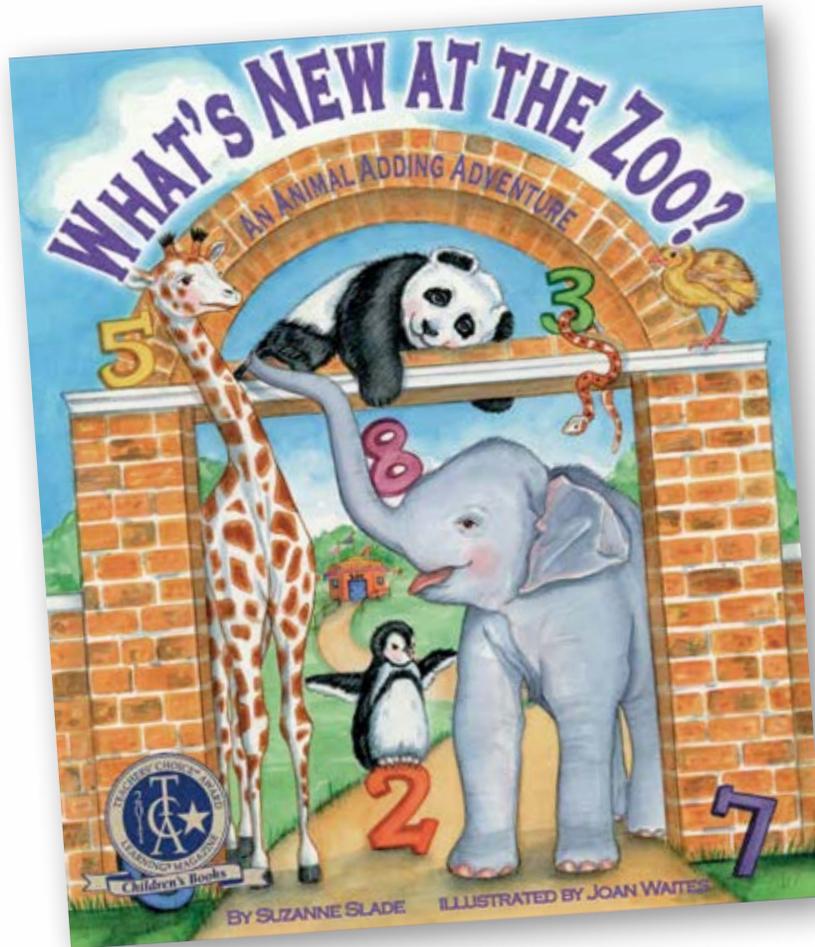
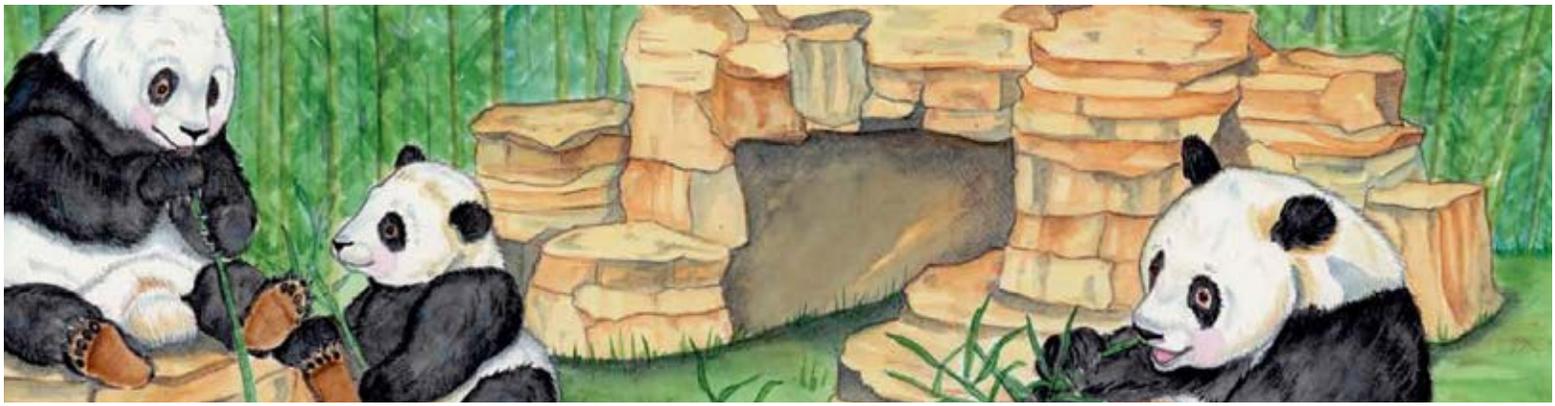


Family Math Book Adventures with...





Family Math Book Adventures

Packet Contents

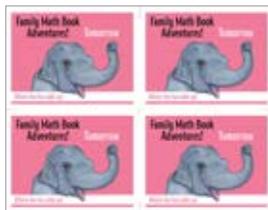
1 Invitation



7 Introduction and Planning Pages



1 Reminder Card Page



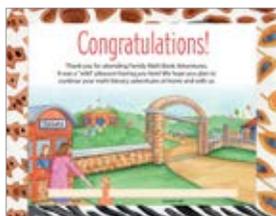
2 Family Take-Home Pages



3 Table Tent Pages

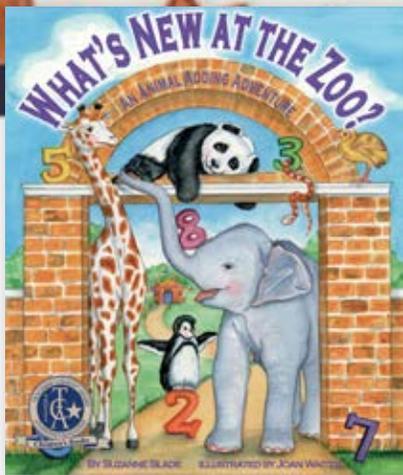


1 Certificate



5 Activity Pages (2 pages are Activity Cards)





Family Math Book Adventures

***What's New at the Zoo?
An Animal Adding Adventure***
by Suzanne Slade

A special time for adults and children ages 5–8 to explore math literacy concepts together!

