



Water Exploration



Water Exploration (What's Included!)

- Introduction to the Unit of Investigation
- Materials Needed for Activities
- Vocabulary Words
- Songs to Sing
- Books to Read
- Expanded Play & Experiential Learning
- 6 Activities (Including Materials Needed, Directions to Follow, and Targeted Learning Objectives)



Introduction: Water Exploration

Ready to dive in?! No, really! Because we're all about water! Water is an exceptional substance that is not only necessary for life but also provides a wealth of holistic learning for children, enriching every aspect of their development in engaging ways. Whether you're a teacher or a parent, understanding the significance of water in learning can open up a world of creative and meaningful learning experiences.

When consistently interacting with water, children begin to learn about cause and effect, as well as basic concepts of quantity and volume. This medium allows for emotional regulation, as it can be a soothing and calming activity for children, promoting relaxation and reducing stress, or can provide an outlet for greater movement when children are excited and energized. Water play provides an enjoyable way for children to explore and learn about their environment while promoting their physical, cognitive, linguistic, social and emotional development.

When administering activities, it's important to re-offer the same activities several times over. This allows children the opportunity to make deep connections, comprehend uses and properties, while contributing to mastery and memory recall. And keep in mind that learning is not confined to a specific time, place, or activity. It's an ongoing journey where connections are woven through daily interactions and engagement with the people, places, and materials that surround us.





Materials

Our suggested list of materials are items that will supplement the activities and experiences in your packet.

- 1 large, shallow bin / water table
- Materials to support water play
 - 1 pack of sponges
 - Cups, measuring cups, or stacking cups
- Ice tray
- Water colors
- Popsicle sticks
- Clear, empty bottle/s
- Baby or vegetable oil
- Optional: Hot glue gun for sensory bottle



Vocabulary Words

New & relative vocabulary words to incorporate in everyday experiences: In addition to incorporating the vocabulary words provided below, try to speak as you go! Talking to children as you go is one of the most powerful ways to expand upon receptive and expressive language development. The more language children are exposed to (when used in meaningful and relative context) the greater it contributes to language and future literacy skills.

- Water
- Bath
- Splash
- Bubble
- Wet
- Drink
- Bottle
- Cup
- Pool
- Bathtub
- Rubber duck
- Shower
- Drip
- Soak
- Puddle
- Stream
- River
- Lake
- Ocean
- Sea
- Wave
- Ripple
- Spray
- Mist
- Rain
- Droplet
- Fountain
- Hose
- Drench
- Quench
- Thirst
- Wash
- Rinse
- Dip
- Float
- Sink
- Ice
- Frost
- Dew
- Wipe



Songs to Sing

Singing with children is a multifaceted tool for development, enhancing language skills through exposure to varied vocabulary and rhythms. The rhythmic and melodic nature aids memory, making learning engaging. Beyond cognitive benefits, singing promotes emotional expression, fostering a holistic growth experience.

Rain, Rain, Go Away

Rain, rain, go away,
Come again another day,
Little children want to play,
Rain, rain, go away.

Row, Row, Row Your Boat

Row, row, row your boat,
Gently down the stream.
Merrily, merrily, merrily, merrily,
Life is but a dream.

Row, row, row your boat,
Gently down the stream.
If you see a crocodile,
Don't forget to scream!

The Itsy Bitsy Spider

The itsy bitsy spider
climbed up the water spout.
Down came the rain and
washed the spider out.

