

Creative Curriculum



CHILDREN'S
HOME
SOCIETY OF
CALIFORNIA

Children love games, especially when they can help make them! Simple games help them improve their social skills and mathematical development. Games offer children the opportunity to practice numeracy skills such as counting and basic addition or subtraction, spatial awareness, and to develop mathematical reasoning. Children also learn how to work cooperatively and resolve conflicts when they play games.

LET THE GAMES BEGIN!

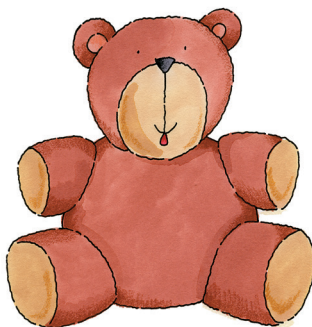
PEEK-A-BOO!

Age group: Infants and toddlers

What you need: Sheet or blanket, and a teddy bear or other stuffed animal.

What you do: Spend a few minutes using the teddy bear to play with the baby. Dance the bear towards the baby, away from the baby and around the baby. Describe what the teddy bear is doing. For example, "Teddy is dancing next to you, now he's dancing on top of your tummy, now he's dancing above your head, now he's dancing below your feet." Once the baby is visually tracking the toy, hide it under the blanket. Use the blanket to play peek-a-boo between the toy and the baby.

What they learn: Infants practice spatial awareness and begin the development of object permanence (knowing an object is present even when it is out of sight), which usually occurs after approximately six months of age. Infants also hear you name body parts and use positional vocabulary words (next to, below, above, etc.).



SHAKE IT! NUMBER RECOGNITION GAME

Age group: Preschool

What you need: An empty egg carton (dozen eggs), a marker, a button to shake inside, a group of twelve objects that can be counted (buttons, plastic bottle caps, rocks), and a piece of paper.

What you do: Inside each egg compartment write a number from one to twelve in random order. Place the button inside and close the carton. Let a child shake the carton and then open it. Ask the child to name the number the button landed on. Write that number on a piece of paper where all the children can see it, and ask the child to count out that many objects. Pass the shaker to the next child and repeat the actions. Keep playing until the button has landed on all twelve numbers at least once.

What they learn: Children practice identifying numerals, counting, one-to-one correspondence, and social skills.

COLOR PATTERN PLATES

Age group: Preschool

What you need: Paper plates, colored markers, and wooden clothespins.

What you do: Use the markers to color the edge of the paper plate. Create color patterns around the edge. For example, color red-blue-red-blue around the edge of the plate. You may want to create some simple two color pattern plates, and build up to more complex five color sequences. Color each wooden clothespin a color that matches the plate. Children will clip the colored clothespins to the corresponding color on the plate, so make enough clothespins for the patterns. Once children can manipulate the clothespins easily, you can have races to see who can clip their pattern the fastest, or set a timer and see how many patterns they can finish before it dings. Ask children to describe the color patterns they see.

What they learn: Children practice the following math skills: patterning (a pre-algebra skill), one-to-one correspondence, and color identification. They also develop their eye-hand coordination and pincher grasp, a fine motor skill which is crucial for holding a pencil correctly.

FILE FOLDER BOARD GAMES

Age group: School Age

What you need: Manila file folders, colored pencils and markers, stickers (shapes, numbers, decorative), shape stencils (to make the game "boxes"), rulers, objects to use as game pieces (small plastic animals, cars, large buttons), dice (to roll for turns and count spaces), and a timer.

What you do: Children can work alone or in groups. Encourage them to think of a theme for their board game (dinosaur land, jungle run, etc.). Give each child/group a manila file folder to use as their game board. They can use the craft materials to design and make their game. Then they need to develop rules for their game. Adults can help write down the game rules. Make a game box where children can store their games and place them in your math area as a play choice.

What they learn: School age children practice identifying numerals, counting, identifying shapes, mathematical reasoning, writing, social skills, conflict resolution, and negotiation. This is also an opportunity for them to be helpers and teach younger children how to play their board games.

For more than a century, Children's Home Society of California (CHS) has adapted to the changing needs of children and families. Since 1891, CHS has worked diligently to protect our community's children and strengthen their families through diverse programs and services.

The mission of CHS is to reach out to children and families at risk with a range of services to ensure every child the opportunity to develop within a safe, healthy, and secure environment.

