S.T.E.A.M. for Infants & Toddlers!?!

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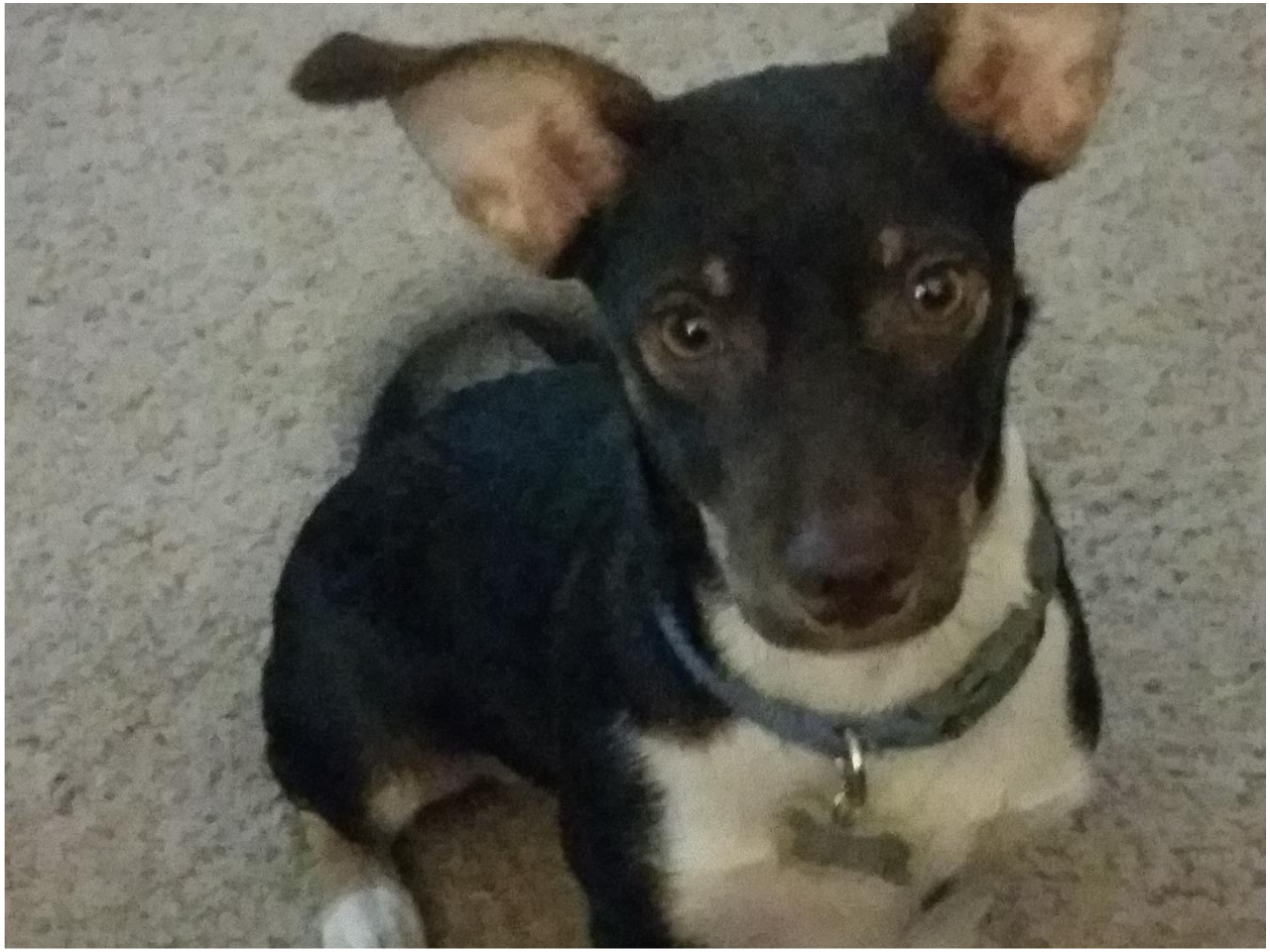
My reasons for everything

And my sweet husband too!

My other reasons….

Our 3 Rescue Fur babies

Bonus Fur Baby



Plus one!