Introduction

Thank you for taking time to learn more about Family Math Book Adventures, an initiative designed by Pennsylvania Public Libraries to provide all the support needed for libraries to host an interactive family night! The activities that follow can be shared with families as a one- to two-hour event. The activities are outlined for three different age groups of children: three activity stations to support kindergarten through grade-two math literacy skill building. Please keep in mind that you know your families best, and can adapt all activities, age suggestions, and groups to provide a successful and fun experience for those who attend.

The purpose of these family night activities is to educate families about the importance of math literacy development. Math literacy is the ability to use numbers to solve real-world problems. It involves having the ability to problem-solve, reason, and analyze information.

The activities included in this resource focus on beginning math skills and vocabulary related to addition and problem-solving. This event provides a perfect opportunity for partnership between schools and local libraries.

Through these activities, families have fun together while building a foundation for math literacy skills. The "why" behind the "what" of each activity is outlined so that caregivers can see the important role they play in the education of the children in their lives. Caregivers not only engage in fun activities, but also learn how to maximize skills through simple strategies they can continue at home.

We hope you take advantage of these resources created "by libraries for libraries" to host your own Family Math Book Adventure! How you structure your event is up to you. One format you might choose is shown on the next page.



Facilitator Resources

Preparation and Planning Tips



A Message for Facilitators

SETTING THE STAGE: Introduce the featured book, *What's New at the Zoo? An Animal Adding Adventure*, by Suzanne Slade. Share with families that the evening will include reading the book together, followed by some activity stations related to the story. Talking points are provided, if interested, to help emphasize to families the learning components of the adventure for which they are about to embark

THE ADVENTURE BEGINS: Read the book together, and then provide the opportunity for families to travel and explore various activity stations that relate to the book and support early math development. A printable table tent with instructions, as well as learning connections, is provided for each station.

TRANSFER TO HOME: As a wrap-up, gather your group together once more for the closing activity. Take-home activity sheets are provided so that families can extend their learning at home.

PREPARATION AND PLANNING TIPS:

To help save time, included in this resource are:

- Preparation and Planning Tips for Facilitators
- Sample Event Invitation/RSVP and Reminders
- Sample Completion Certificate

Depending on the time frame of the event, you could also pair the event with a light meal or refreshments to encourage participation and relaxed networking among families.

These activity suggestions are here as a guide. Feel free to add creative ideas to make it your own and meet the needs and interests of your participants.

Enjoy, and happy reading and math adventures!

Facilitator Resources

Preparation and Planning Tips



Setting the Stage: Talking Points

As you welcome families to this special event, consider including these talking points to help set the stage:

It is wonderful to see the families in the room making time to enjoy a math literacy event together. Families are truly a child's first and most important teacher. They may not realize it, but they are an essential partner in their child's education.

Research shows that when the adults in a child's life nurture early literacy and math skills at home, there is a major, positive impact on that child's success in school.

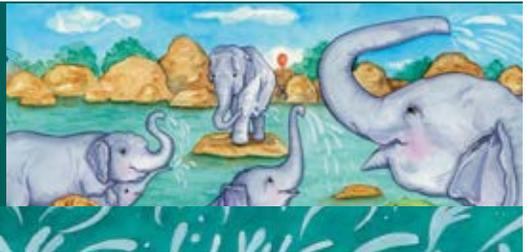
Tonight, we are going to go on a math book adventure together. We are going to read a wonderful book, called *What's New at the Zoo? An Animal Adding Adventure* by Suzanne Slade. After reading, we are going to have some time to explore activity stations connected to the book.

Each activity station has a table tent nearby that provides instructions for the activity. In addition, the tent provides some neat facts about how, as adults, our interactions with children during each of these fun activities can build specific early math literacy skills!

The cool thing about these strategies is that they can be practiced anywhere. We have some materials here that are part of each activity station, but all you really need to continue practicing these strategies at home is the knowledge we hope you will gain as you learn and play together this evening.

Facilitator Resources

Preparation and Planning Tips



The Adventure Begins: Messages for Families

To support interactivity during reading, pass out copies of the book to each family, if they are available. Interactive, or "shared," reading between adults and children is the most important activity to help children become stronger readers and engage with the content of the book. Sharing this particular book, *What's New at the Zoo? An Animal Adding Adventure*, provides reinforcement for both early reading literacy and early math literacy. Invite families to follow along using their copies of the book as you read the story aloud.

Before reading, you can ask families what they know about animals found at the zoo. Have they ever visited a zoo before? Look at the picture on the cover. What animals would you expect to see at the zoo? Asking children questions helps us to understand their perspective and predictions. In addition, this background knowledge is something that aids comprehension, or the ability to understand a text.

You can explain that the elephant is just one of the interesting animals that we will be learning about in this book. The author, Suzanne Slade, and the illustrator, Joan Waites, created this book with lots of information about animals and their babies. The beautiful illustrations tell a story within a story. A bonus in this book is that you get to practice your addition skills throughout the story! Encourage children to listen and look carefully to learn more about the animals at the zoo and to practice what they know about addition, too!

Informational books like this one offer new vocabulary and are full of rich language. Be sure to pause while reading to allow time for readers to think about the names of the animals and their babies, as well as the addition problems as they explore each page. After reading, invite children and adults to share something new that they learned, or to tell the group about their favorite baby animal name.

Facilitator Resources

Preparation and Planning Tips



Activity Stations

Briefly explain the stations and assign families a starting point. Rotate about every 15–20 minutes, depending on the size of your group. Families with both older and younger children may need some support as they select and visit stations.

