

ARKANSAS AMI LEARNING GUIDE

Supporting Continuous Learning in Arkansas

3-6 AMI/PBS
April 27-May 1
Days 25-29

PBS Arkansas Shows and Times

SciGirls	SciGirls showcases bright, curious, real tween girls putting science, technology, engineering and math (STEM) to work in their everyday lives.
Cyberchase	Cyberchase is an ongoing action-adventure children's television series focused on teaching basic STEM concepts.
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.
Xavier Riddle and the Secret Museum	Xavier Riddle with his sister, Yadina Riddle, and their friend, Brad, go to the Secret Museum to time travel to the past, to observe, interact, and learn from historical heroes.

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**.

- **Write a Summary** of your favorite show this week. Remember to include the main idea and supporting details. Be sure to add a picture.
- **Make an Animal Poster:** In *Arthur: Double Dare*, Arthur and Buster were afraid they were going to be digested by a giant clam. Research and make a list of other types of oceanic animals. Choose one and make a poster of the animal and place important facts about it on the poster.
- **Write a Story:** Imagine that you can be someone else for a day. It can be someone you know or a celebrity. Write about your pretend day.
- **Create a Headline** after watching and taking notes from *SciGirls*. Write or tell someone about the things you learned in the video.
- **Riddle Writing:** After watching *Arthur: The Big Riddle*, work with your family to come up with some riddles that you could use to have a Riddle Quest of your own. Have fun playing!



- **Brainstorm and Write:** In the episode, *Arthur: The Longest Eleven Minutes*, the internet did not work. Brainstorm and make a list of some activities you could do that doesn't require the internet. Try some of them and write about your favorite one.

- **Communicate:** Think about a friend you haven't seen in a long time. Write a letter, send an email or text, or facetime/call them. Explain what you miss about not being with them. What did you enjoy doing with them? What do you look forward to doing when you are together again?



- **Read Paired Text:** Read the paired text and answer the questions.
- **Create a Comic Strip:** After watching *Xavier Riddle and the Secret Museum*, create a comic strip about information that you learned about the Wright Brothers or the Bronte Sisters.
- **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>

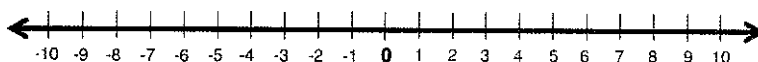
3rd grade math <https://www.khanacademy.org/math/cc-third-grade-math>

4th grade math <https://www.khanacademy.org/math/cc-fourth-grade-math>

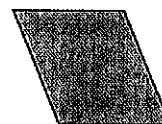
5th grade math <https://www.khanacademy.org/math/cc-fifth-grade-math>

6th grade math <https://www.khanacademy.org/math/cc-sixth-grade-math>

- **Number Line:** In *Cyberchase: Less Than Zero*, the Leaders of Cyberspace gathered to discuss Hacker's increasing influence. Hacker's crew hid the leaders and the CyberSquad turned the building into a giant ruler to keep track of the floors. They discover something interesting about their number line. Use the number line to solve the problems. What number do you land on (positive or negative)? Talk to a family member about your own number line discoveries.
 - Starting at zero, go up 4, down 3, up 5, and down 2.
 - Starting at zero, go up 8, down 5, down 1, up 5, and down 3.
 - Starting at zero, go up 2, up 6, up 1, down 10, and down 2.
 - As a challenge, build your own number line and problems. Ask a family member to solve them.



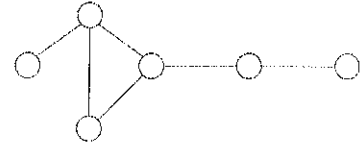
- **Temperature Change:** Record the temperature twice a day for one week. Build a number line to represent your values and talk to a family member about what you notice and what you wonder about the temperature.
- **Skeptic/Convincer:** In *Cyberchase*, Digit needs to be convinced zero is a number. Ask a family member to play and take turns being a skeptic or a convincer. Remember, skeptics require reasons and justifications that make sense. When you are a convincer, your job is to give a skeptic those reasons and justifications. Decide if each of the statements is always, sometimes, or never true. Convince the skeptic. If it is sometimes true, draw and describe a figure for which the statement is true and another figure for which the statement is not true.
 - A rhombus is a square
 - A triangle is a parallelogram
 - A square is a parallelogram
 - A square is a rhombus
 - A parallelogram is a rectangle
 - A trapezoid is a quadrilateral



- **Writing Equations:** In *Cyberchase: The Wedding Scammer*, the CyberSquad must think their way through an intricate series of puzzles to free the REAL long-lost daughter of a powerful king. What numbers can you make

with 1, 2, 3, and 4? Using the operations of addition, subtraction, and multiplication, we can make different numbers. For example, we can write 13 as $13 = (3 \times 4) + 1$. Make up your own equations with these four numbers.