My current co-workers

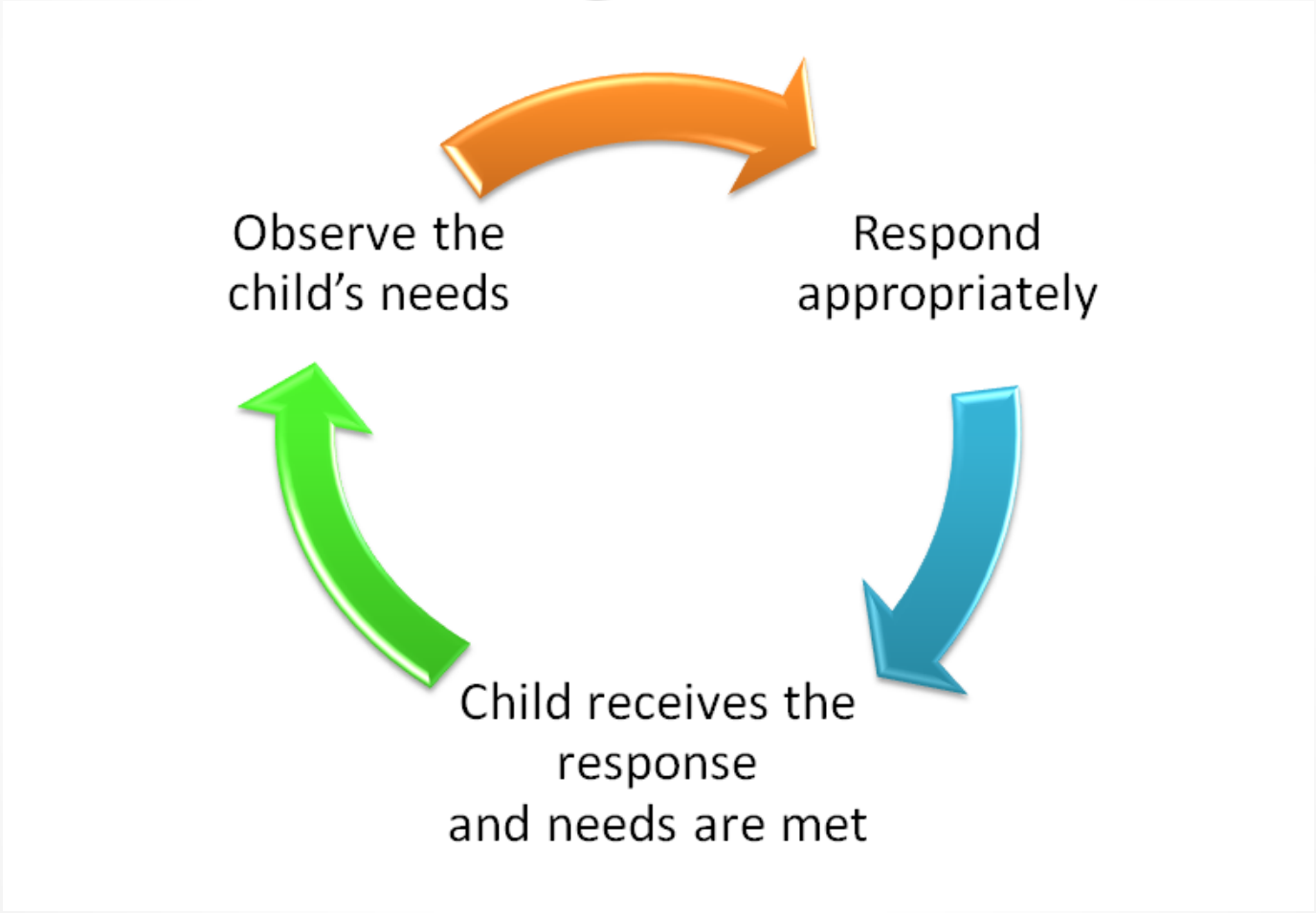
Actually, my last group- several graduated.

Piaget's Stages of Cognitive Development

Zero to two is the **SENSORIMOTOR** stage of cognitive development.