Stations for kindergarten – grade-two children

1. Memory Card Game
2. Zoo Animal Matching Activity
3. Zoo Fact Families

Transfer to Home

Gather families back together to talk about their experience. What station was their favorite? Were any activities more challenging than expected? How did families adapt to help their child succeed?

In closing, use the questions at the top of the take-home sheet to guide families as they reflect on the evening's activities. Provide each family with copies of the take-home activity sheets for extending learning. Finally, thank families for taking time to do this important (and fun!) work together, and provide each with a certificate for participating.

Facilitator Resources

Preparation and Planning Tips



Materials to Purchase, Make, or Gather: Setting the Stage

- Create sign-in sheet and make/gather name tags for attendees.
- Order or locate book: *What's New at the Zoo? An Animal Adding Adventure*
- Print introductory talking points (included), if desired.
- Create table tents for the activity stations– Hint: To create table tents, print the sheets included that list the name of the activity, how to play, and what is learned through play. Fold each sheet as you would a trifold brochure. Open the sections and staple or tape the middle so that the tent stands up. See example at right.



The Adventure Begins

ACTIVITY 1: Memory Card Game

- Make two copies of each of the animal card pages and cut out the cards. Laminate, if possible. Keep one set of the cards intact.
- Mix the cards up and place them face down on a table.
- Start out by showing the children the intact page of cards and naming the animals from the story together.
- Taking turns, each child should turn over two cards so that everyone can see. If the cards match, he or she keeps the pair and takes another turn. If they do not match, the child should turn the cards back over and it is another child's turn.
- The child with the most pairs at the end of the game wins.

ACTIVITY 2: Zoo Animal Matching Activity

- Make copies of the animal matching activity directions with the answer key.
- Make one set of the animal picture cards (with their corresponding letters). Cut out and laminate the cards, if possible.
- Make one set of the animal descriptions (with their corresponding numbers). Cut out and laminate the descriptions, if possible.
- Taking turns, each child should pick a description card, read the description (or have parent do so) and try to select the correct animal picture. Parent can check their selection and if it is correct, remove both the description and the picture card. If not, child puts them back.
- Keep going until all matches have been made.

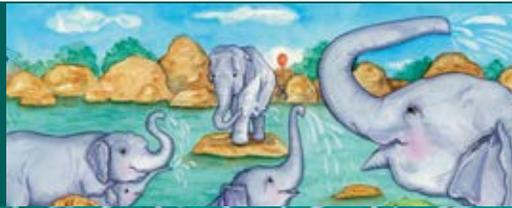
ACTIVITY 3: Zoo Fact Families

- Make copies of the zoo fact families page.
- Make one set of the zoo fact families cards. Cut out and laminate, if possible.
- Children use the zoo fact families card to solve the corresponding problems. Parents should assist with this at the station, as needed.

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<https://www.arbordalepublishing.com/bookpage.php?id=NewZoo>

Facilitator Resources

Preparation and Planning Tips



Timeline Checklist

SIX WEEKS BEFORE THE EVENT

- _____ Read over all details within this resource. Many of the materials needed have been provided for you.
- _____ Select date and location for your Family Night. Consider a location that has enough space for multiple activity stations. This event provides a perfect opportunity for partnership between early childhood programs and local libraries. Early childhood programs are encouraged to reach out to their local libraries, who may have additional resources and materials related to *What's New at the Zoo? An Animal Adding Adventure* and would welcome the opportunity to collaborate and share.
- _____ Order copies of the book if needed and/or desired.
- _____ Plan menu if providing a meal or refreshments.

ONE MONTH BEFORE THE EVENT

- _____ Send home invitation with RSVP advertising your Family Night. (Sample provided.)
- _____ Begin to purchase/make/gather materials.
- _____ Solicit volunteers for the evening, if needed.

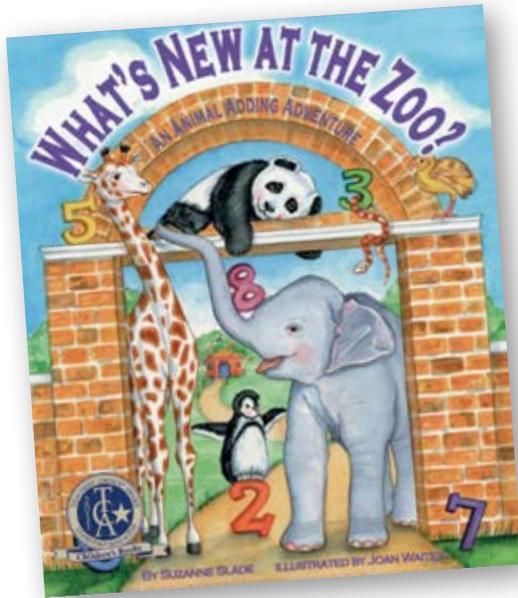
ONE WEEK BEFORE THE EVENT

- _____ Tally RSVPs received and send reminder invitations or emails, if needed.
- _____ Confirm meal/refreshments order, if providing.
- _____ Review activity instructions and ensure all necessary materials have been purchased or prepared.

DAY BEFORE THE EVENT

- _____ Send children home with a reminder badge. (Sample provided.)

Dear Families, you are invited to attend this special event:



Family Math Book Adventures

*A fun-filled night of
talking, reading, and math!*

We will be exploring the book,
*What's New at the Zoo? An Animal
Adding Adventure* by Suzanne Slade.

