Power Packet 4
Fun learning activities for K-5th Grade!

RISE AND SHINE
SUMMER LEARNING

Arkansas PBS
Welcome, friends!
We’re glad you are joining us for our “Rise and Shine” learning adventure! We have a lot of fun learning planned and some great teachers leading us along the way. This Power Packet contains lots of different lessons and activities for you to choose from. You can also access more “Rise and Shine” fun on our website!
Visit myarkansaspbs.org/riseandshine for mini lessons with some of Arkansas’s best teachers, video field trips to interesting places all around our state, cool new songs and dance videos, and more!

**POWER PACKET GUIDE:**
- Kids in K-2nd Grade – Start on Page 3
- Parents & Caregivers of K-2nd Grade Kids – Start on Page 7
- Kids in 3rd-5th Grade – Start on Page 9
- Parents & Caregivers of 3rd – 5th Grade Kids – Start on Page 13
- “Helping All Learners” – Page 15 (myarpbs.org/helpinglearners)

¡Este paquete también está disponible en español!
myarkansaspbs.org/riseandshine/es
**Math Power Page (K-2)**

**Power Goal:** Examine (look closely) and collect data.

**Learning Choices:**

1. Look at the chart and key. Answer the questions below.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Tally of items in surroundings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>... are blue?</td>
<td>Example: ![Tally Marks]</td>
</tr>
<tr>
<td>... are red?</td>
<td>![Tally Marks]</td>
</tr>
<tr>
<td>... are green?</td>
<td>![Tally Marks]</td>
</tr>
<tr>
<td>... are square shaped?</td>
<td>![Tally Marks]</td>
</tr>
<tr>
<td>... have words on them?</td>
<td>![Tally Marks]</td>
</tr>
</tbody>
</table>

2. Look for items in your environment or surroundings that match the categories below. For each item you find, make a tally mark in the box to the right. (Example in the chart: Seven blue items were found.)

How many things can you find in your surroundings that ...?

**Answers:**

a. How many total miles did Laila, James, and Ben ride on the Arkansas River Trail? Write the number sentence, and then solve.

b. Ben decided to bike 5 more miles. Compare his new total to James' total on the chart. How many more miles did Ben ride than James?
1. On your own paper, create a drawing that shows the sky during the day and another drawing that shows the sky during the night. Be sure to label objects in the sky (Examples: the sun, the moon, stars, clouds, etc.).

2. With the help of an adult, and using your own materials, create a map of the stars that you can see at night. A constellation is a group of seeable stars that form a pattern or picture when seen from Earth. Make your own constellations based on the stars that you see. Here is a link to a star map and constellations that should be visible: bit.ly/36a6HAe

3. Label the picture below with “nighttime” and “daytime.” Then complete the chart with some tasks that you do during the day, during the night, and during both times.

<table>
<thead>
<tr>
<th>Daytime</th>
<th>Both</th>
<th>Nighttime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catch butterflies</td>
<td>Brush my teeth</td>
<td>Catch lightning bugs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Power Goal:** Identify and change sounds and syllables in words.

**Learning Choices:**

1. Play this game with an adult or friend. Use the following words: big, lap, grin, fridge, and rack. One at a time, have the other person tell you to change the beginning, middle, or ending sound. Make a new word based on what you are told to do.

2. A syllable is a part of a word that has one vowel sound. You can clap, snap, or stomp out the syllables in a word. Example: magnificent. Clap out the syllables as you say them: mag nif i cent. How many syllables do you hear? Did you say, “four?” Great job! See how that looks in the table below. Now, complete the table by breaking down the other words into syllables. Not all boxes will be filled. Some parts have been filled in for you.