"During the sensorimotor stage infants learn mostly through trial and error learning. Children initially rely on reflexes, eventually modifying them to adapt to their world. Behaviors become goal directed, progressing from concrete to abstract goals. Objects and events can be mentally represented by the child (sometimes called object permanence)." Saul McLeod, SimplyPsychology, 2010

Responsive Caregiving Cycle



Development of Cognitive Skills through Exploration and Discovery:

0-8 Months

- Reach to touch objects
- Put objects in their mouth to touch and taste
- Turn toys over and over to explore, bang toys
- Hit or kick toys to make them move, over and over

8-18 Months

- Look at books
- Enjoy toys/objects that make sounds, such as drums or bells
- Look closely at small objects, examining the detail
- Stack blocks or objects
- Manipulate toys or objects repeatedly

EXPLORATION & DISCOVERY

18-36 Months

- Express interest in animals and insects
- Examine rocks, sticks, and outdoor objects
- Pour, scoop, and explore sand and water
- Match colors and shapes, sort like objects
- Push/pull riding toys

36-48 Months

- Talk about and ask about objects in nature
- Notice and discuss changes in weather
- Name colors and shapes
- Copy simple patterns
- Experiment with different objects during play to compare their effects
- Repeat actions to improve results

Caregiver Response (ALL AGES):

- Provide an enriched environment with a variety of objects to promote exploration indoors and outside
- Rotate materials often
- Allow uninterrupted play time
- Model curiosity, finding answers together rather than providing them
- Engage and play alongside

Setting up the environment for learning

- Activities should be child-directed and teacher supported.
- Minimize or eliminate problems or "no's".
- Resist the urge to "fix" things for the child. Encourage them to try again or ask a friend to help.
- Allow extended, probably messy play. Wait to "clean up" till the end of the activity time. Of course, pick up any hazards as needed.
- Start by introducing materials without instructions. Let the children discover and explore. After they are familiar with the materials, you can begin to introduce ways to use the materials that support your lesson or learning goal.

Setting out toys without direction

First day the tubes from Kodo Kids arrived

Looking and trying

What else can we do?

Giving large blocks of time

Max likes to play too!

A Side Note

The day Lilly arrived

Creating

Putting things inside of other things!

Still creating

Finished?

Let It Go!

It does get messy!

Really, LET IT GO!

Really messy! And they get to clean it up!

My Playroom on Monday

With three new 1 year olds.

The Perpetrators

Working on feeding themselves

SCIENCE

Physical Science

1. Magnets
2. Optics
3. OTHER

Nature

1. Animals/Insects
2. Weather
3. Plants

Human Biology

1. Five Senses
2. Nutrition
3. The Body and Hygiene

Science

They eat EVERY DAY!

Science

Trying broccoli

Science

Cucumbers vs. Pickles

Science

Pickles won!

Science

Exploring real objects

Science

DIRT!

Science

Real cricket found in playroom

Science

Pretend bugs

Science

Grass “cakes”