If you plan to attend, please fill out the bottom portion of this form and return it to:

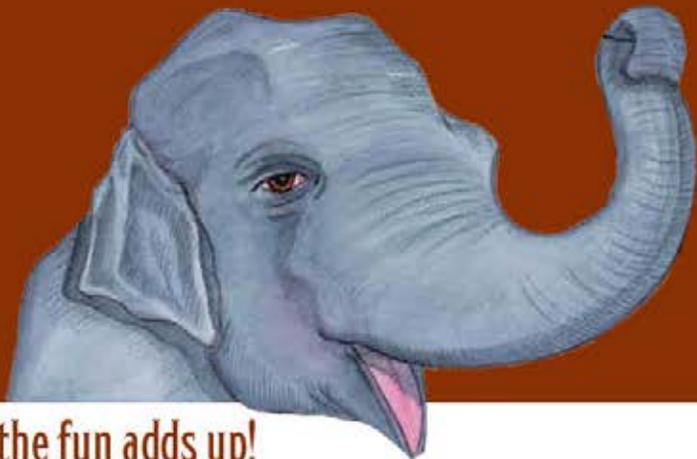
Family Section

YES, we will be attending the Family Math Book Adventures event.

Names and ages of children attending:

Number of adults attending:

Family Math Book
Adventures! Tomorrow



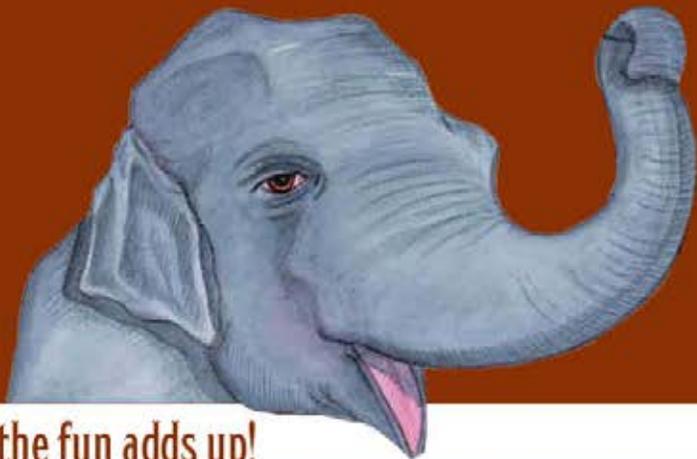
Where the fun adds up!

Family Math Book
Adventures! Tomorrow



Where the fun adds up!

Family Math Book
Adventures! Tomorrow



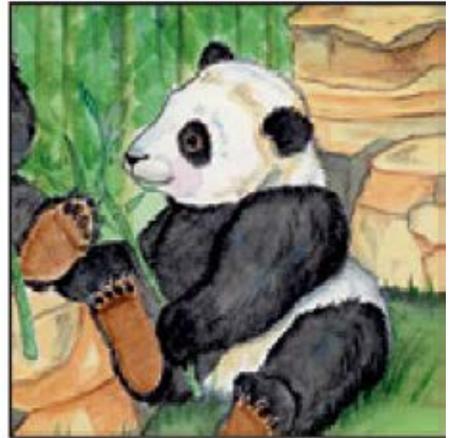
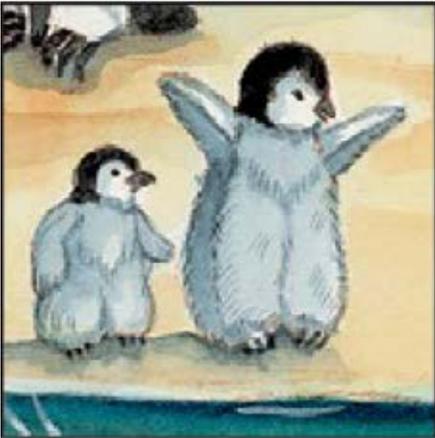
Where the fun adds up!

Family Math Book
Adventures! Tomorrow



Where the fun adds up!