<table>
<thead>
<tr>
<th>Word</th>
<th>1st syllable</th>
<th>2nd syllable</th>
<th>3rd syllable</th>
<th>4th syllable</th>
<th>How Many Syllables?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: magnificent</td>
<td>mag</td>
<td>nif</td>
<td>i</td>
<td>cent</td>
<td>4</td>
</tr>
<tr>
<td>adventure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>symbol</td>
<td>sym</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bridge</td>
<td>bridge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bicycle</td>
<td></td>
<td></td>
<td>cy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>walking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Arkansas</td>
<td></td>
<td></td>
<td>sas</td>
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<tr>
<td>rider</td>
<td></td>
<td></td>
<td>der</td>
<td></td>
<td></td>
</tr>
<tr>
<td>generator</td>
<td></td>
<td></td>
<td></td>
<td>a</td>
<td>4</td>
</tr>
</tbody>
</table>

Answers: 1. Possible answers may include wig; lip; chin; bridge; 2. Ad-ven-ture = 3; Sym-bol = 2; Bridge = 1; Bi-cy-cle = 3; Walk-ing = 2; Ar-kan-sas = 3; Ri-der = 2; Gen-er-ator = 4.
**Social Studies Power Page (K-2)**

**Power Goal:** Learn and describe different places in Arkansas.

**Learning Choices:**

1. **All About Arkansas:** Look at the pictures that show landmarks in different locations around Arkansas. Match each picture with the description of the landmark. Use the compass with help for directions.

   - **A.** This eastern region is known as the Delta. Farming crops is a big industry here.
   - **B.** Blanchard Springs Caverns is a cave system known for its stalagmites, stalactites, and other rock formations.
   - **C.** Many people enjoy hiking in Central Arkansas at Pinnacle Mountain.
   - **D.** In the northern part of the state, you will find the Buffalo River State Park.
   - **E.** This southwest landmark, Crater of Diamonds State Park, is known for its natural resource of diamonds.

2. **Plum Island Explorer:** In this online game, journey around the island to learn about landforms and water bodies. The game requires you to identify and record specific observations of these features. [myarpbs.org/plumsisland]

**Answers:** 1. B; 2. D; 3. C; 4. A; 5. E
Parent/Caregiver Plan

Math (K-2)

**Power Goal:** Examine (look closely) and collect data.

**Shine and Share:** Talk to the child about how it is sometimes easier to understand data when it is shown visually in a chart or graph. Point out the types of data that often shows up in graphs (temperature, survey results, population trends, etc.). You could even find a chart or graph and discuss that example.

**Learning Choices:**

1. Have the child pick out things they know based on the info in the chart such as how far Ben rode. Make sure that they understand the key and how to read the chart. Then ask the questions: “Who rode the least?” “Who rode the most?”
2. As the child completes the chart on the Power Page, they are going to look around their environment or surroundings and find items to tally. If the child is not familiar with tally marks, explain that you make four tallies or lines, then on the fifth you cross the mark diagonally over the previous four to create a set that equals five. (See example in chart.)

**Rad Review:** Using blocks, candies, beans, or other manipulatives, have the child organize them according to color, shape, or some other feature. (Example: If using blocks, they could group the items based on colors.) Then have them create a tally chart.

Science (K-2)

**Power Goal:** Describe patterns that can be seen in the sky during day and night.

**Shine and Share:** Ask the child what types of things they can do during the day. Then, ask if there are different activities that take place during the nighttime. Have them connect this to the idea that daylight allows us to do things during the day that we cannot do easily during the night. You can also talk about how some things can be done both during the daytime and nighttime, such as brushing your teeth.

**Learning Choices:**

1. If needed, help the child brainstorm what places they might use for the setting of their scene. Suggestions are provided on the Power Page. Help or remind the child to label the parts of the picture as “daytime” and “nighttime.” Discuss things that may be seen both during the day and night such as airplanes, clouds, lightning, and the moon (at times).
2. On a clear night, help the child make a star map from their point of view. Help the child create constellations, or imagined pictures of characters, objects, or creatures, based on the stars they can see. If you can access the star map (link is on the Power Page), you could look for these constellations as well.
3. Ask the child about their daytime activities and discuss how those activities might need to change at nighttime. Are there some activities that can only be carried out during the day or night? For example, you usually can only catch lightning bugs at night. Because of lack of light, safety can be a concern for many kinds of nighttime activities, such as hiking.