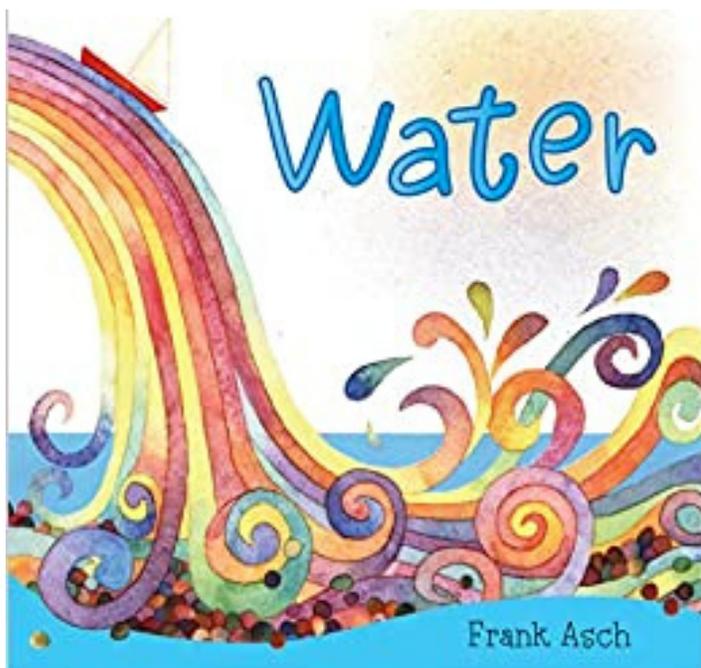
Out came the sun and
dried up all the rain,
And the itsy bitsy spider
climbed up the spout again.

Disclaimer: We Skoolhouse does not own the lyrics to any of the songs provided.

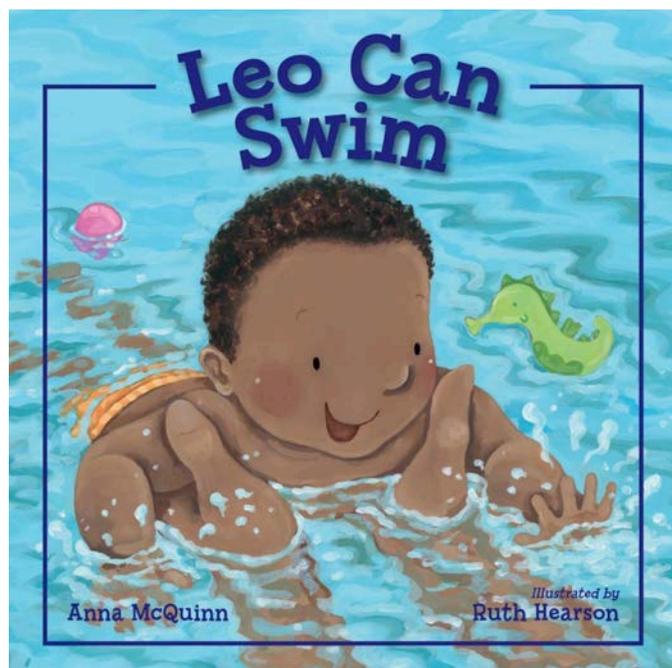


Books to Read

We select two books to support your unit of investigation - it's important to go slow and re-read the same books several times for greater comprehension and connection building. You can read the recommended book before they begin the hands-on work. We understand all children have different preferences and interests when it comes to books (and everything else), so please find our supplemental reads that can replace or add to the suggested books below:

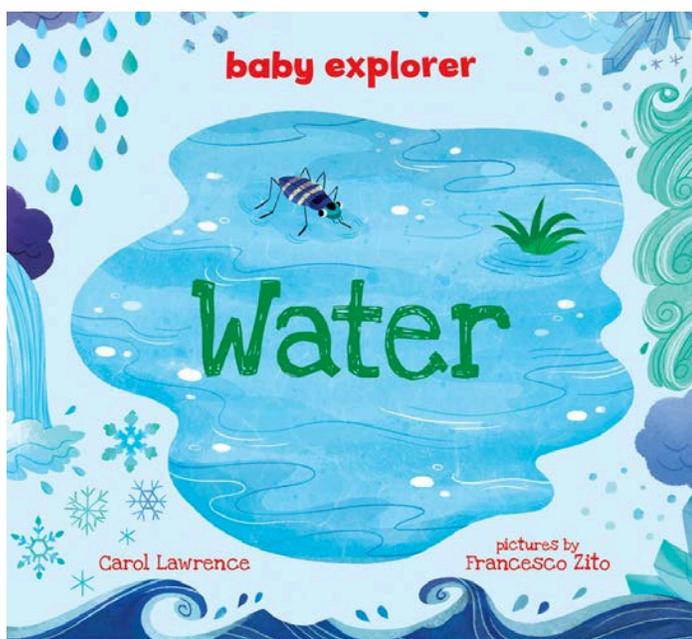


Water, by Frank Asch

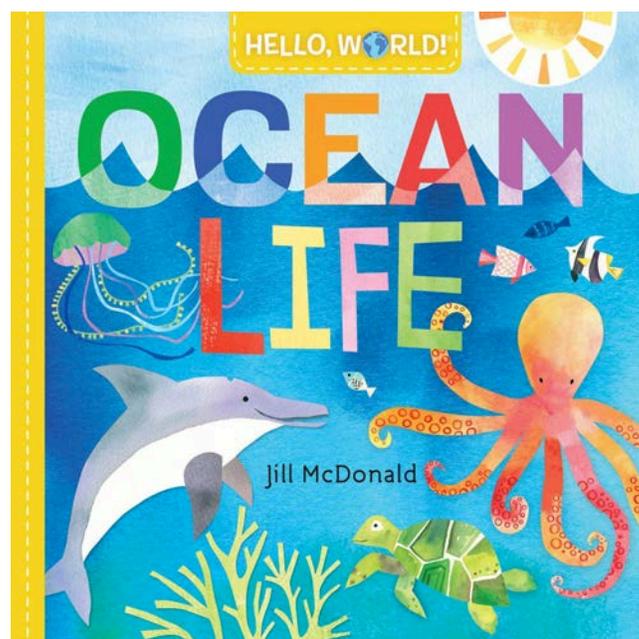


Leo Can Swim, by Anna McQuinn

Supplemental Reads:



Water, by Carol Lawrence



Ocean Life, by Jill McDonald

Expanded Play & Experiential Learning

Learning concepts are best adopted when children can make everyday and tangible connections. Support your child's emergent knowledge and experiences by incorporating the topic in different areas of play and exploration.



- **Embracing Water All Around Us**

- Bring your child to a local pool or beach (weather permitting)
- Talk about water in the community, highlighting water found in rivers, creeks, fountains, pet stores (fish tanks), aquariums etc.
- Consider purchasing a water mat to vary tummy time experiences.
- Remember to use descriptive language during bath time or when you're washing hands, dishes, etc.

- **Tasting Water**

- If your baby is over 6 months old and is displaying all signs of readiness (with eating and drinking), invite you child to drink water from a cup or offer frozen treats!
 - E.g. Ice pops made of water and chopped up fruit.