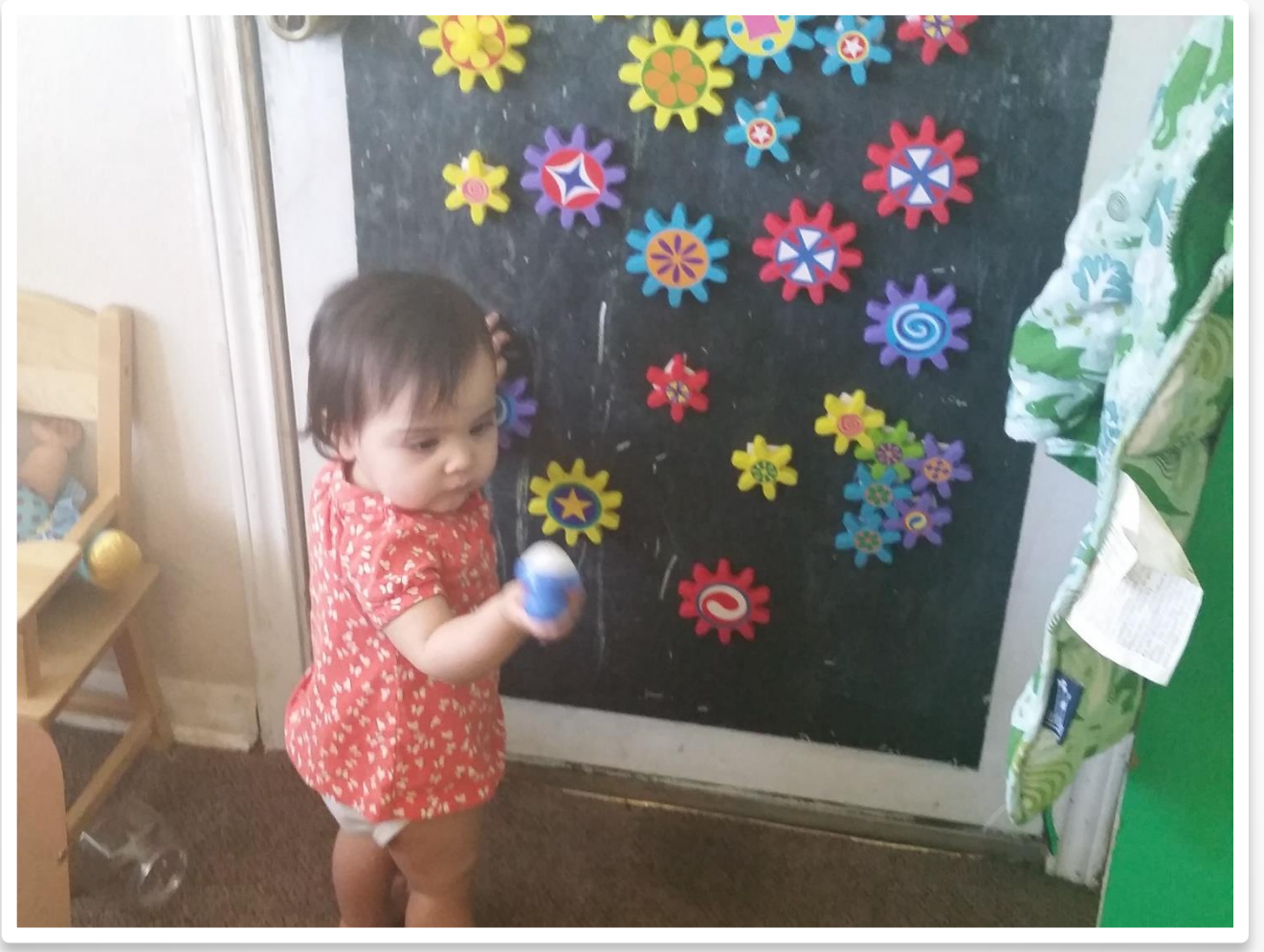
Science

Growing and caring for plants

Science

Plant life cycle

Science



Magnets- working on a vertical surface

Science

A FAVORITE of all ages

Science