Animal Cards



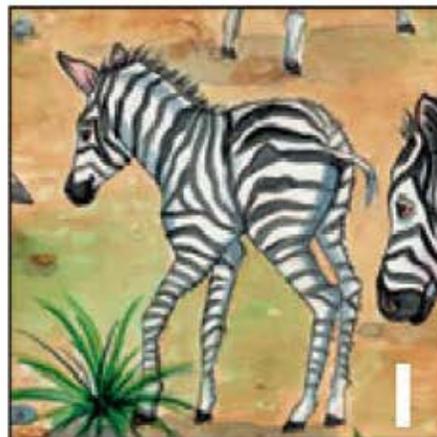
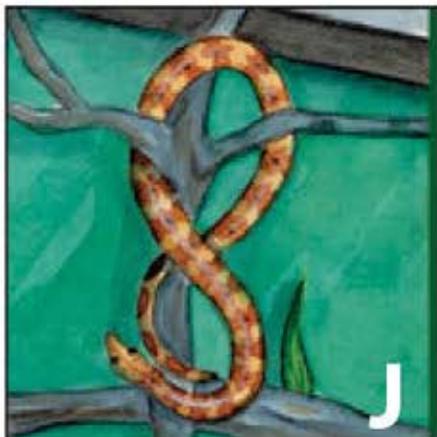
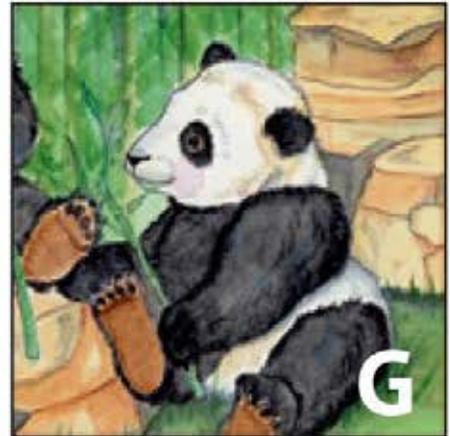
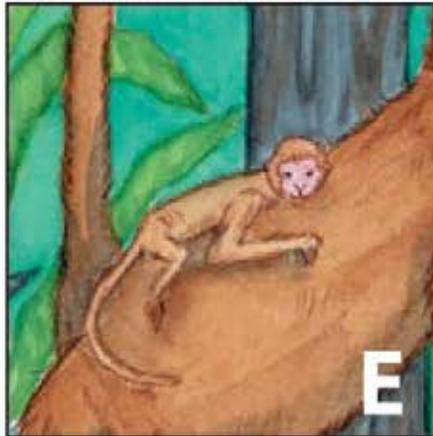
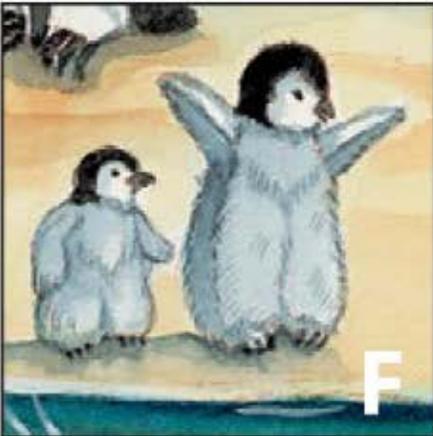
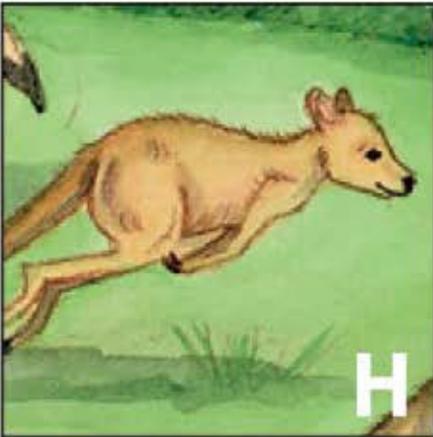
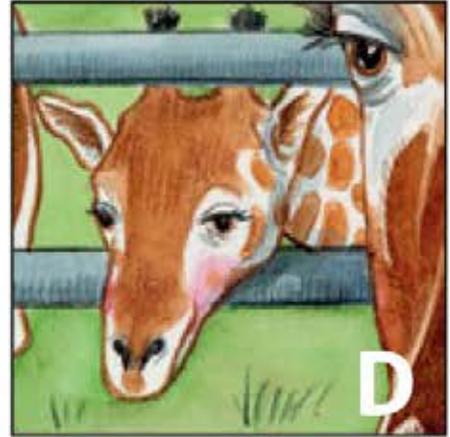
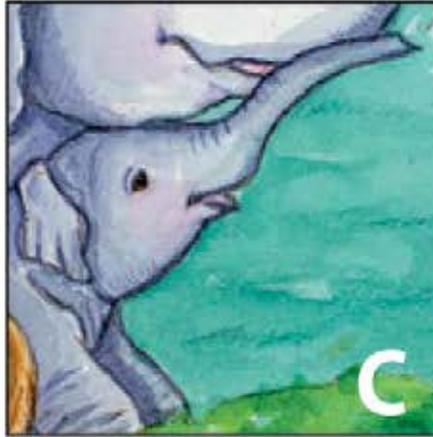
Animal Matching Activity

Many animals are called by a special name when they are babies. Each animal baby is unique and develops differently. See if you can match the baby animal description to its picture. Answers are upside down at the bottom of the page.

1. These **cubs** are about the size of a pet hamster, are blind, and don't have any fur or teeth when born. The mother stays in her safe, cozy den with her baby cubs for about a month. Young cubs drink milk from their mothers. When they are about a year old, cubs begin eating tender leaves from bamboo plants. Later, after their teeth become strong enough to chew, they will also eat the tough bamboo stems.
2. Newborn **calves** weigh about 250 pounds (113 kg)! These huge babies are able to stand soon after they are born. These calves drink milk from their mothers. When they are a few months old, calves begin to munch on grass. These babies like to follow their mothers wherever they go. They might even suck on their trunks much like young children suck their thumbs!
3. These colorful animals are related to pheasants. The males are called peacocks and are well-known for their long, beautiful tails. The females are called peahens, but their feathers are not as brightly colored as the peacocks. In the spring, peahens lay a group of seven to ten brown eggs. About 30 days later, tiny peachicks hatch from the eggs. They are called **peachicks** until they are about one-year old.
4. Some of these primate **infants** weigh about one pound (454 g) when born. These small furry creatures spend most of their time riding on their mother's belly or back and drinking her milk. When they get older, they also dine on fresh fruit, leaves, or flowers. Because they live in trees, infants quickly learn how to walk across tree branches.
5. A **neonate** has plenty of company because its mother gives birth to 20 to 60 neonates at a time. Neonates weigh about three ounces (85 g) when first born and are between 12 to 18 inches (30-46 cm) long. About a week later, they shed their scaly skin for the first time and begin eating and rapidly growing. Adults may weigh up to 50 pounds (23 kg) and can be 10 feet (3 m) long.
6. Most females have only one baby, called a **joey**, at a time. Joeys crawl into their mother's front pouch shortly after birth. Joeys can drink milk whenever they are hungry. Joeys usually stay snug in their mother's pouch for about 11 months before venturing out into the world.
7. **Foals** weigh around 55 pounds (25 kg) at birth. Born with their stripes, they can stand on shaky legs minutes after being born and are able to run a short distance within an hour. Foals stay near their mother for the first few weeks. The mothers help protect their babies and give them milk when they are hungry.
8. Newborn **calves** are about 6 feet (1.8 m) tall (thanks to their long necks) and usually weigh between 90 and 120 pounds (41-54 kg). Hours after being born, they are able to stand and run but spend most of their time resting near their mother for the first two weeks. Calves drink milk from their mother or another female "babysitter" from the herd for 9 to 12 months. They begin eating leaves when they are a few months old.
9. After hatching from their eggs, these **chicks** must stay near one of their parents to keep warm. When first born, their feathers are a silky down that are later replaced by a second set of soft gray feathers. When they are about two years old, their feathers turn black and white. The feathers are covered with special waterproof oil.
10. These **pups** are very tiny and may only weigh about 1 ounce (28 g) at birth. However, that could be almost 45% (almost half) of the mother's weight. That would be like a 120-pound woman giving birth to a 54-pound baby! They drink milk from their mother. They are the only mammals that fly. Using their strong claws, newborn pups cling tightly to their mother when they forage for food at night. During the day, pups sleep under their mother's wings.
11. Newborn **cubs** are blind and do not have any fur. The helpless cubs weigh about 18 ounces (510 g) when they are first born. The warm milk they get from their mother helps them grow quickly. By the time they are three months old, most cubs weigh 33 pounds (15 kg). Cubs are curious creatures, but they usually don't stray too far from their mother.

