

The National Council of Teachers of Mathematics and State of California have developed content standards for Math. Possible activities and experiences are listed by math content area.

Number Sense and Operations

Games with Dice Make a large die out of a box with number dots and the corresponding number symbol. Children take turns rolling the die, identifying the number and then leading the family in doing the action that number of times. They will practice ways of representing numbers and counting

Number Bingo Game Make playing cards that have written numbers in each of the squares. Children take turns rolling the die and placing the correct number of dots under that number. They will practice ways of representing numbers and counting.

Bears in a Cave Using an overturned plastic sorting tray or box to represent a cave and seven or eight plastic counting toys (bears, dinosaurs, animals etc), two family members act out a scenario in which a group of toys are having a picnic and decide to play hide-and-seek. While the child covers their eyes, the other person takes some of the small toys and hides them in the cave, leaving the remaining ones in plain sight. The child who has been covering their eyes tries to guess how many bears are hiding in the cave practicing counting and addition and subtraction

The Goldfish Game A family member tells a story about a whale who loves to eat goldfish. The children play the part of the whale and places the number of fish the family member says on a blue napkin that represents the ocean. The family member then says how many goldfish the whale gobbles up. The child eats that many goldfish and then identifies how many goldfish are left. This would practice counting and simple addition and subtraction.

A variation of this game would be for the child to use small bottle lids to match to the number of fish they have. The game could be for some fish to hide in the caps from the whale and practice one-to-one correspondence.

Geometry

Secret Socks A family member can create a "secret sock" which contains several mystery shapes. The secret sock is given to the child. The child feels the shapes inside the socks without looking, and in their own words, the child describes what they think is inside. This activity gives children practice in identifying and naming shapes and their properties.

Shape Scavenger Hunt Show your child a few different shapes. Discuss the similarities and differences of those shapes. Have your child choose a shape to look for in the environment such as a circle. Your child can now go into the environment to find an object shaped like the shape they chose. They will be identifying and naming shapes and their properties.

Shape Story Using differently shaped flannel pieces or drawing shapes on a large piece of paper with markers, make up a story with each shape having a name and character such as Cindy Circle, Trini Triangle. Integrate the characteristics of the shapes into the story such as the circle rolling because it has no points and the triangle looking the same no matter which way it turns. Have your child take turns continuing the story. This story gives your child practice in identifying and naming shapes and their properties.

Shape Sculptures Give your child a collection of twist ties, pipe cleaners and/or rubber bands to rearrange and reshape. Describe what they are doing with the materials and model new ways to use them. They will be practicing creating and naming two and 3 dimensional shapes.

Shape Printing Give your child objects of different shapes to dip in paint and create prints with. Look for and comment on patterns and properties of the prints they create. This activity involves children in naming two dimensional shapes and patterning.



Algebra

Spin and Match This activity requires game pieces of varying colors and features (large/small, light/heavy, dark/light, curved/straight) and a spinner made by a family member. The spinner will reflect the features of the pieces. For example if the children are interested in big and little, a spinner is divided in half with BIG written on one side and little written on the other. If they want to sort by color or shape, the spinner can be divided into wedges of color or sections with shape pictured. Sitting in a circle around the pieces and spinner, family members and the child take turns spinning, reading the spinner, and selecting the indicated pieces. This game gives children practice in sorting and classifying.

Frogs on Lily Pads Using small plastic frogs and two inch squares of paper in a variety of colors, tell a story about a frog who crossed a pond by jumping on colored lily pads. Arrange the squares in alternating colors in a line. As you make the frog jump say the color of the square. Other animals could be substituted in the story. Your child can then use their frogs and squares to make their own colored path and build on the story. This activity gives your child practice in classifying, color naming and patterning.

Graphing Graphs can be created with your child using any concrete characteristic such as eye or hair color, type of shoes they're wearing, a grouping of objects such as buttons (colors, how many holes), colors/kinds of vehicles family has, number of letters in your name, etc. Your child will be practicing sorting, classifying, counting and comparing amounts.

Animal Habitats Talk with your child about the different places that animals live (farm, forest, sea). Provide photos and natural items such as sticks, leaves, shells, and small plastic animals and have them sort the animals to create animal habitats. This activity gives them practice in sorting, classifying, and counting.

Treasure Collections Have your child gather objects to make a collection. These collections could happen on a neighborhood walk, outside on the playground at the park or from inside the home. Give your child boxes or other containers and spread the collection items on the table. Initiate the activity by talking about the characteristics of the items you see and notice how things are the same or different. Encourage them to explore their collections, talk about aspects of the objects (shape, color, texture, etc.) and place them in groupings. Add magnifying glasses for more detailed examination. This activity gives children practice in classifying, sorting and seriating.

People Patterns Your child can look at the clothing they're wearing (colors, buttons/zippers, shoes/sandals) or decide on a way they want to pose their body (hands up/ hands in front of their body, bending to the left/bending to the right) and create patterns using other family members. You could start by suggesting a pattern and then see if your child can suggest other patterns.

Sound Patterns Explore the sounds of musical instruments or the way voices can be changed (high/low, soft/loud, quick/long). Create a musical or voiced pattern for your child to follow and then have them suggest other patterns.

Math Related Books

Counting

26 Letters & 99 Cents by Tana Hoban

Count and See by Tana Hoban

Fish Eyes: A book you can count on by Lois Ehlert

More than One by Tana Hoban

Numbers of Things by Helen Oxenbury

One Bear Alone by Caroline Bucknall

One Crow by Jim Aylesworth

Roll Over by Mordicai Gerstein

Six Little Ducks by Chris Conover

Ten, Nine, Eight by Molly Bang

Y la luna sonrió (When the Moon Smiled) by Petr Horacek

Geometry

Picture Pie by Ed Emberley

Shapes and Things by Tana Hoban

Shapes, Shapes, Shapes by Tana Hoban

Circles, Triangles and Squares by Tana Hoban

Square is a Shape by Sharon Lerner

Straight as a Line by Sharon Lerner

Shapes by Jan Pienkowski