

Family
Math

Fun Pack!

The Ohio Literacy Resource Center and Midwest LINCS have designed a packet that contains activities children can do with their families. All of the math activities can be used with various children's books.

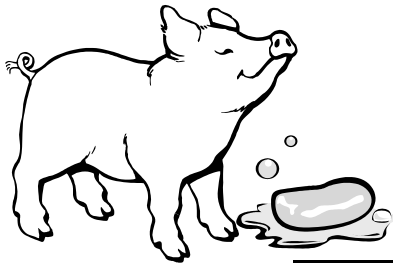
You can find these books at your local library. The activities involve sorting, counting, money, and measuring. These activities can be used to support lessons that have been learned in school while linking math to children's literature. These activities will give families a chance to learn and have fun together.

read and write with your little one



Ohio Literacy Resource Center
Midwest *LINCS*

http://midwestlincs.org/FamilyLit/parent_links.html



Family Math Fun Pack

Other Great Books to Read

- *Once Upon a Company*
- *Take Off With Measuring*
- *Super Sand Castle Saturday*
- *Eating Fractions*
- *Fabulous Fractions*
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Ten Dirty Pigs; Ten Clean Pigs

by Carol Roth, Illustrated by Pamela Paparone, North-South Books, New York, 1999

Description of book:

Watch and count the pigs as they clean up after a days play, then flip the book over, start from the beginning and watch them play in the mud and get dirty again.

Age Level:

0-3

Skill:

Counting and sorting

Activity:

Foam number counting and shape sorting in bathtub (or anywhere)

Materials:

- Foam numbers 0-9 (pre-cut foam numbers can be purchased from the store, or made by tracing and cutting out numbers from sheets of craft foam)
- Plastic bag or container to hold the numbers

Instructions:

- Read *Ten Dirty Pigs; Ten Clean Pigs* together. Talk about the story.
- Ask your child to take all the numbers out of the container.
- Sort all the numbers by color. How many different colors are there?
- Ask your child if they have a favorite number and why it is their favorite.
- Help them to pick the number that shows how old they are.
- At bath time, take the foam numbers into the bathtub — they stick to the wall!
- Sing “1 clean, 2 clean, 3 clean piggies, 4 clean, 5 clean, 6 clean piggies, 7 clean, 8 clean, 9 clean piggies, 10 clean piggies in the tub” (to the tune of “10 little Indians”) while sticking the foam numbers to the side of the tub.
- Sing the song again while bathing each toe of your child.

Things to think and talk about:

- Ask children to name numbers and shapes that they see in other places around your home or city.
- Give your child crayons or markers to begin tracing numbers that you write on paper. Go over the numbers with your child before they begin.
- Count vegetables at dinnertime, raisins at snack time, stuffed animals at bedtime. Make it fun!

Websites for kids:

- <http://www.edbydesign.com/btcount.html>
- <http://www.funbrain.com/numbers.html>
- http://www.mcpl.lib.mo.us/KidsWeb/Just_for_Preschoolers/Learning_Fun/Numbers/

Recipes

Courtesy of Preschool Education www.preschooleducation.com

Edible dough

Ingredients (have your child do the measuring)

1/2 cup peanut butter

1/2 cup honey

1 cup powdered milk

Instructions: Knead dough until smooth..

Pigs In A Blanket

Ingredients:

Hot dogs

Roll of refrigerated biscuits or crescent rolls

Instructions: Help your child cut a hot dog in half. Help them to separate the refrigerated biscuits or crescents. Let children wrap the biscuit/crescent around the hot dog. Bake until done. Make sure you let the "pigs" cool before eating!