Answers: 1G, 2C, 3K, 4E, 5J, 6H, 7I, 8D, 9F, 10A, 11B

Animal Matching Cards



Zoo Fact Families

Just as animals in a family are related to each other, numbers in a fact family are related, too. The three numbers in each fact family below are related to each other by the four math facts beside them.

$$4 \text{ elephants} + ? \text{ elephants} = 6 \text{ elephants}$$

$$2 \text{ elephants} + 4 \text{ elephants} = ? \text{ elephants}$$

$$6 \text{ elephants} - 4 \text{ elephants} = ? \text{ elephants}$$

$$? \text{ elephants} - 2 \text{ elephants} = 4 \text{ elephants}$$

$$8 \text{ giraffes} + ? \text{ giraffes} = 13 \text{ giraffes}$$

$$5 \text{ giraffes} + 8 \text{ giraffes} = ? \text{ giraffes}$$

$$13 \text{ giraffes} - 5 \text{ giraffes} = ? \text{ giraffes}$$

$$? \text{ giraffes} - 8 \text{ giraffes} = 5 \text{ giraffes}$$

$$2 \text{ pandas} + ? \text{ pandas} = 3 \text{ pandas}$$

$$1 \text{ panda} + 2 \text{ pandas} = ? \text{ pandas}$$

$$3 \text{ pandas} - 2 \text{ pandas} = ? \text{ pandas}$$

$$? \text{ pandas} - 1 \text{ panda} = 2 \text{ pandas}$$

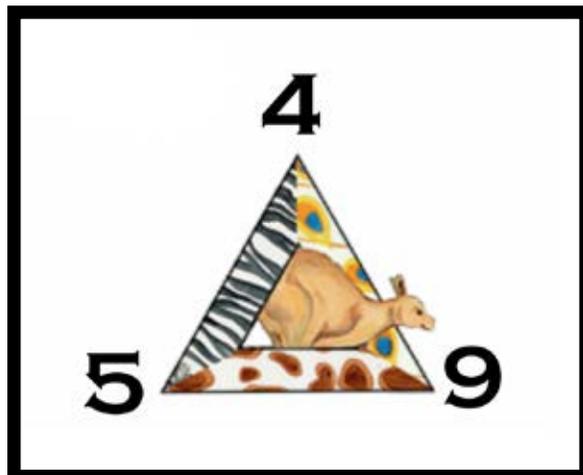
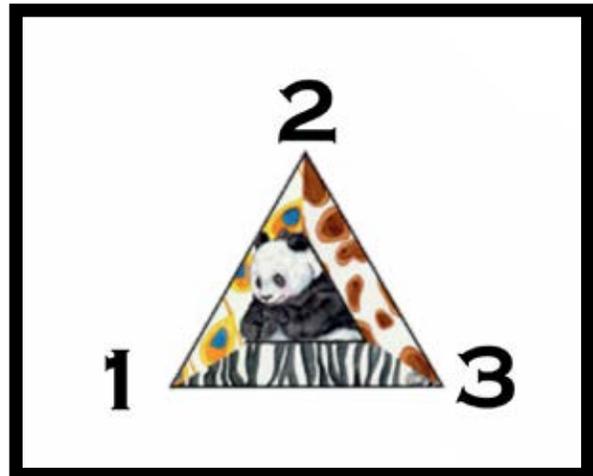
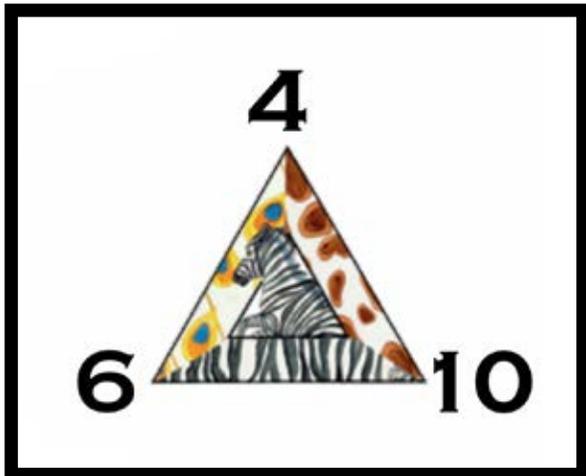
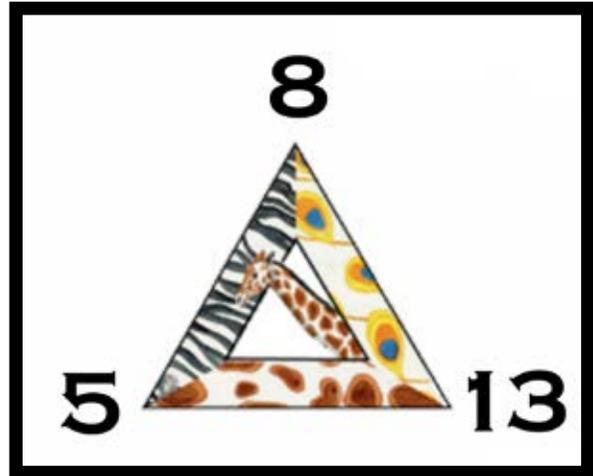
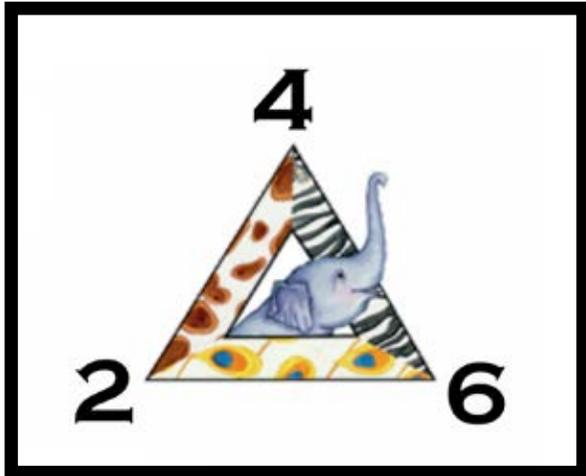
$$4 \text{ kangaroos} + ? \text{ kangaroos} = 9 \text{ kangaroos}$$