ACTIVITIES





Exploring Water & Cups

MATERIALS

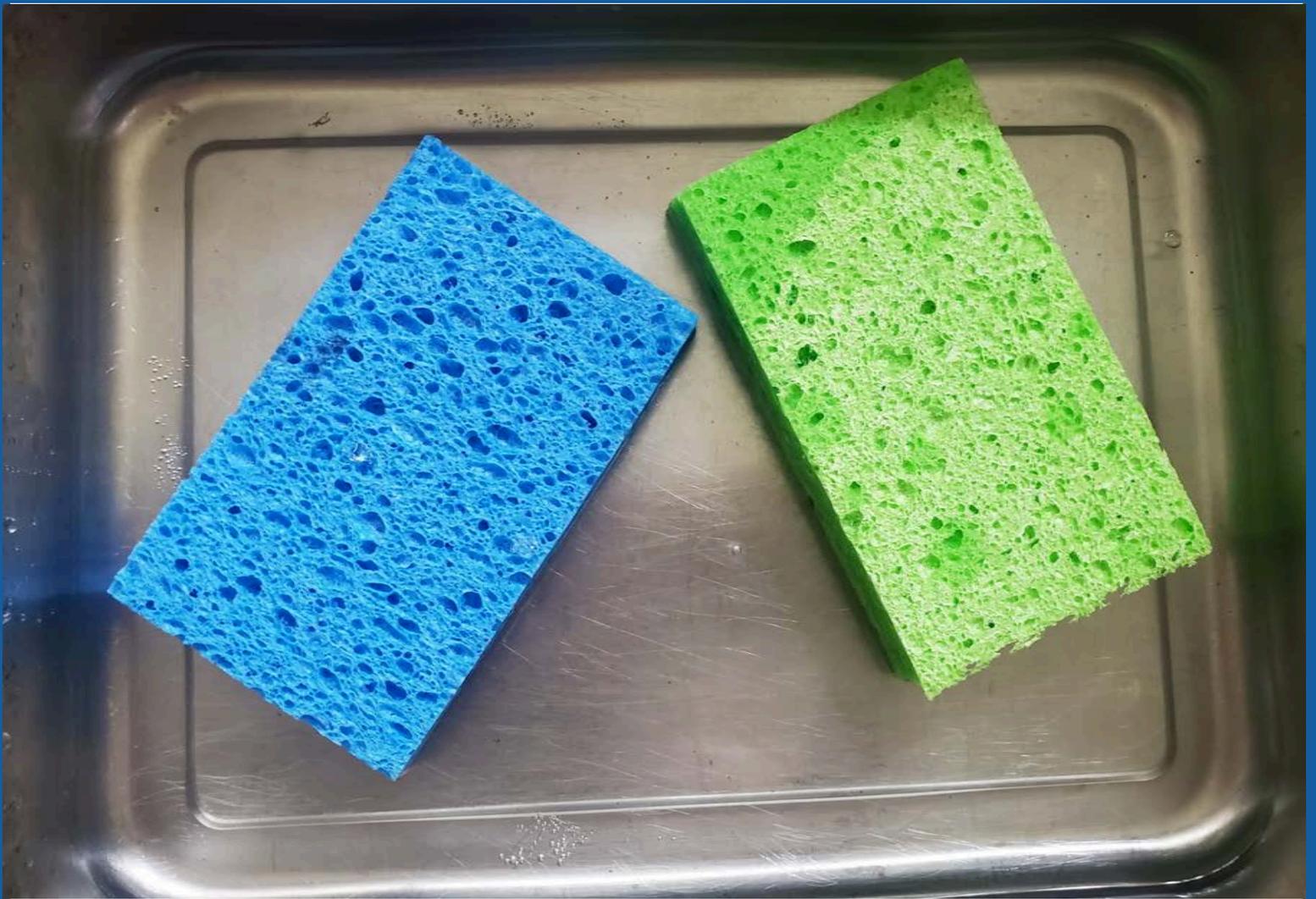
- 1 large & shallow container/bin to hold water
- Water
- Cups/Stacking cups
- Towels to place around the water play & mop

DIRECTIONS

- Fill your large shallow container or bin with water & add cups.
 - Consider going outside if weather permits.
- Allow children to freely explore and experiment with the water and cups.

LEARNING OBJECTIVES

- **Sensory Stimulation:** Babies experience different sensations as they touch, splash, and play with water, engaging their senses of touch, sight, and sound.
- **Fine Motor Development:** Grasping and manipulating cups, pouring water, and scooping encourage the development of fine motor skills, including hand-eye coordination and finger dexterity.
- **Cognitive Skills:** Babies learn about concepts such as volume, quantity, and cause and effect as they explore water and cups play. They develop cognitive skills by observing how water behaves and experimenting with different actions.
- **Spatial Awareness:** Playing with water and cups helps babies understand spatial concepts such as empty/full, in/out, and up/down as they pour, fill, and empty cups.
- **Language Development:** Babies may vocalize, babble, and engage in conversations with caregivers during water play, providing opportunities for language development as they describe what they are doing and experiencing.



Exploring Water & Sponges

MATERIALS

- 1 large & shallow container/bin to hold water
- Water
- One - two sponges
- Towels to place around the water play & mop

DIRECTIONS

- Fill your large shallow container or bin with water & add sponges.
 - Consider going outside if weather permits.
- Allow children to freely explore and experiment with the water and sponges

LEARNING OBJECTIVES

- **Cognitive Skills:** Babies develop cognitive skills by observing how water is absorbed and released by the sponges, learning about concepts such as absorption, saturation, and capacity through hands-on exploration.
- **Spatial Awareness:** Exploring water and sponges helps babies understand spatial concepts such as size, shape, and volume as they compare different sponges and containers and experiment with pouring and filling.
- **Sensory Stimulation:** Babies engage their senses of touch, sight, and sound as they squeeze, squish, and manipulate wet sponges, experiencing different textures and temperatures.
- **Fine Motor Development:** Handling sponges encourages the development of fine motor skills, including hand strength, finger coordination, and grip control, as babies grasp, squeeze, and wring out the sponges.
- **Gross Motor Development:** Babies may engage in gross motor movements, such as reaching, stretching, and crawling, as they move around to explore the water and sponges in their environment.
- **Emotional Regulation:** The tactile and sensory nature of water and sponge play can have a calming effect on babies, helping them regulate their emotions and providing a soothing sensory experience.