Pigs in Mud

Ingredients:

Pink Mini Marshmallows

Chocolate Pudding Mix

Instructions: Make the pudding according to the package directions. Place the pudding into individual clear cups. Then drop a pink mini marshmallows on top of the pudding. Make sure they don't sink. Place the cups in the refrigerator. After the pudding has set you can serve the "Pigs in mud"

Other Activities

- Sing counting songs
 - Count toes (*this little piggy...*)
 - Count fingers (*where is thumbkin...*)
- Sort and plant seeds—watch their growth over time (indoors or outdoors)
- Make and sell lemonade at a neighborhood road side stand (with an adult present)
- Make your own piggy bank
- Gather and measure ingredients, follow directions and bake sugar cookies that are in the shapes of numbers
- Estimate and measure distances
- Make a pizza together and count the toppings. Put different toppings on different halves or quarters of the pizza. Once the pizza is baked and ready to eat, cut into halves first, then quarters, then eighths. Your pizza will have eight slices so now you can share with your friends.
- Make a map of your city and measure the distance between home and library or city hall
- Measure rooms in your house with a ruler
- Measure objects in your house with a non-standard measurement tool (your hand, any book, pen, a piece of string, plastic cup) Ask yourself, "How many pens wide is the top of my kitchen table?"
- Show examples of certain fractions using a Hershey's chocolate bar as the whole
- Make a "Math About Me!" poster. Divide a poster into 8 equal squares. Draw a picture of yourself and write how old you are in one box, write your birth date in another box, write how many pets you have in another, write how much you weigh, how much you weighed at birth, how tall you are, how many brothers/sisters you have, your house number, and your favorite number. (Courtesy of Beth Haugeto-Basic Skills Math: Grs. 3&4, Merriam Avenue School, Newton, NJ)
- Use a paper plate to cut into fractional parts (such as 1/2, 1/3, 1/4, 1/8 and so on) - compare and contrast the differences between the fractional parts. Which is bigger? How many of these make a whole?
- Figure out the cost for a family trip. As a family make a bank to collect the trip funds. Chart the progress.
- Let your children see you using math in your daily routine: balancing the check book, looking through grocery ads to see what is on sale, recording events on a calendar, paying bills, using a calculator
- Have children set the table. Let them decide how many plates, utensils and napkins they will need.

Music and Movement

Count and Dance!

Materials:

- Flashcards with numbers 1-20 written on them
- 1 person to read off the orders
- 1 or more players

Directions:

This game can be played with any number of children. The game leader calls out a number and then says what the players have to do that many times. Some suggestions are: clap 19 times, do 5 jumping jacks, give someone around you 11 high fives, touch your knees 7 times. Change the leader during the game.

The Piggy Bank

Courtesy of 15 Fun-to-Sing Math Learning Songs & Activities, Scholastic Professional Books.

(Sing to the tune of "Shortnin' Bread")

What's in my piggy bank, piggy bank, piggy bank?

What's in my piggy bank worth _____ cent(s)?

It's a shiny _____, _____, _____.

It's a shiny _____ worth _____ cent(s)!



Ten Little Piggies Jumping on the Bed

10 little piggies jumping on the bed- 1 fell off and bumped his head

Mama called the farmer and the farmer said, "No more piggies jumping on the bed"

9 little piggies jumping on the bed- 1 fell off and bumped his head

Mama called the farmer and the farmer said, "No more piggies jumping on the bed"

(8, 7, 6, 5, 4, 3, 2 piggies.....)

1 little piggy jumping on the bed, he fell off and bumped his head

Mama called the farmer and the farmer said "Put those piggies straight to bed!"

Science

Make Your Own Tornado!

As you know, tornadoes are powerful forces of nature that are caused by warm, moist air from the Gulf of Mexico mixing with cold air from the north. There is actually a section of the United States called "Tornado Alley" although tornadoes happen in other parts of the world too. It is important to know what to do during a tornado. Check out the kids' websites below to investigate more about this force of nature.

Materials:

- Clean 1 plastic two-liter pop bottle with cap
- Water
- Food coloring (optional)
- Small objects to be in the tornado (such as marbles, paperclips, or glitter)
- Duct tape

Directions:

- After cleaning the bottle, peel the label off—you will be able to see the tornado better this way.
- Next pour water in the bottle (don't fill it up all the way or your tornado will not work).
- If you wish to put food coloring in, put 3 drops in now.
- Drop the small objects into the bottle (marbles, paperclips or glitter). Make sure you count them first so you know how many of each small object you put in (for glitter, measure how many teaspoons of glitter you put in).
- Screw the cap on very tightly.
- Swirl the water around to create your own tornado in a bottle!