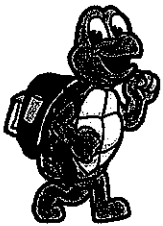
- **Fraction Challenge:** In *Cyberchase: Shari Spotter and the Cosmic Crumpets*, the CyberSquad learn how to represent fractions in multiple ways. (ex: $1 + \frac{1}{3} = \frac{4}{3}$ OR $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{4}{3}$) Find multiple recipes around your home or on the internet. Half and double the recipe and rewrite the fractions. Use drawings or representations to justify your reasonings. **Challenge:** Try taking $\frac{1}{4}$ of the recipe. Talk to a family member about your drawings or representations. Remember to justify your reasonings.
- **Problem Solving:** Use the diagram to the right and clues to help you place each friend's name in a circle and solve the puzzle. Alan has 3 friends, Barney, Charlie, and Daniel. Barney and Ed are both friends with Charlie. Ed is Frank's only friend.
- **Flashcard Design:** You want to make a set of flashcards. Each card is three inches by six inches. You only have two pieces of construction paper that is twelve inches by eighteen inches. You do not want to have any construction paper left. How many flash cards can you cut from the two pieces of construction paper? Justify your mathematical thinking to a family member. **Challenge:** Design your flash cards with geometric figures from around your house (cylinder, cone, rectangle, circle, etc).



THINK like a Scientist!

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

- **Racing Experiment:** To experience drag, just run 10 yards fast. Then run the same 10 yards again, except this time carrying an open umbrella. Predict what you think will happen. Then, collect some data. What happens when you run slow? What happens when you run faster? What happens when you run as fast as you can? Draw and label what you think happened. The pull you feel against your speed is drag.
- **Pinwheel Design:** Using paper, cardboard, aluminum foil, leaves, tape, glue, pencils, straws, sticks, etc. to create a pinwheel spinner or a spiral wind spinner that turns in the wind. Draw a picture of your creation. Did your first design work? Why or why not? Now, revise it. Can you make it better? What changes did you make? What evidence do you have that the second one was better? Draw a picture of your second design and explain how it was better than the first one.
 - **Digging up the Past:** An archaeologist is a person who studies human life in the past by uncovering and analyzing artifacts. What is the benefit of knowing about how humans lived in the past? What skills would an archaeologist need to have? Why is it important to have museums to display the artifacts that are discovered? Would you want to be an archaeologist? Why or why not?
 - **Turtle Design:** Arkansas has snapping turtles, box turtles, mud turtles, and softshell turtles. Draw and label an example of what you think each type of turtle would look like. What characteristics would each have and why? Ex. what do you think the beak of a snapping turtle would look like? Why?
- **Trash to Treasure:** How much trash does your family produce in a week? Data Collection: For 7 days, weigh each bag of trash. Can you brainstorm ways to reduce that weight? Can you recycle items at your house to create a new and useful item? Can you find new uses for items you may throw away regularly? Ex. plastic shopping bags, milk jugs, newspaper, soda cans, old food (banana peels/apple cores), etc. Draw and label your creation.



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...)

Archaeological Discoveries

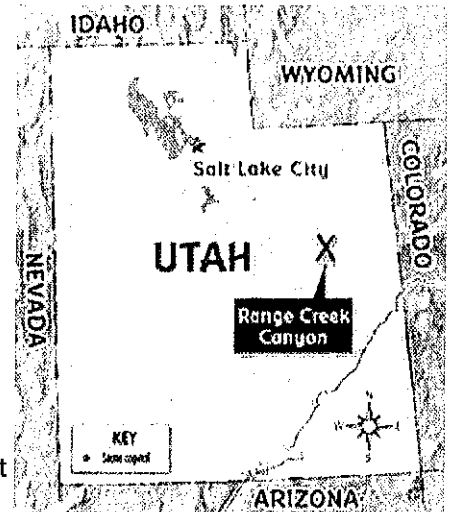
PAIRED TEXT

A Well-Kept Secret

In the 1940s, a young cowboy named Waldo Wilcox stumbled upon an ancient treasure in a remote area in Utah called Range Creek Canyon. He found an elegant woven basket of grass and willow in an old stone-walled house. When he looked around some more, the young cowpoke couldn't believe his eyes. Pottery, weapons, and other ancient houses dotted the area.