**Rad Review:** What are the differences in daytime and nighttime? What objects are usually visible during the day? What objects are usually visible during the nighttime? What helps us to see things during the nighttime that we cannot clearly see during the daytime? (Examples: porch lights, streetlights, flashlights, etc.)
**Literacy (K-2)**

**Power Words:** adventure, magnificent, symbol

**Power Goal:** Identify and change sounds and syllables in words.

**Shine and Share:** Talk about how every syllable in a word must have a vowel sound. Explain that every time we say a vowel, our mouths open and our chins drop. That drop produces a new syllable. Try this with the child: Have them place their hand under their chin and feel each time they say a syllable. There are other fun ways to identify syllables such as clapping, snapping, or stomping them out. The following link shows how to find syllables in words. myarpbs.org/SyllableLessonVideo

**Learning Choices:**

1. This fun game changes the beginning, middle, or ending sounds in words. Say the word to the child and have them repeat it. Then, give them the new sound and have them tell you the new word. Letter sounds are represented by the / / marks outside a letter. It is important to say the sounds and not the letter. Example: Tell the child, “Say big.” The child repeats: “big.” Say, “Now change the beginning sound /b/ to /w/ and you have “wig.” Give the child time to say each new word. Complete the game using the remaining words: lap-lip; grin-chin; fridge-bridge; rack-rock. There are many other possible words which may be made with other sound changes.

2. Remind the child of ways to show how to count the number of syllables (clapping, stomping, or putting their hand under their chin and feeling the movement). Using the Power Word magnificent, have them use one of these methods to practice counting the syllables. When the child completes the chart, not all boxes for each word will be filled.

**Rad Review:** Play rhyming games with the child that support the skill of changing beginning sounds. (Example: Using the word bat, have the child think of words that have a different beginning sound, such as cat, hat, or sat). Using the word pail, have the child think of words that rhyme with it, such as mail, nail, and rail.

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**Social Studies (K-2)**

**Power Goal:** Learn and describe different places in Arkansas.

**Shine and Share:** Talk with the child about different types of landforms (mountains, valleys, caves, hills, lakes, rivers, etc.) and how you can find them on a map. Let them know that Arkansas has many types of landforms. There’s Mount Magazine and Petit Jean Mountain, the Arkansas River Valley, DeGray Lake, the Arkansas River and Buffalo National River, Blanchard Springs Caverns, and many more natural wonders.

**Learning Choices:**

1. **All About Arkansas:** See Power Page for activity instructions. Be sure to let the child know they have a compass they can use to guide them in finding the landmarks on the map. Ask the child if they’ve ever heard about any of these places or if they have visited any of them. Discuss their experiences.

2. **Plum’s Island Explorer:** Navigate around the island to explore landforms and water bodies in this interactive online game. Learners engage in the game to observe, identify, and record characteristics of common landforms and water bodies. myarpbs.org/plumsisland

**Rad Review:** Have the child tell you one place in Arkansas they would like to visit. Why?
**Math Power Page (3-5)**

**Power Goal:** Add or subtract up to 1,000.

**Learning Choices:**

1. Solve the problem in the **START** box. Once you have solved it, color in the correct answer to lead you to your next problem. Keep solving until you reach the **GOAL** box. Hint: it might be helpful to check your answers as you go. To check your answers, you will do the opposite math operation.

Let's use the example $100 - 56 = 44$. To check, you would take the answer $44$ and add it to $56$, and you should get $100$. Here is a video if you need a refresher on adding and subtracting three-digit numbers. [bit.ly/3ydzWpB](bit.ly/3ydzWpB) The strategies on the video may be different from the way you were taught, and that is okay. Use the strategy that you find most comfortable.

![Math Maze](image)

2. Using the maze above as an example, create a math maze for basic multiplication facts. Suggestion: Make the CORRECT path first, then fill in all the other boxes with additional problems and answers.

