MATH:

- Every activity can be math. Count glue, scissors, etc. Let the children do it. Count snack - 3 cookies, etc.
- Children make sense of their world through math and logic.
- Any book can be a math activity.
- Make a graph for children.
- Classification (also called sorting); putting things into groups based on common characteristics (shape, size, color, texture, function or use, taste, smell, sound, etc.) Let children group in ways that make sense, but let them think of ways that no one else would think of (creativity).
- Seriation - Placing things in order of biggest or most to smallest or least.
- Measuring - Could be a cooking activity.
- Counting - Order of numbers or one to one correspondence (one cup matches with one plate).
- Understanding number symbols - Knowing that 2 stands for two, recognizing it and being able to identify it and write it.
- Number operations and number sense - Becoming familiar with adding and subtracting the things in their world based on concrete examples . (If we have three fruit snacks and get three more from the teacher, how many will we have? What if we eat, or subtract, two of them? How many will we have?) Also, understanding the concept of more/fewer/the same. At this age, children must have something that they can physically move around and count to do this.
- Space - Knowing how far apart things are, and understanding spatial relationships (how far/close are things? Which things are farthest, closest?)
- Shapes - Identifying and cutting/drawing/ basic shapes. Using shapes to make things.
- Patterns - recognizing, identifying, describing and copying or continuing patterns in their environment.

Idea examples:

- String beads or pasta and create patterns to copy or continue. Talk about colors, shapes, spaces and patterns.
- Sort things such as coins, beads, leaves, buttons, manipulative toys, keys, milk lids, etc. Ask how they can be sorted - by color, shape, size, use, texture.
- Encourage counting whenever possible.
- Ask the children if they can make shapes using their bodies. How many shapes can they make by themselves? How many can they make with a friend? With two friends?
- Cook or bake something. Let the children do the counting and measuring. Count how many times you have to stir until is it all mixed up. Let them make predictions about what will happen in the oven. Divide the treat with friends. Have children work together to make a large poster-sized recipe complete with pictures, numbers, and words.
- Make a map of the classroom. Draw the children's attention to the shapes and spaces in the classroom. See if they can devise a better way to arrange the shapes (furniture) in the room.
- Conduct surveys and graph the results: Who has a library card? How many scoops of rice do you think it will take to fill the jar? What's your favorite ice cream flavor?

SCIENCE:

- Observing through the 5 senses: looking, smelling, touching, listening, tasting.
- Inferring - Interpreting (or explaining) what was observed using the 5 senses (I can hear a popcorn popper and smell popcorn, so someone must be making popcorn).
- Classifying - Grouping (sorting) according to characteristics: size, color, weight, etc.)
- Measuring - How much, what temperature, how tall, how heavy, more or less, etc.)
- Predicting - Forecasting the future based on existing patterns (I think the sponge will sink because there are other sponges already under the water on the bottom).
- Communicating - Getting information to others and recording data.
- Using time/space relationship - Identifying relative position and motion of objects, as well as changes over time. (This marble rolls down this block faster than it rolls down that block; but if I change the tilt of the block the speed changes.)
- Formulating hypotheses - Making educated guesses on the basis of current information before investigating or experimenting (I think butterflies like to eat grass).
- Identifying and controlling variables - Identifying the variables that affect a system, and selecting those to manipulate and those to hold constant. (Checking the speed things roll down tilted blocks and changing the tilt of the blocks.).
- Comparing - noting similarities.
- Counting - Finding out how many.
- Defining - Creating new terms for things or learning the current term, such as curvy, spiney, etc.
- Testing - part of experimenting.
- Experimenting - investigating through controlled manipulation of variables using all applicable and appropriate process skills (any of #1-13 above)

IDEAS:

- Sink and float different objects in water - jello, pudding, or other fluids.
- Mark with tape all the objects in the room that “stick” to the magnet (stay away from the computer) Then make a poster list of all the things you found.
- Race cars down tracks made with blocks, poster board, etc, and record the results. Try altering the weight of the cars by tying magnets to them and see if that matters. Then try changing the tilt of the track. See what other things the children think to alter. Write down all the results of your experimenting.
- Sort rocks, leaves, seeds, etc according to different criteria. Record the different groups you chose and graph how many objects ended up falling into each group
- Graph classmates’ hair, eye, shoe color.
- Bring in old DI radios, cameras, etc. and let the children use screwdrivers to dismantle and explore them.
- Take a survey among class members about favorite ice cream flavors, animals, flowers, colors, etc. Graph the results.