"I thought, this stuff has got to be protected," he told *The Washington Post*. Wilcox was afraid that if word got out about his discovery, tourists, collectors, and vandals would ravage the site, as they had done other ancient sites of the Southwest.

So Wilcox protected the 4,200-acre area the best way he knew how: He didn't tell a soul. He even bought the land in 1951 to raise cattle. He and his family went to great lengths to keep the secret. They even built gates to keep people out.



Leigh Haeger

When Wilcox decided to sell his land, he wanted to make sure that whoever bought the property would preserve the site. To do that, he sold the ranch to a local preservation group. The group then transferred the land to the state of Utah. Scientists came to know that the site was littered with historic relics. Once Wilcox's secret was out of the bag, they began visiting the remote canyon. Scientists hoped to unravel the mysteries of an ancient Native American culture that had roamed Utah thousands of years ago. Those Native Americans were called the Fremont people.

Meet the Fremont

The Fremont were hunter-gatherers and farmers who inhabited the high-desert Book Cliffs in present-day Utah from about A.D. 500 to 1300. In the canyon, the ruins of small villages are spread out along a 12-mile stretch of Range Creek, about two hours southeast of Salt Lake City. The Fremont people once lived in Range Creek Canyon.

"We've documented about 225 sites, and it's just scratching the surface," said Kevin Jones, a state of Utah archaeologist.

Almost all the sites include granaries, beehive-shaped storehouses for grain.

Some granaries are the size of cupboards. Others are several yards across. Many of the granaries are perfectly preserved. Some were still filled with grass seed and corn—just the way the Fremont had left them.



Ellen Sue Turner

Archaeologists also found granaries on cliff ledges. They suspect the Fremont put the granaries there to protect the food supply from rodents and raiders. Scientists say the granaries are evidence that the Fremont moved from place to place, leaving stashes of food at each stop.



Ellen Sue Turner

Arrowheads, pottery fragments, and other artifacts lie on the ground at other village sites. Most of the homes are intact too, although the roofs of the houses in which the Fremont people lived collapsed long ago. The dwellings were once "warm and snug in the winter and cool in the summer," Jones said.

Where Did They Go?

Scientists say the Fremont people disappeared about 800 years ago. No one knows exactly why. Jones guesses they might have starved to death or joined other tribes.

Archaeologists have been learning more about the Fremont by studying the ruins and artifacts at Range Creek Canyon. Scientists say if Waldo Wilcox had not kept his mouth shut all these years, the ruins would have been ransacked.

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Long Live the Vikings

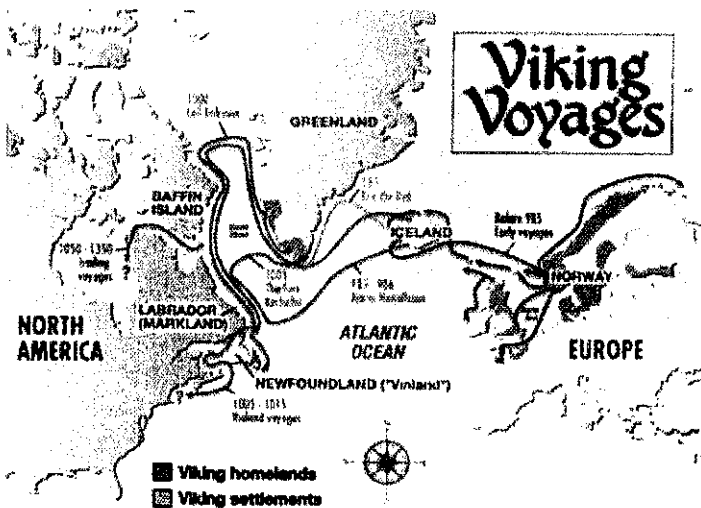
Peter Adams wasn't searching for anything in particular when his metal detector went off in a farmer's field in northwestern England. He knelt and began sifting through the dirt for a piece of scrap metal or perhaps a coin. Instead, Adams turned up two copper brooches that looked quite old. He reported his find to archaeologists. They determined that the brooches were more than 1,000 years old!

A few days before the soil was to be plowed under to grow potatoes, archaeologists returned to the field. They unearthed swords, spears, more jewelry, and other artifacts. What Adams had stumbled on was a rare Viking graveyard more than a thousand years old. It's no wonder he described it as "the find of a lifetime."