Answers: 1. Answer key is on parent/caregiver page.
Science Power Page (3-5)

**Power Goal:** Use evidence to explain that changes in the landscape happen because of erosion.

**Learning Choices:**
1. The surface of the Earth changes drastically because of wind and water. **Weathering** happens when rock or land is broken down by wind or water into smaller pieces called sediments. After the rock or land is broken down into sediments, the movement of the sediments by wind, water, or ice is called **erosion**. **Deposition** is what happens when the sediments are dropped and settle somewhere after erosion.

Use the background information above to help fill in boxes below. Match the terms **weathering**, **erosion**, and **deposition** to the labeled box it best fits. Sketch a picture in the box of what the term means.

Break it = _________________________  Move it = _________________________  Drop it = _________________________

2. Look at the pictures.

What differences do you notice?

Using the terms from above, discuss with someone what you think happened.
Learning Choices:

1. Look at the prefixes, suffixes, and word parts below. Try to create new words. You might write these word parts on index cards or small papers and use them to put together different words (Example: re-, side, -ing can be combined to create residing). Add more prefixes, suffixes, and other word parts on your own.

<table>
<thead>
<tr>
<th>re-</th>
<th>ex-</th>
<th>de-</th>
<th>rupt</th>
<th>ject</th>
<th>capt</th>
<th>graph</th>
<th>port</th>
<th>-ible or able</th>
<th>-er</th>
</tr>
</thead>
<tbody>
<tr>
<td>bio</td>
<td>in-</td>
<td>struct</td>
<td>tract</td>
<td>side</td>
<td>aud</td>
<td>photo</td>
<td>vis</td>
<td>-tion, -sion, or -cion</td>
<td>-est</td>
</tr>
<tr>
<td>ob-</td>
<td>dis-</td>
<td>dict</td>
<td>ped</td>
<td>-y</td>
<td>mal</td>
<td>trans</td>
<td>-ate</td>
<td>-ive</td>
<td>-ing</td>
</tr>
</tbody>
</table>

2. Roll a Die Word Manipulation Game

Directions: Think of a word made from three to six letters. Then roll a die, and based on the table below, make the changes to the word. Say or write the new word. Continue the game with another word, or, for a challenge, you can use the same word to make more changes using the die.

<table>
<thead>
<tr>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Five</th>
<th>Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change a vowel to create a new word (Example: cat to cot).</td>
<td>Change the beginning sound of the word (Example: cat to bat).</td>
<td>Change the ending sound of the word (Example: cat to car).</td>
<td>Put two words together to create a new word (Example: cat and nap to catnap).</td>
<td>Break word into syllables/chunk the word (Example: power = 2 syllables, pow and er).</td>
<td>Change the form of the word (Example: runs to running).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Word before roll</th>
<th>Number on die</th>
<th>Word after roll</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Power Goal:** Use a timeline to explain important events in Arkansas.

**Learning Choices:** The Big Dam Bridge Timeline

**Directions:** There were several events in history that shaped the building of the Big Dam Bridge. These events are listed out of order below. Using the icon that stands for each event, draw that icon in the box where it goes on the timeline. Start from the left with the oldest event. To help you organize the events, the dates of the events are shown in bold. For more information on Arkansas history, check out this web resource: [bit.ly/2Uf8HMS](http://bit.ly/2Uf8HMS)

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**The Big Dam Bridge, nicknamed by Pulaski County Judge F.G. Buddy Villines, was completed in 2006.**

- **Named after commercial traffic expert John C. Murray, the Murray Lock and Dam was built in the 1960s.**

- **In the 1880s, John Jackson and his wife settled on and farmed the land where the south entrance to the Big Dam Bridge begins. That land is also a cemetery. There are 37 known gravesites of African American farmers on this land.**

- **Construction began on the Big Dam Bridge in 2002. Once finished, this achievement would be the longest recreational pedestrian/bicycle bridge in North America!**

- **In 2012, the second phase of the Big Dam Bridge was completed. This southwest addition gives cyclists and walkers a way to ride and walk from the Big Dam Bridge to the Two Rivers Bridge.**

Answers: RIP icon, dam icon, street cone icon, open sign icon, chain link icon
Parent/Caregiver Plan

Math (3-5)

**Power Goal:** Add or subtract up to 1,000. Multiply and divide within 100.

**Shine and Share:** Help the student brainstorm things that are counted in the 1,000s. Examples: populations of people or animals, products in a store, trees in a forest, miles, etc. Here is a video that that is provided on the Power Page that reviews adding and subtracting three-digit numbers: [bit.ly/3ydzWpB](https://bit.ly/3ydzWpB).

