STEAM Powered Play:

Science

MAKE SCIENCE PART OF EVERY DAY!

Observe nature

Wonder how things work

Build with blocks

Take things apart

Experiment with kitchen chemistry

Science in Action

When children do science experiments they learn to ask questions, solve problems, and explain how things work.

A child's best science tools are their five senses! Discover what you can see, hear, touch, smell, and taste.

Playing with a Magnifying Glass

Practice your powers of observation. Talk with children about the difference between looking near and looking far.

Collect nature items like leaves, rocks, or feathers to examine with the magnifying glass.

Look closer at the illustrations in a picture book. Many books have small details that you can search for.

Go on a scavenger hunt! Using a magnifying glass makes kids feel like detectives.

Questions to Ask

- What do you notice?
- How does it look different?
- Tell me more about what you see.

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Technology in Action

The difference between harmful screen time and educational screen time is INTERACTION! You make the difference. When children talk and engage with an adult about what's on the screen, they can learn important skills.

Technology is more than screens! Simple tools and machines like gears, levers, and pulleys are tech too.

Computer coding seems complex, but it is based on simple logic problems. Sorting, sequencing, and following directions builds coding skills.

Playing with Sorting & Sequencing

Sorting items into categories or putting steps in order are important for developing a child's logic and understanding.

Make cleaning up a sorting activity by picking up toys by color or shape.

Play robot! Pretend to be a robot and follow your child's directions. With older children make it trickier by following directions literally, for example, don't stop walking until the child says Stop.

STEAM Powered Play:

Technology

As technology becomes a larger part of the classroom, children need digital literacy skills.

DIGITAL SKILLS

Use a computer mouse

Scroll/ Select/ Exit

Know tech vocabulary

On a touch screen: Swipe / Tap / Double tap / Pinch / Drag / Flick

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Engineering in Action

When children build, they are planning, problem solving, and learning spatial skills.

Use special vocabulary like under, beside, through, or above when playing with your child.

Playing with Blocks & Ramps

Build ramps for balls and cars out of books, tubes, cardboard. Test the ramp and race different toys and balls.

Stack other objects beside blocks. Boxes, rocks, or sticks can provide a new challenge because they are uneven.

Questions to Ask

How can we make this taller/ longer?

What might happen if . . . ?

What can we change to fix the problem?

STEAM Powered Play:

Engineering

Encourage children to think like engineers as they build and play.

DESIGN PROCESS

Name the Problem

Imagine / Plan

Create

Improve

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Art in Action

Creativity is the cornerstone of science and exploration. When young children engage in art, the creative process is more important than how the product looks at the end.

Playing with Colors

Use the eye dropper to create messy art with colored water! Drip water onto a paper towel or coffee filter to watch colors mix.

Shake baking soda into a baking pan. Squeeze vinegar or lemon juice with food coloring to make the colors fizz.

Questions to Ask

What do you notice?

How did it change?

What do you think will happen if we . . . ?

STEAM Powered Play:

Art

PROCESS ART LOOKS LIKE:

Open ended projects

No directions

Different choices

Sensory experience

New ways to explore

Child in charge

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STEAM Powered Play:

Math

1,2,3's and More:

Math means

Counting

Shapes

Sorting

Comparing

Patterns

Representing numbers
(3 = I I I)

Math in Action

Children with a strong number sense in preschool do better at math AND reading throughout school.

We use math every day. Let children see you weighing fruit, measuring ingredients, or counting change.

Playing with Magnet Numbers

Mix up the magnet numbers in a tub with beans, cotton balls or other filler and go "fishing" with the magnet wand. Try to find matching numbers, put the numbers in order, count out beans to match the number.

Place magnet numbers on a baking tray. Place the magnet wand underneath the tray and make the numbers move.

Questions to Ask

How many do you have all together?

How can we make a pattern?

What else can magnets stick to?

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