Water + Sponges + Cups

MATERIALS

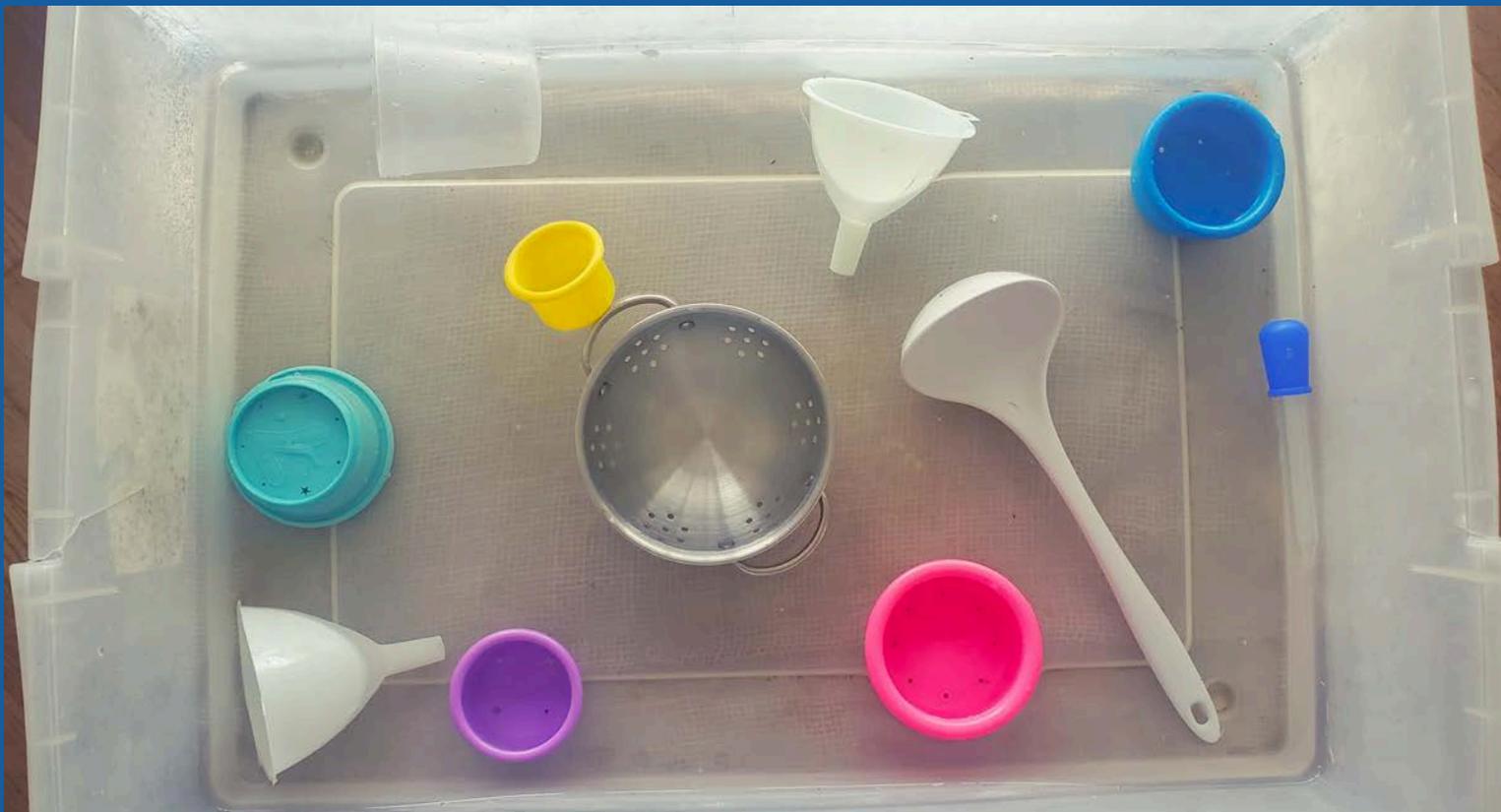
- 1 large & shallow container/bin to hold water
- Water
- One - two sponges
- Cups or stacking cups
- Towels to place around the water play & mop