Light boxes and color paddles

Science

Light boxes with room lights off

Science

Light and shadow

TECHNOLOGY

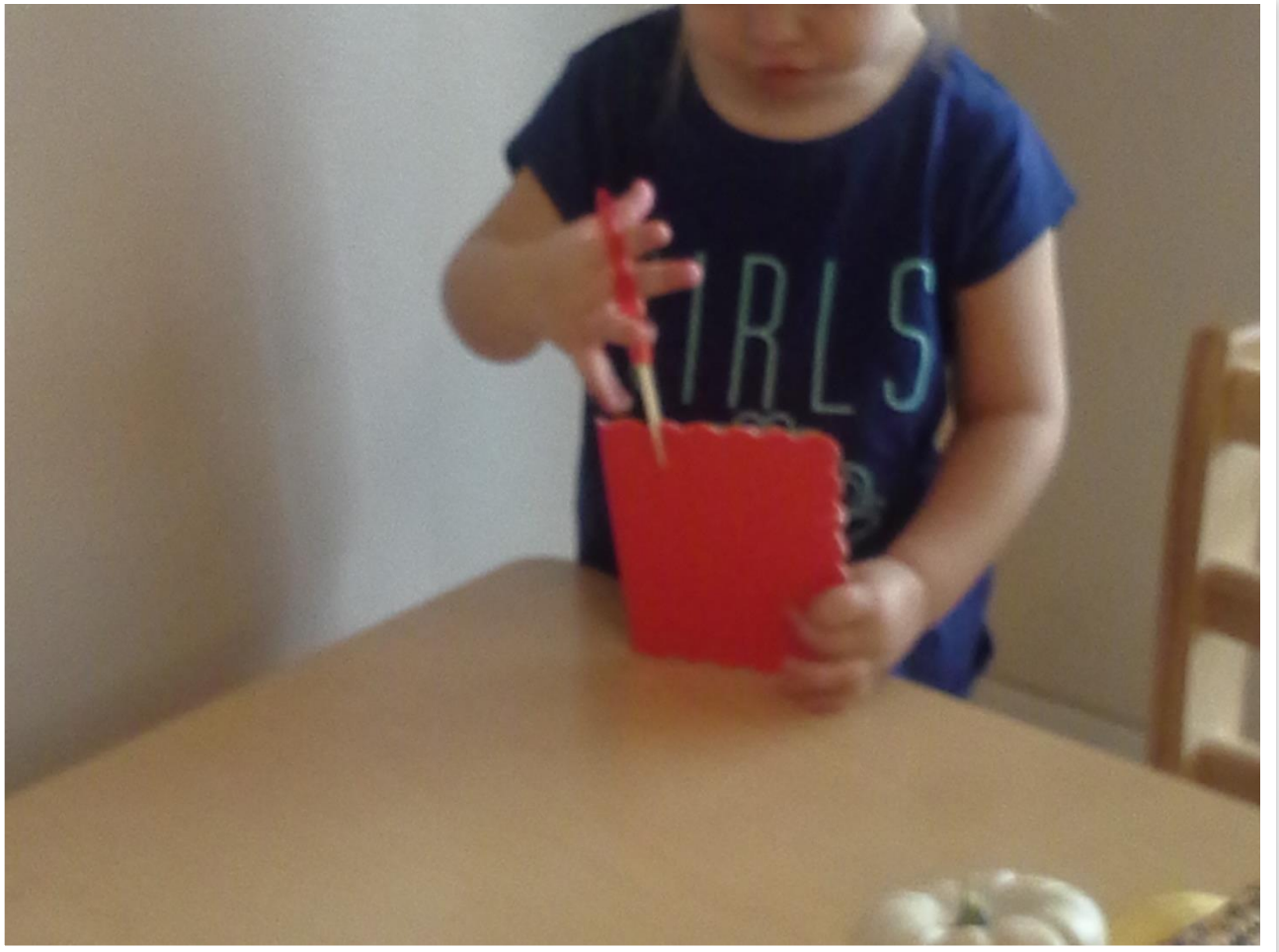
- Technology is ANYTHING that has been created by humans.