**Learning Choices:**

1. Depending on the child's level, they may need you to help them regroup or borrow. The video provided should help with that. They may just need someone to help them walk through the problem. The maze requires the skills of adding and subtracting three-digit numbers as well as recall of some basic multiplication facts.

![Maze Diagram]

2. Help the student create their own maze using the first learning choice as an example. They could trace the page and insert their own problems, or they could come up with their own layout. Their maze may focus on multiplication facts or two-digit addition and subtraction.

**Rad Review:** Have them create a three-digit addition or subtraction problem that may be related to a real-life problem. The problem might talk about the population of their town. “Pretend that 356 people moved to town over the next three years. If we know the population of our town is ___, then how many people now live here?” Then, have them walk you through the steps they use to solve that problem.

Science (3-5)

**Power Goal:** Explain from evidence that changes in the landscape happen because of erosion.

**Shine and Share:** Ask the child what can cause changes to Earth's surface (weather, water, wind, people, etc.). Supply some background on erosion: The Grand Canyon was created through erosion. Over time, the Colorado River weathered (broke down) the rock into smaller pieces. The river would then move those pieces down river as it continued to flow. The movement of those pieces is the process of erosion. Local examples of weathering would be cracks in the sidewalk or smoothed rocks. Local examples of erosion would be evidence that rocks, leaves, etc. had been moved due to water or wind.

**Learning Choices:**

1. Help the child connect **weathering** to Break It, **erosion** to Move It, and **deposition** to Drop It. Then, help brainstorm ways they could sketch these terms. For weathering they might draw a river breaking down a rock. For erosion they might draw those broken-down pieces of rock and wood that can be found floating in the river. For deposition they might draw a pile of sand or pieces of rock.

2. Help the child point out differences in the pictures and possible reasons for the differences (flooding, hurricane, etc.). Then, help them use the terms from the first choice to give a possible explanation for the changes.

**Rad Review:** See if the child can connect these terms to things that they might see outside in their neighborhood or town (Examples: cracks in road or sidewalk, a pile of leaves due to wind or water, a fallen tree, etc.)
**Power Words:** fiction, reaction, elegant, consider, pollute

**Power Goal:** Manipulate sounds and parts of words.

**Shine and Share:** Talk to the kids about how we can use one word part and create many different words. Give them the root word vis and ask them how many words they can think of. Give them some time to think. Words might include vision, visible, invisible, visitor, revise, visit, televise, television, supervise, or supervision. Next, explain to them the three main word parts are prefix, root or base word, and suffix. A prefix comes at the beginning of a word; a suffix comes at the end. Also, explain to them that words are made of syllables. A syllable is a unit of spoken language with one vowel sound. You might have them clap out, tap out, or snap out some words with different syllables. (Example: cat - 1 syllable, catnap - 2 syllables, educate - 3 syllables, dedicated - 4 syllables, communicated - 5 syllables.) Make this discussion fun and allow them to use several words and count syllables.

**Learning Choices:**

1. Have the child take the prefixes, suffixes, and word parts from the Power Page and see if they can create new words. You might have them write the word parts on index cards or small papers and use those as manipulatives so that they might move around the word parts and see the different words. (Example: re- and side syllables can be combined to create reside.) Add more prefixes, suffixes, and word parts on your own.

2. “Roll a Die” Word Manipulation Game: If you do not have a die at home, there are online options at freeonlinedice.com, or you can write the numbers 1 - 6 on individual pieces of paper and pull them from a cup.