The Viking Age

Archaeologists determined the graveyard, near the village of Curnwhitton, included the graves of four men and two women. Researchers said it is one of the few Viking burial grounds ever found in Britain and helps explain more about the culture of the ancient people.

For more than three centuries, from about A.D. 800 to 1100, the Vikings lived in Scandinavia, a region of northern Europe that includes present-day Norway, Sweden, and Denmark. The Vikings were known for their seagoing adventures, which they made in long, narrow longships powered by wind and dozens of oarsmen.



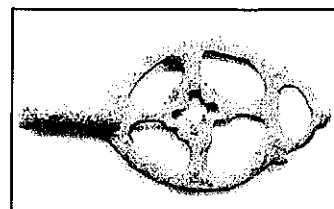
Leigh Haeger, Source: Smithsonian Institution

The Vikings were among the earliest explorers of North America. Historians believe that Leif Eriksson arrived on the northeastern coast of the continent, near what is now Newfoundland, almost 500 years before Christopher Columbus arrived in America.

Conquerors

In the Norse (Scandinavian) language, viking means "piracy." The Vikings were famous for their raids on other lands. Fleets of longships attacked coastal villages as far away as North Africa. The Vikings invaded and conquered England in 1013.

Archaeologists believe that the burial site discovered by Peter Adams was part of a Viking settlement. Items found at the site included weapons, spurs, a horse harness, a drinking horn, and a copper belt. Also found were a ring and a bracelet made of jet, a form of coal considered to be as valuable as gold.



DCMS/Portable Antiquities Scheme
Peter Adams found this Viking brooch.
women.

DCMS/Portable Antiquities Scheme
This copper key belonged to one of the Viking

Rachel Newman, of Oxford Archaeology North, said, "We knew the brooches found by Mr. Adams came from a burial of a Viking Age woman, which was exciting and of great importance in itself. But we did not expect to find five other graves complete with such a splendid array of artifacts."

Treasure Trove

There are other Viking burial sites in England. A large graveyard at Repton, which held 240 bodies, had been hastily dug on a battlefield, perhaps after a battle. At another site, in Derbyshire, the cremated remains of warriors were buried in pots.

The rich trove of artifacts at Cumwhitton suggests that Vikings were wealthy settlers rather than plunderers. Newman added, "We could not have expected more from the excavation of the site."

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Paired Text Questions

Use the article "A Well-Kept Secret" to answer questions 1 to 2.

1. What did Waldo Wilcox find in Range Creek Canyon?
2. Scientists found that the Fremont left behind granaries in the villages, as well as on some cliff ledges. What did scientists conclude about the Fremont's lifestyle based on the granaries?

Use the article "Long Live the Vikings" to answer questions 3 to 4.

3. What did Peter Adams and archaeologists find in a farmer's field in England?
4. What has led archaeologists to believe that Vikings were wealthy settlers, rather than plunderers?

Use the articles "Long Live the Vikings" and "A Well-Kept Secret" to answer question 5.

5. How can ancient sites help scientists today learn about ancient cultures? Use evidence from both texts to support your answer.

3-6 AMI/PBS

April 27-May 1

Days 25-29



Student Name: _____

Teacher's Name _____

Grade Level _____

AMI PROGRESS REPORT- Self Reporting - Week 5

PBS Programming:

We were able to watch:

- All 5 days of programs (Hour and ½ each day)
- 4 days
- 3 days
- 2 days
- 1 day
- Did not watch

Literacy Corner:

Mark the learning opportunities that your child completed:

- Write a Summary
- Make an Animal Poster
- Write a Story
- Create a Headline
- Riddle Writing
- Brainstorm and Write
- Communicate
- Read Paired Text
- Create a Comic Strip
- FREE Choice

Math Mania:

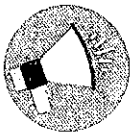
Mark the math learning opportunities your child completed:

- Khan Academy 3 times or more this week (30 min each)
- Number Line
- Temperature Change
- Skeptic/Convincer
- Writing Equations
- Fraction Challenge
- Problem Solving
- Flashcard Design

THINK like a Scientist!

Mark the science learning opportunities your child completed:

- Racing Experiment
- Pinwheel Design
- Digging up the Past
- Turtle Design
- Trash to Treasure



Upload, email, or turn in 2 pieces of your child's work from the week that shows their progress in completing the learning opportunities in literacy, math or science to