To fulfill our mission, CHS provides a variety of services to children and families in California and nationwide, working to improve their quality of life by offering vital information, educational, and resource services, which include Community Education, Child Care and Development, and Family Resource Services. Along with helping children and their families, CHS is an expert resource for child care providers, other social service agencies, and government agencies at the local, state, and national level.

© 2014 Children's Home Society of California
Funded by California Department of Education –
Early Education and Support Division

Children's Home Society of California's (CHS) Resource and Referral (R&R) Program provides child care referrals to parents within CHS's designated service area to all parents requesting services regardless of income level or other eligibility requirements. Referrals are provided to parents based on their specific needs. CHS refers to child care centers, license-exempt child care centers, and licensed family child care homes.

In order to promote quality child care for children, CHS will:

- Assist parents seeking child care, but will not make recommendations.
- Provide written information about selecting quality child care.
- Recommend that parents visit facilities before making a decision.
- Inform parents of their right to review licensing information about providers.
- Maintain confidentiality of all information received from the parent.
- Not discriminate against any individual or group based on race, creed, religion, national origin, sex, age, handicap, or income.

CHS reserves the right to discontinue referrals to a provider when:

- Licensing, law enforcement, or another regulatory agency has substantiated a complaint involving the health, safety, or personal rights of children; or actions that would impact the care or services to children.
- CHS is informed of an ongoing investigation regarding the health, safety, or personal rights of children; or actions that would impact the care or services to children.
- CHS has received a complaint regarding the health, safety, or welfare of a child and CHS is waiting for a response from the local licensing agency regarding the results of the complaint.
- The provider has been issued a probationary license or a corrective action plan.

CHS will notify the provider in writing when it is determined that CHS will discontinue referrals to the provider because of one of the above items.



Address Service Requested

If you would like additional copies of this newsletter to share with parents or other child care providers, please visit our website at www.chs-ca.org/child-care/ppn.



Non-Profit Org.
U.S. Postage
PAID
Los Angeles, CA
Permit No. 32415

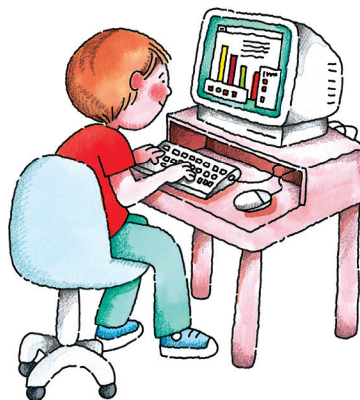


Child Care and Development Services



MARVELOUS MATH

Children use math in marvelous ways every day. In fact, the best way to help children develop their math skills is to incorporate math concepts into daily routines and activities. The opportunity to use math in practical ways communicates that there is value in learning number sense, classification, patterning, measurement, shapes, spatial awareness, and mathematical reasoning. The *California Preschool Curriculum Framework, Volume I* states that “Play is children’s work. Adults support young children’s diligence and mathematical development when they direct attention to the mathematics children use in their play, challenge them to solve problems, and encourage their persistence.”



Using play to introduce and strengthen math development makes learning new concepts fun and interesting. While children are engaged in play, adults can help them focus on math skills through the use of observation, vocabulary building, and thought extension. Consider the following story, and notice how this teacher supports her student’s math development:

Jimmy is working with blocks. His teacher, Emily, is sitting nearby. She notices that he has lined up the blocks in a pattern of red-blue-red-blue. Emily says, “Jimmy, look at the wonderful pattern you made! I see a red block, then a blue block, then another red block, and another blue. When two colors repeat like that it is a pattern. Would you like to draw a picture of your pattern for the Math Book? Jimmy answers, “Ok, but if I leave someone will break it.” He looks towards the writing area. Emily asks, “What will you need to draw your pattern? I can get it for you.” Jimmy tells her he will need paper, a red crayon, and a blue crayon. Emily retrieves the items, and Jimmy draws his block pattern. They place it in the Math Book which is kept in the book center. The Math Book contains photos of patterns that children have either made or found. continued on page 4

MATH RESOURCES

Looking for more information about math development, activities, or ways to create an environment that supports mathematical thinking? Visit your public library and browse through the following books:

- *Block Play* by Sharon MacDonald and Katheryn Davis
- *Blocks and Beyond: Strengthening Early Math and Science Skills Through Spatial Learning* by Mary Jo Pollman
- *Math at Their Own Pace: Child-Directed Activities for Developing Early Number Sense* by Greg Nelson
- *Math Play! (Williamson Little Hands Series)* by Diane McGowan and Mark Schrooten
- *More Than Counting: Whole Math Activities for Preschool and Kindergarten* by Sally Moomaw and Brenda Hieronymus
- *Snackivities: 50 Edible Activities for Parents and Children* by MaryAnn F. Kohl and Jean Potter
- *The Giant Encyclopedia of Math Activities For Children Age 3 to 6: Over 600 Activities Created by Teachers for Teachers* edited by Kathy Charner

You can also visit www.naeyc.org and click on the publications page to search for archived articles and resources regarding mathematics.