**Rad Review:** Make it a point throughout the week to have the child notice different parts of words or clap out syllables. You could play a game in which you say a word and then tell the child to do one of the “Roll a Die” game directions to practice until they are able to show progress with making new words.

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**Social Studies (3-5)**

**Power Goal:** Use a timeline to explain important events in Arkansas.

**Shine and Share:** Timelines are a great way to visually show how an event or group of events happened over the course of time. One important event that happened in Arkansas was the building of the Big Dam Bridge. Since the 1880s, there have been multiple events associated with and leading up to the building of this structure. Have the child predict how long they think it took to build this bridge. Then read the Power Page to learn about the bridge’s timeline.

**Learning Choices:**

1. With the child, research a bridge near them that they might like to visit.

2. For more information on timelines and Arkansas History, follow this link: bit.ly/2Uf8HMS

**Rad Review:** Have the child create a timeline of their day. The timeline can be of the current day or yesterday. Have them make a list of all the main events that happened and then organize them by morning, noon, and night. What was the high point?
## Helping All Learners

While you are working with children to boost their learning, consider these tips and tools to help all learners.

<table>
<thead>
<tr>
<th>Skill</th>
<th>Strategy/Resource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Helping</td>
<td>With your help or guidance, allow children to help with chores and everyday tasks, including things such as talking with salespeople or checking out at a store.</td>
</tr>
<tr>
<td>Writing</td>
<td>Chunking Writing Tasks</td>
<td>Instead of asking children to write an entire piece, divide it into smaller parts.</td>
</tr>
<tr>
<td>Writing</td>
<td>Talk It Out</td>
<td>If a child needs help with writing, allow them to talk through their answers in other subject areas such as math or science instead of having them write their answers.</td>
</tr>
<tr>
<td>Reading</td>
<td>Chunking Text</td>
<td>Break long texts into shorter sections. Have children read or listen to one section at a time, pausing to discuss or write about each one before reading the next.</td>
</tr>
<tr>
<td>Reading</td>
<td>Build Background Knowledge Prior to Reading</td>
<td>Before having a child read a text or story, consider what vocabulary words or ideas they might be unfamiliar with and explore those together, first.</td>
</tr>
<tr>
<td>Reading in Math</td>
<td>Read Aloud</td>
<td>For children who need help with reading, reading math problems to them will help them focus on the problem without struggling to understand it.</td>
</tr>
<tr>
<td>Math</td>
<td>Manipulatives</td>
<td>Children can work through a math problem by moving around small household objects such as building blocks, pencils, coins, rocks, beans, cereal, etc.</td>
</tr>
<tr>
<td>All</td>
<td>Different Ways of Knowing</td>
<td>Encourage learning activities involving multiple senses and types of intelligences, such as:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nature Spotlight: Take a walk and write down what you see, smell, hear, and sense through touch.</td>
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<tr>
<td></td>
<td></td>
<td>• Body Movement Spotlight: Create a dance or athletic routine.</td>
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<tr>
<td></td>
<td></td>
<td>• Word Spotlight: Create a poem or a set of jokes using the power words.</td>
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<tr>
<td></td>
<td></td>
<td>• People Spotlight: Get with family members or friends and play or make a game, complete a puzzle, or put on a performance.</td>
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<td></td>
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<td>• Self Spotlight: Express your feelings by building or creating something, drawing, or writing a journal entry.</td>
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<tr>
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<td></td>
<td>• Number Spotlight: Using an everyday object, measure different things in/around your home (example: the chair is 12 forks tall).</td>
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<tr>
<td></td>
<td></td>
<td>• Musical Spotlight: Read books to the tune of different genres of music.</td>
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<tr>
<td></td>
<td></td>
<td>• Visual/Creative Spotlight: Draw or sketch something you learned.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Technology Spotlight: Create a presentation/game to show your learning.</td>
</tr>
</tbody>
</table>

For our full list of tips, including links to online resources, visit myarpbs.org/helpinglearners