- Crayons, paints, paper, scissors, markers, dough, cardboard, blocks, etc. are TECHNOLOGY.

Technology

Scissors

Technology



Scissor grip- beginning

Technology

Grip at end of year

Technology

Table time- Writing Center

Technology

TOOLS!

Technology

Fixing the table

ENGINEERING

1. BLOCKS/BUILDING TOYS

2. RAMPS (plus balls, cars, accessories)

3. FOUND OBJECTS

Engineering

Blocks outside- infants

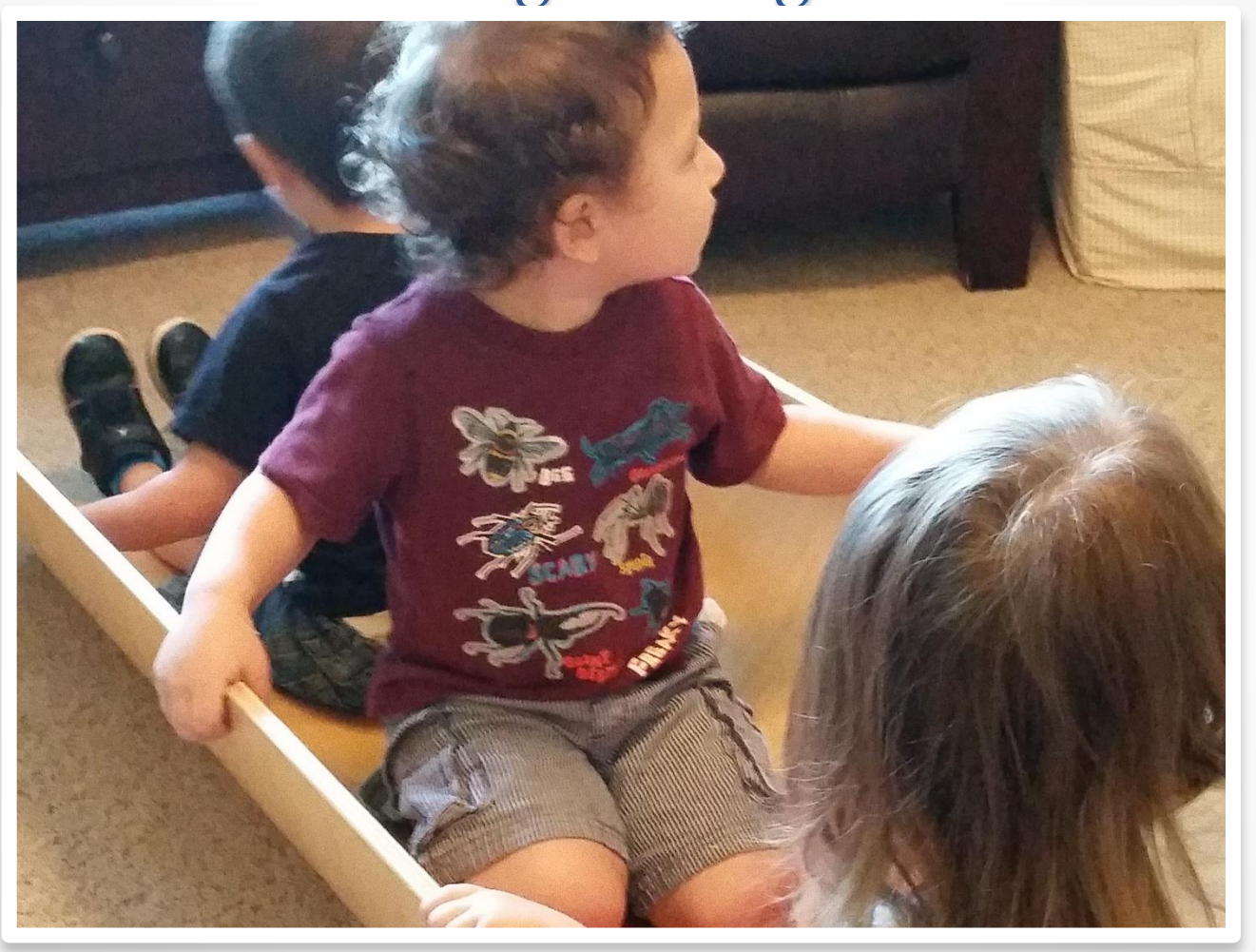
Engineering

Blocks and accessories outside- toddlers

Engineering

TUBES