WHAT'S INSIDE

reflective practice	2
caring for kids	2
child health	3
recipes	4
creative curriculum	5





THE LANGUAGE OF MATH

Math activities offer opportunities to develop children's self-expression and vocabulary. Adults can enhance this learning by interacting with children. While children are playing, adults can observe and join in when appropriate. For example, if a group of children are in the block area building a structure, then the adult can ask about what they are building and introduce vocabulary. "I see you are using the rectangle blocks as a foundation, and the square blocks as walls. Which blocks will you use for the roof?" Block play is a wonderful way to introduce math vocabulary about shapes, colors, and patterns.

You can also illustrate more complex math terms with blocks. For example, if a child explains he is building roads, you can point out which roads are parallel to each other, and which are perpendicular. Those may seem like tough words, but with the blocks there as an illustrated guide, the meanings are clear.

Take a moment to think about the items in your room that children can classify or use to make patterns. How could you use those classification and patterning experiences to develop children's language and introduce them to new vocabulary? What questions could you ask? Write down some general questions you can ask and make them into a wall poster that you can refer to throughout the day.

Source: *California Preschool Curriculum Framework* by the California Department of Education (Sacramento, 2010).



CARING FOR KIDS

STEM PLAY EVERY DAY

Children can learn about science, technology, engineering, and mathematics (STEM) when they engage in meaningful play. What helps to make play meaningful? A thoughtful and intentional educator designs a learning environment that offers materials which are open-ended and interesting, extends learning through quality interactions, and plans activities that stimulate children's curiosity and thirst for learning.



Support science learning by putting together a table with natural objects, plants, or animals (like a fish tank) that children can investigate with magnifying glasses and include nonfiction books, pictures, or posters about those materials. You can extend science into other areas by placing plants around the room, planting a garden, and placing toy medical kits and lab coats in the dramatic play area. You can also add non-fiction books to the book area, use musical instruments that are made from natural materials, and hang wind chimes, prisms, or bird feeders in windows.

Give children the opportunity to experiment with different forms of technology by including materials such as calculators, cash registers, and microscopes. You can even use old keyboards or laptops, plastic phones, MP3 players, microphones, tablets, educational videos, digital cameras and photo frames. You can consider adding pictures of people using technology throughout your environment. Make sure to verify that used laptops and phones do not contain toxic materials harmful to children. These materials can be used for dramatic play, music appreciation, science exploration, math experiences, teaching activities, and documentation of class projects.

Engineers are problem solvers, so equipping your environment with materials that allow children to experiment with structures, the physical properties of objects and how they can be manipulated, and the opportunity to build will help develop engineering skills. Choose items such as wooden blocks, boxes, tubes, plastic pipes, plastic funnels and cups, buckets, yarn, rulers, measuring tape, and balls of different sizes and weight.

ASTHMA AND ALLERGIES

Many children struggle with asthma or allergies. Asthma causes difficulty in breathing. During an asthma attack, the air passages in the lungs become narrow and congested with mucus that can cause wheezing, tightness in the chest, tiredness, or coughing. Asthma can be controlled with medication, but needs to be closely monitored.

Asthma can be triggered by allergies to pollen, mold, cockroaches, animal dander, dust mites, cigarette smoke, cleaning products, or by colds and viruses, temperature, weather, or food allergies. Asthma triggers are unique to each person, so you will need to have a conversation with parents to determine what triggers you need to be aware of and how to handle problems when they occur. Make sure you have a doctor's note for any medication, and ask to be trained in how to use medication dispensers such as an inhaler, spacer, or nebulizer.

Allergies affect over fifty million Americans. There are seasonal allergies to pollen or weather changes, allergic reactions to insect bites or stings from spiders, bees, hornets, wasps, yellow jackets, or fire ants, allergies to medications such as penicillin, as well as food allergies to nuts, fish, shellfish, dairy, eggs, wheat, or soy. Most allergies can be controlled by avoiding those things that cause them, but some require immediate medical attention. Talk to parents and write out a health plan that will help you prevent allergy attacks from occurring, and will guide you in what to do when they cannot be avoided.