$$5 \text{ kangaroos} + 4 \text{ kangaroos} = ? \text{ kangaroos}$$

$$9 \text{ kangaroos} - 4 \text{ kangaroos} = ? \text{ kangaroos}$$

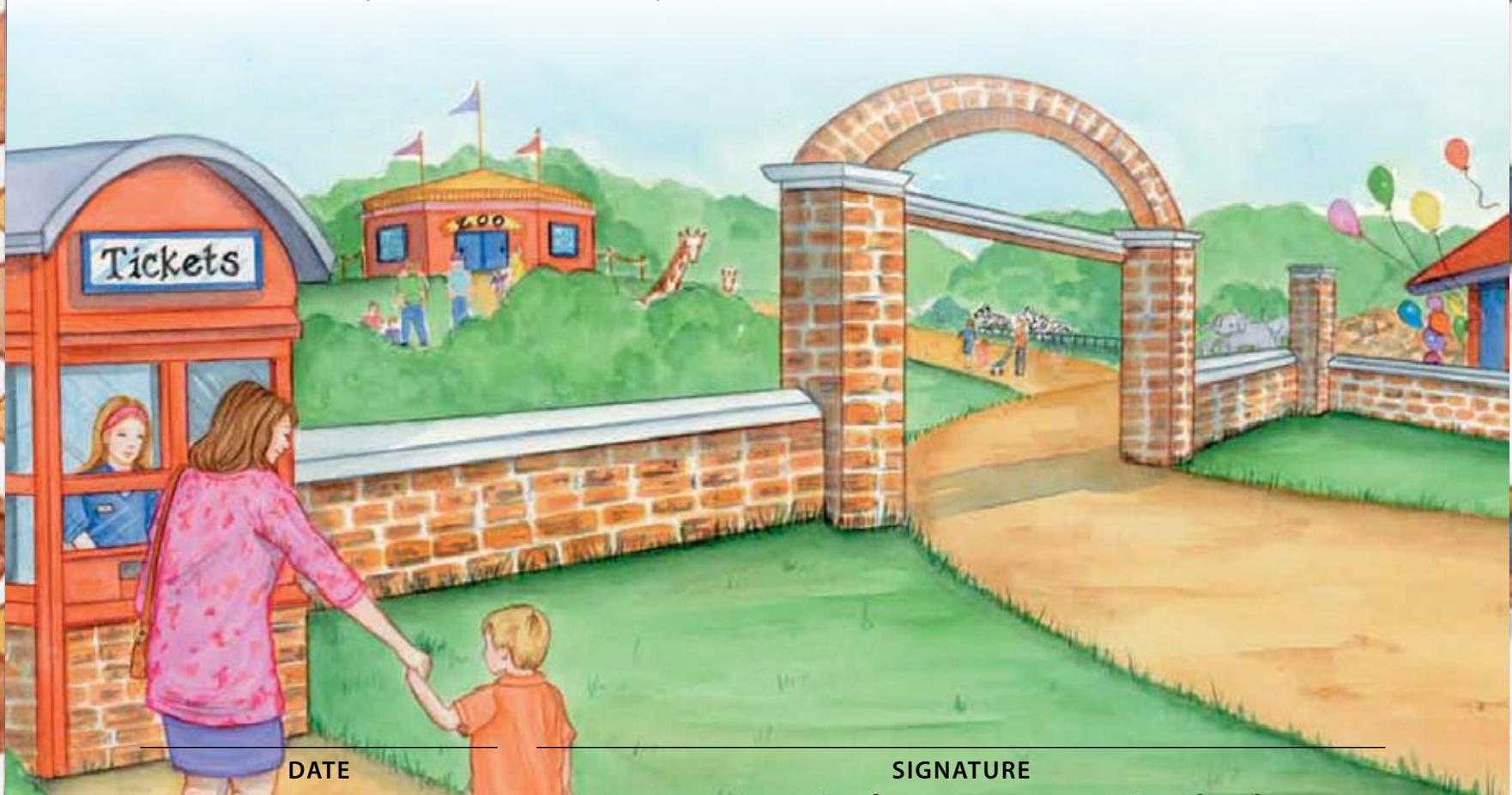
$$? \text{ kangaroos} - 5 \text{ kangaroos} = 4 \text{ kangaroos}$$

Zoo Fact Families Cards



Congratulations!

Thank you for attending Family Math Book Adventures. It was a "wild" pleasure having you here! We hope you plan to continue your math literacy adventures at home and with us.



DATE

SIGNATURE

Continue Learning at Home



Dear Families,

Thank you for being part of this special adventure! Thinking back on your time reading and exploring math literacy concepts, did you:

- Talk about new vocabulary regarding the names of the animals and their babies?
- Practice addition concepts with the story problems in the book?
- Practice addition fact families with the center activity?

If you answered YES to any of these questions, you have done something AMAZING this evening. You have helped your child by building vocabulary, comprehension, and math skills! These skills are critical to early literacy and becoming a successful reader as well as early math literacy development to become successful in math – and you have made a positive difference in your child's learning.

