden, check out the soil there. Compare soil from two different places—like under a tree or in the open. Observe the color and texture of the soil and how moist the soil is. Make a table and record your measurements.
- **Representing Plants:** Spring is an amazing time to watch plants grow. Many plants have flowers this time of year, and that invites all kinds of insects to hang out with them. Go outside and observe a plant closely. What do you see on the plant? What do you notice about the plant? Draw a simple outline of a plant and add symbols to the plant that represent the things you see.
- **All Grown Up:** The monarch butterfly larva has 5 instar stages. Between every instar stage the larva sheds its skin. This event is called molting. Like a larva, you have grown since you were born, but you don't have to molt on your birthday to keep growing—whew! Create a display of your instar stages thus far, starting with Instar Stage 1, when you were a baby. What are the notable moments in your life that might be considered stages? How many "stages" have you gone through so far? Be creative with your display: use color and add drawings with labels. Most of all, have fun!



FUN ZONE

- ★ **Get active-** dance, do exercises, create an obstacle course
- ★ **Perform-** Dress up and perform. Act out your favorite story or one you wrote this week
- ★ **Play** a family game (Uno, Heads Up, Battleship, Guess Who, etc...)
- ★ **Make a masterpiece** - use art chalk, paint, crayons, etc.
- ★ Check out the PBS kids for specific games and additional learning opportunities for each show. <https://pbskids.org>





Photograph of a gecko clinging to glass

Gecko Feet & Space Robots

(From ReadWorks.org)

Have you ever seen a gecko climb up a wall? If so, you would know that this little creature has the impressive ability to scuttle across ceilings. It is almost as if the gecko can defy gravity! But, of course, gravity affects geckoes. Their bodies have simply adapted. To avoid falling to the ground, the geckoes have sticky feet. Their feet are covered with millions of microscopic hairs that grip surfaces. When weight is applied to the hairs, they stick to the surface.



Photo Credit: Matt Reinbold, CC BY-

Photograph of gecko feet

Gecko feet have inspired the invention of a new NASA robot. The International Space Station, a large satellite that houses a research lab, needs to be checked and maintained. Since it is located in space, it is difficult for astronauts to check the outside of the satellite on a regular basis. The new NASA robot was invented to address this problem. Scientists created robots that have "gecko grippers." These grippers basically allow the robots to stick to the outside of the station as they repair it.



Douglasy, CC BY-SA 3.0

Photograph of a sticky robot

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Comprehension Questions

1. What do geckos have on their feet?

- A. millions of microscopic feathers that grip surfaces
- B. millions of microscopic scales that grip surfaces
- C. millions of microscopic hairs that grip surfaces
- D. millions of microscopic wings that grip surfaces

2. What does the text describe?

- A. how geckos' feet have evolved over time
- B. how NASA built "gecko grippers"
- C. different ways scientists are inspired by nature
- D. gecko feet and the NASA robot they inspired

3. Nature can help us come up with new ideas for inventions.

What information from the text best supports this statement?

- A. The International Space Station, a large satellite that houses a research lab, needs to be checked and maintained.
- B. Gecko feet are covered with millions of microscopic hairs that grip surfaces.
- C. It is difficult for astronauts to check the outside of the International Space Station on a regular basis.
- D. NASA invented a new robot based on the way gecko feet help geckos stick to Surfaces.

4. The "gecko grippers" of the new NASA robot are similar to what part of a gecko's body?

- A. the gecko's feet
- B. the gecko's head
- C. the gecko's back
- D. the gecko's tail

5. What is the main idea of this text?

- A. It is difficult for astronauts to check the outside of the International Space Station on a regular basis.
- B. A new NASA robot was inspired by the feet of geckos which allow the animals to grip surfaces.
- C. Geckos can climb up walls and scuttle across ceilings thanks to millions of microscopic hairs on their feet that grip surfaces.
- D. NASA invented a new robot that sticks to the outside of the International Space Station as they repair it.