Engineering



Half-round from Kodo Kids as boat

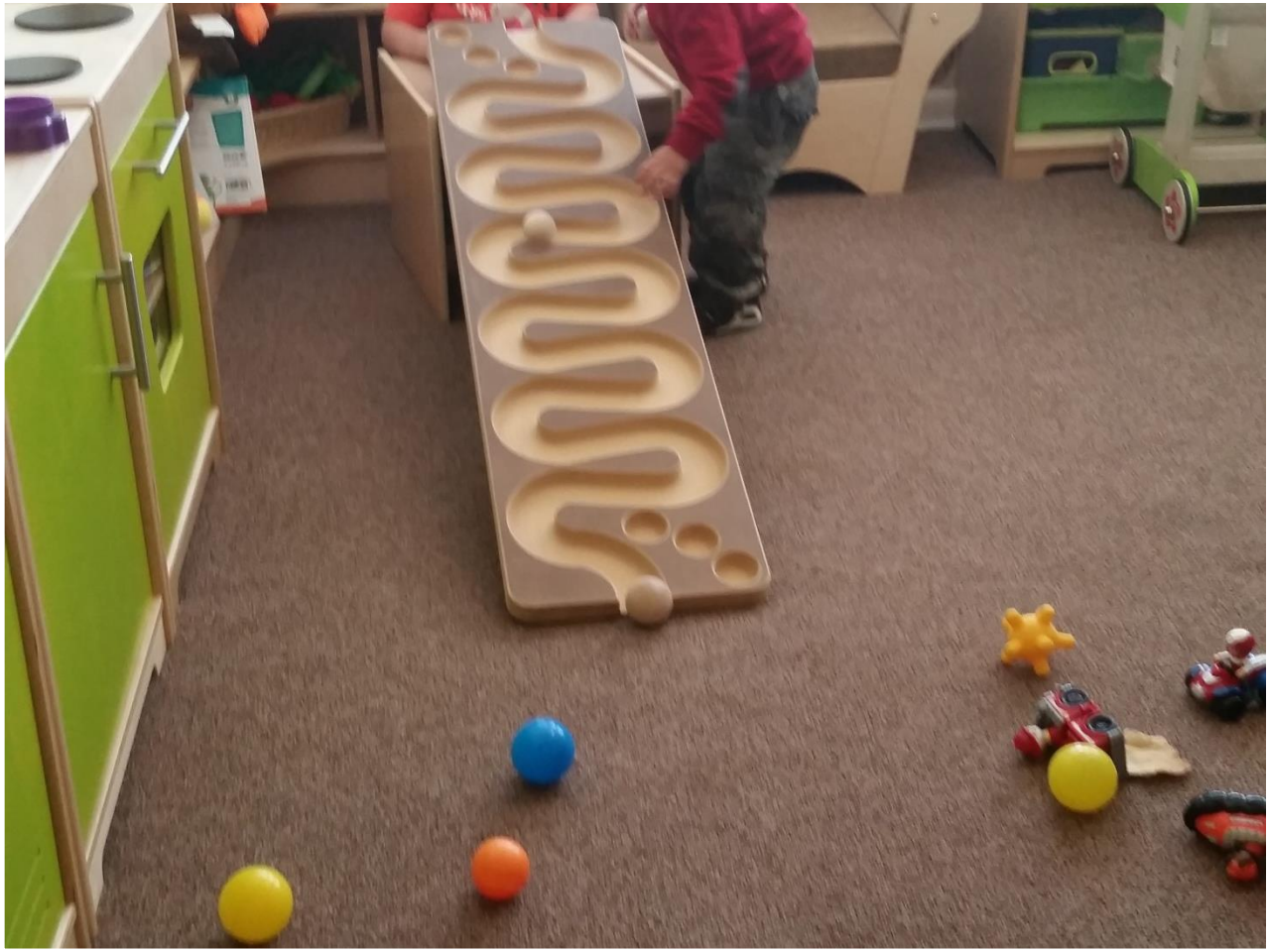
Engineering

As mountain

Engineering

Ramp

Engineering



Toddler mazes- Kodo Kids

Engineering

Using cars and plastic eggs

Engineering

Building a creation

Engineering

Making a “contraption”

Engineering

And MATH- how many toddlers in a box?

Engineering

How many in a car?

Engineering

Boats!

Engineering

ROW YOUR BOAT

Engineering

Promotes cooperation & problem-solving!

Engineering

Cooperation!

MATH- the "M" in S.T.E.A.M.