More information about tornadoes can be found at <http://www.fema.gov/kids/tornado.htm> or <http://skydiary.com/kids/tornadoes>.



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Pigs in the Pantry: Fun with Math and Cooking

By Amy Axelrod, New York: Scholastic, Inc., 1997

Description of book:

Mrs. Pig isn't feeling well so Mr. Pig and the piglets decide to make her favorite chili. There's only one problem--they don't know how to cook! While Mom is taking a nap, Mr. Pig and the piglets make such a mess in the kitchen that Mrs. Pig wakes up to find the firemen cleaning up a big mess.

Age Level:

4-6

Skill:

Measurement of volume

Activity:

Measuring in the kitchen

Materials:

- Set of measuring cups
- Packet of drink mix (Kool-Aid)
- Sugar
- Water
- 2 quart container
- Spoon to stir

Instructions:

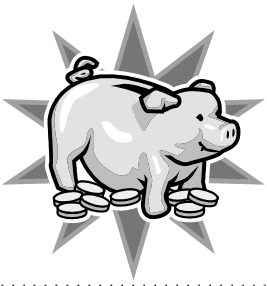
- Read *Pigs in the Pantry: Fun with Math and Cooking* together. Talk about the story.
- Ask your child if they would like to measure with you to make a drink.
- Get out all the materials needed for the recipe (from above).
- Open and pour the contents of the drink packet into a container
- Add 1/2 cup to 1 cup of sugar (depending on how sweet you want the drink to be)
- Add 8 cups of cold water to the container and mix well
- Pour the juice into glasses and enjoy!

Things to think and talk about:

- What other things can you measure with measuring cups?
- Which measuring cup is the smallest and which is the largest?

Websites for kids:

- http://www.kidscourier.com/kids_learning/math/math_measurement.html
- http://www.nist.gov/public_affairs/kids/morenist.htm
- http://pbskids.org/cyberchase/webisode_3/web_game3.html
- <http://www.funbrain.com/measure/>



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Alexander, Who Used to Be Rich Last Sunday

By Judith Viorst, Illustrated by Ray Cruz, Aladdin Paperbacks, New York, 1978

Description of book:

Although Alexander and his money are quickly parted, he comes to realize all the things that can be done with a dollar.

Age Level:

7-9

Skill:

Money and savings

Activity:

Savings Box

Materials:

- Container to put savings in
- Goal sheet
- Writing utensil and stickers (or any decorations)

Instructions:

- Read *Alexander, Who Used to Be Rich Last Sunday* together. Talk about the story.
- Alexander realizes that money goes fast if you don't have a goal in mind of what you want to buy or save for. Can you think of something you would like to buy for yourself or someone else? Find out how much it costs.
- After you have a goal in mind of how much you need to save, write it down on the Savings Sheet (that is in your Savings Box). Follow the directions on the Savings Sheet. Each week and month record your savings on the chart.
- Next, write your name on the lid of the Savings Box and decorate the box with stickers.
- Start saving your money and keep your goal in mind. Remember, you can save your money for just a month or the whole year depending on how much you earn and what it is you are saving for.

Things to think and talk about:

- Tell your child about a time that you saved up money you have earned to buy something. Explain the planning that is behind saving.
- Are there any chores your child can do around the house to earn money?

Websites for kids:

- <http://www.funbrain.com/cashreg/>
- <http://www.kidsmoney.org>
- <http://www.usmint.gov/kids>
- <http://www.moneyfactory.com/kids/start.html>

My Savings Sheet

I, _____, would like to buy _____
Your name What you are saving for

for _____ which will cost _____
Who you are buying it for Put dollar amount here

In the chart below, write in how much you have saved during each week of each month. Add up the amounts from each week to get the total for the month. At the end of the year, add up how much you have saved each month. Remember, keep in mind what you are saving for. It can be something different each month or one big thing for the whole year... you decide! It's YOUR money!!!

Month	Week 1	Week 2	Week 3	Week 4	Total
January					\$
February					\$
March					\$
April					\$
May					\$
June					\$
July					\$
August					\$
September					\$
October					\$
November					\$
December					\$
				Grand Total	\$