Remember to keep all health and medical information in a confidential, but easily accessible location. For example, it is not appropriate to post a list of children with allergies in a visible area, but it can be kept in the front of a file drawer. For more information about asthma and allergies visit the California Childcare Health Program website at www.ucsfchildcarehealth.org, or the Centers for Disease Control and Prevention website at www.cdc.gov.

Source: www.cdc.gov

You can also use real construction tools such as hammers, nails, wood, nuts, bolts, screw drivers, and wrenches. Real construction tools must be closely supervised, and children should wear protective eyewear. Try giving them problems and see what solutions they come up with. For example, "How can we keep rabbits out of our garden?"

Hopefully by now you are noticing how all of these areas overlap and include math. Children use math skills such as measurement, classification, sequencing, counting, and estimation whenever they engage in science, technology, and engineering activities. Plan activities that allow children to make predictions, experiment, evaluate outcomes, and make corrections. Enrich their learning experience by asking them questions about their work and, when appropriate, offer suggestions for how they can go further with their projects.

SQUISH SQUASH APPLESAUCE

Make learning fun! Use cooking activities to teach math concepts, skills, and vocabulary. Children can practice many practical math skills when they engage in cooking activities. They can experiment with measurements, quantities, counting, identifying numerals, and estimating.

Cooking is a wonderful way to practice estimation skills because every time children use a measuring cup or spoon they can connect the measurement vocabulary with what they see. In other words, they begin to know what one cup, one tablespoon, or one teaspoon looks like even if the container they are using does not have measurement indicators.

Try this recipe for applesauce and let the math learning begin! Remember that cooking activities should always be supervised, and only adults should use sharp tools. You will need:

- Knife (adult use only)
- Fruit/vegetable peeler
- Cutting board
- Large mixing bowl
- Potato masher
- Several apples (8-12)
- 2 tablespoons of lemon juice
- 2 teaspoons of sugar
- Cinnamon to taste

Peel the apples. Remove the cores and cut them into slices. Put the sliced apples in a pot and warm them over medium heat. Once they are warm, put them into a large mixing bowl, and smash them with the potato masher. This is a great job for children! Add the lemon juice, sugar, and cinnamon. Keep mashing until the mixture looks like applesauce. Serve and enjoy!

Source: www.sproutonline.com



MARVELOUS MATH continued from page 1

Emily drew Jimmy's attention to his math work by narrating what she saw, supplying the appropriate vocabulary word, and by giving Jimmy a way to look more closely at his pattern. She also created a Class Math Book where children can collect and review their work. Observing children at play helps you develop a sense of when it is appropriate to step in and support their learning.

When children encounter obstacles in their play they will use a variety of math skills to find solutions. Children will often need to try out several different solutions before they find the right one. They may need an adult to step in and help them see the problem through to the end. Encouraging children to be persistent and achieve their goals helps them develop problem-solving skills and builds up their resilience.

Imagine there are a group of four children who are playing with a ball. They throw it over the playground fence. They know they are not permitted to climb the fence, but they want to get the ball back. First they try to reach under the fence to retrieve it, but their arms are too short. They ask the teacher if she can get the ball for them. The teacher replies, "I need to stay where I can keep children safe. Can you think of another way to reach the ball?" The children begin trying to use sticks and shovels to reach the ball. They finally discover that the broom will fit under the fence, and is long enough to reach the ball. Now they have to figure out how to angle and drag the broom in order to pull the ball towards the fence. After several attempts they finally manage to drag the ball back to a point where they can reach it.



These children used mathematical reasoning, measurement, classification (algebra), and spatial awareness (geometry) to solve the problem of retrieving their ball. Take advantage of the learning opportunities during play and routines to teach children math concepts. Practice number sense by asking children to count out food items during snack, or ask how many children there are and see if they can tell you who is missing. Support the math development of preschoolers by making math tools such as rulers, tape measures, measuring cups, balance scales, and blocks available daily, and extend their learning through the use of observation and positive interactions. Look for more marvelous math ideas in our *Caring for Children* section of this newsletter or by reading one of the books listed in the *Math Resources* article.

Source: *California Preschool Curriculum Framework, Volume 1* by the California Department of Education (2012).