1. Number and Operations
2. Patterns
3. Geometry and Spatial Sense
4. Measurement
5. Classification and Data Collection

Math

Cheerios Counting Books at snack

Math

Numbers and Operations

Math

Charts and Graphs

Math

Puzzles

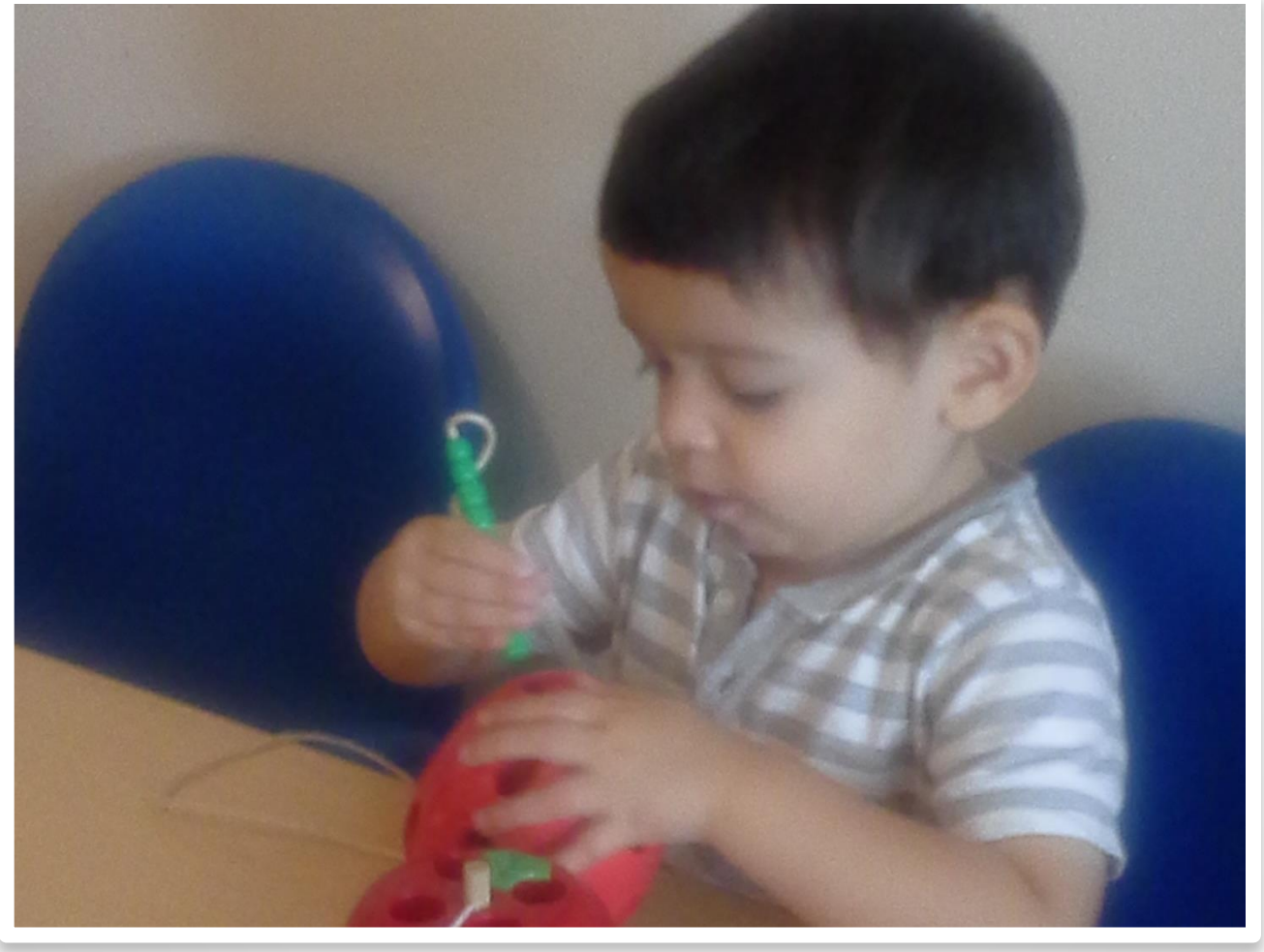
Math

Sorting by Age

Math

One to One Correspondence

Math



Lacing

Math

Assigned colors help teach color recognition

ART- the "A" in S.T.E.A.M.

INFANT/TODDLER ART TIPS:

- Remember that it's the process, not the product, that's important.
- Plan simple art projects to avoid confusing and frustrating your toddlers. Just give infants the experience with the materials and the freedom to explore the materials- this does not mean letting them have free access to the surrounding environment.
- Keep an open mind-your toddlers may have different ideas about how to use the materials you've provided.

- Sit down with your toddlers as they are creating. Talk about what they're doing and join in the creative process. Offer suggestions by modeling them, rather than explaining them.

- The children will love “painting” with water. Works well with colored or butcher paper. Great for outside time.

- Invite your toddlers to stand up while drawing or finger painting. This allows them to involve their arms and bodies in the process. Be sure to give your child plenty of space for moving around.

Art

Watercolors

Art

Fingerpainting

Art

Experiencing the medium

Art

Painting NOW

Art

More experiential

Art

Body Painting

Art

More body painting

Art

Artists!

Art

Finished product

SENSORY PLAY

ART is a GIANT SENSORY EXPERIENCE FOR INFANTS AND TODDLERS. Sensory play is art for infants and toddlers.

Sensory Play

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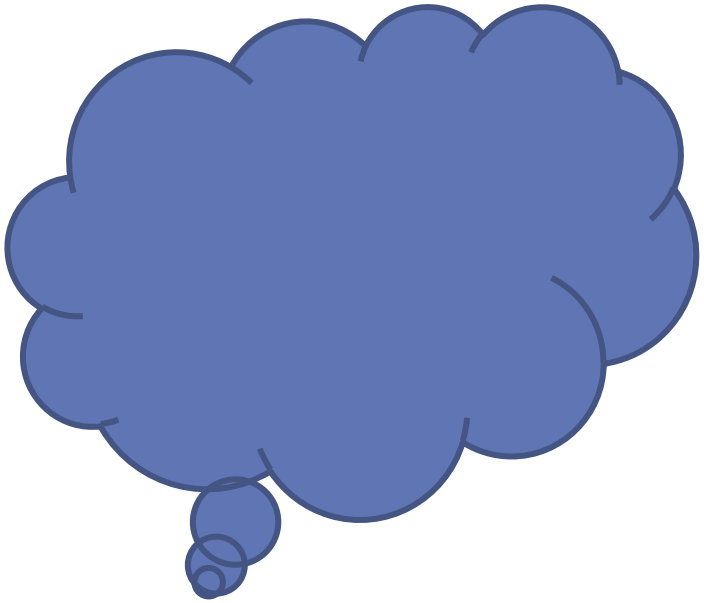
Activities to Promote Cognitive Development

Cognitive development includes four components that describe how young children develop and demonstrate abilities in: exploring the world around them; solving problems; remembering and retaining information; and pretending and using their imagination. Positive early experiences that support cognitive development contribute to lifelong traits, such as curiosity, persistence, and independence.



QUESTIONS????