If you enjoyed tonight's activities, there are other ways to promote early reading and math literacy! Check out the resources and ideas listed listed on the following page.



Continue Learning at Home



Explore Further!

Was there a specific zoo animal you would like to know a bit more about? While at the library, look for additional books on the animals you found interesting or search for more fun books with a math theme.



With a library card, children can access awesome books, videos, photos, facts, and more at [POWER Kids Library!](https://kids.powerlibrary.org/)

For a fun read that ties into the night's activities, children can:

- Visit <https://kids.powerlibrary.org/>.
- Click on **BookFLIX**.
- You may be prompted to enter your library card number to access BookFLIX. If so, follow the instructions to enter your number. If you do not have a library card or do not know the number, follow the instructions on the website that can help you get your number. When you have your library card number, enter it and click **submit**.
- View the intro to **BookFLIX** and click **start**.
- Try the category **Animals in Nature** or perhaps **ABCs** and **123s**.
- Read, watch, search, and enjoy!



Try Bedtime Math!

Looking for more fun activities to engage your children with math? Bedtime Math has something for all ages at their website at www.bedtimemath.org

Sign up for Fun Family Math and have a math challenge geared to your child's age delivered right to your inbox via email or use their award-winning app!



ACTIVITY 1

Memory Card Game

This station involves matching.

Can you find two animal cards that match?

Learning matching skills helps in the classification of objects.

Table Tent Card

How to Play

Step 1:

Share the intact page of animal cards and name them with the children.

Step 2:

Tell children that you have two sets of these cards face down on the table. Now they get to take turns trying to find a matching pair!

Step 3:

Take turns turning over two cards so that everyone can see. If the cards match, you get to keep the pair and take another turn. If they do not match, you turn the cards back over and it is another child's turn. Play to see who gets the most pairs!

Here's What's Happening When You Play

Children search to find two animal cards that match. Matching is the identification of same or similar objects. It is an important early math skill. Playing the memory card game is a fun way to help children develop this skill and their concentration skills at the same time! Other ways to build this skill at home include:

- Matching socks into pairs.
- Sorting objects by size or color.
- Matching uppercase and lowercase letters.



ACTIVITY 2

What Animal Am I?

This station involves learning more about the different zoo animals in order to identify them by their characteristics. See if you can match the animal's picture to its description!

Learning the specific characteristics of each animal develops background knowledge and content area vocabulary.

Table Tent Card

How to Play

Step 1:

Show the children the different animal pictures spread out on the table. Tell them they will be picking a card with a description of one of the animals and they are to find the animal that matches the description.

Step 2:

Pick a description card to be read aloud by either child or parent. Have child try to select the animal picture card that matches the description.

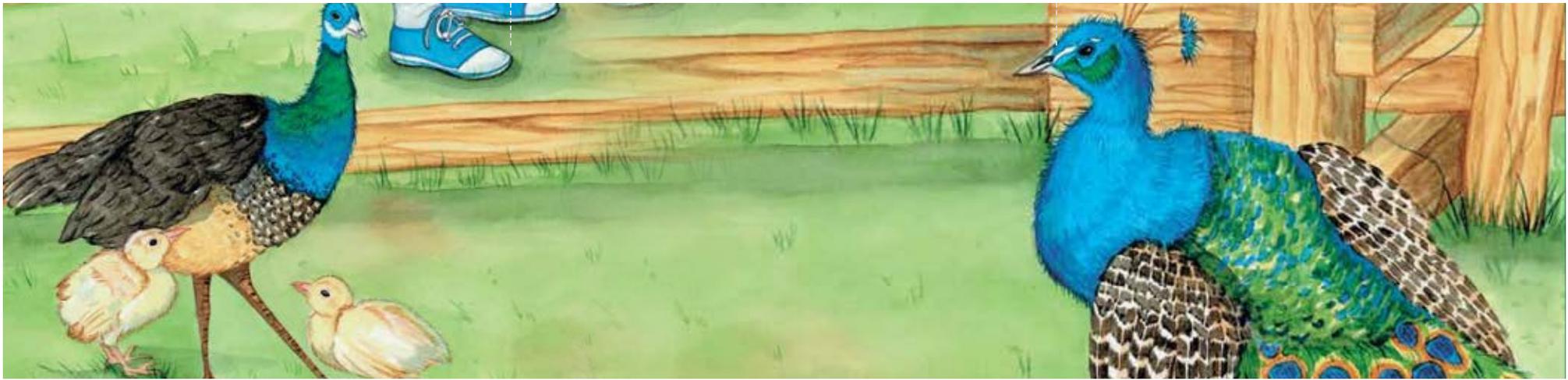
Step 3:

Keep going until all animals have been identified. Discuss and help as needed.

Here's What's Happening When You Play

As you read through the descriptions of each animal and search for the corresponding picture, you are helping to build their background knowledge and vocabulary. Other ways to build this skill include:

- Providing definitions of new words and talking about what they mean in the context of a story or informational text.
- Introducing vocabulary related to math or content areas when reading recipes, web pages, menus, or maps.
- Asking your child to describe objects by their characteristics.



ACTIVITY 3

Zoo Fact Families

This station explores addition fact families.

Can you solve the animal addition problems?



Learning about the relationship of fact families strengthens math problem-solving skills.

Table Tent Card

How to Play

Step 1:

Explain that just as animals in a family are related to each other, numbers in a fact family are related, too!

Step 2:

Demonstrate with one of the fact family triangles and the corresponding questions to show children how the numbers form a family that help you find the answer.

Step 3:

Distribute the remaining triangle cards and have children work with a partner or a parent to solve the problem.

Here's What's Happening When You Play

Your child is learning about the relationship of numbers within a fact family.

Other ways to build this skill include:

- Making up fact family problems related to different topics of interest, such as insects or dinosaurs.
- Making a set of triangle cards with pictures to match your child's favorite topic.