DIRECTIONS

- Fill your large shallow container or bin with water & add sponges and cups.
 - Consider going outside if weather permits.
- Allow children to freely explore and experiment with the water and cups.

LEARNING OBJECTIVES

- **Cognitive Development:** Babies learn about cause and effect, object permanence, and spatial relationships through water play with sponges and cups. They observe how water behaves when poured or squeezed, understand that objects can be hidden and revealed in water, and explore concepts such as full and empty, floating and sinking.
- **Language Acquisition:** Water play provides opportunities for language development as babies engage in verbal interactions with caregivers, describing their actions, making observations, and imitating sounds related to water play. Caregivers can introduce vocabulary related to water properties, actions, and objects to enrich babies' language skills.
- **Social Interaction:** Water play can be a social activity when babies engage with peers or caregivers, promoting social interaction, turn-taking, and cooperative play. Babies learn to share materials, communicate their intentions, and negotiate play scenarios, fostering social-emotional development.



Exploring Water With Diverse Materials

MATERIALS

- Large bin/container or sensory table
- Water
- Materials to support water play (e.g. measuring cup, bowls/jars/containers, spoons, etc.)
- Mops, towels, and/or butcher paper to support clean-up.

DIRECTIONS

- Fill a large shallow bin (at least halfway up) with water. Add some objects that support water play, such as cups, bowls, funnels, basters, etc.
- Ideally, you can set up the water table in a "yes" space, meaning your child has the opportunity to really splash the water as they see fit. If you do not have an outdoor space to utilize, consider adding butcher paper and towels around a space in the home where you feel comfortable with water splashing.

LEARNING OBJECTIVES

- **Sensory Exploration:** Children will engage in sensory exploration as they interact with water, experiencing its temperature, texture, and fluidity. This sensory-rich experience stimulates their senses and promotes sensory integration.
- **STEM Concepts:** Through water play, children will explore fundamental STEM concepts such as buoyancy, displacement, and surface tension. They will observe how objects float or sink, investigate water flow and movement, and learn about the properties of liquids.
- **Scientific Inquiry:** Children engage in scientific inquiry as they explore water properties and conduct simple experiments. They make predictions, observe cause-and-effect relationships, and draw conclusions based on their observations and experiences.
- **Emotional Regulation:** Water play provides a calming and soothing sensory experience, promoting emotional regulation and relaxation. Children can release pent-up energy, reduce stress, and regulate their emotions through water play activities.
- **Motor Skills Development:** Children will enhance both gross and fine motor skills through water play activities. Gross motor skills are developed as they engage in activities such as splashing and pouring water, which involve large muscle groups and whole-body movements. Fine motor skills are refined through activities like pouring water into containers, squeezing water toys, and using small scoops or cups to manipulate water, promoting precision, hand-eye coordination, and finger dexterity.



Exploring Ice

MATERIALS

- Ice cubes
- Tray or shallow container

DIRECTIONS

- Fill a large shallow bin with ice cubes
- As a long term extension, you may eventually add some materials in which your child can scoop and pour the ice cubes, such as spoons, cups, bowls, and tongs.
 - Start slow with only ice, revisit, and slowly add new materials.
- Ideally, you can set up the water table in a "yes" space, meaning your child has the opportunity to really explore the cubes as they see fit.

LEARNING OBJECTIVES

- **Sensory Stimulation:** Children experience the unique sensory properties of ice as they touch, hold, and observe the cold and slippery texture. They develop tactile sensitivity and learn about temperature differences.
- **Cause and Effect:** Children explore cause-and-effect relationships by observing how ice melts and changes state when exposed to warmth or pressure. They learn about the concept of transformation and the effects of environmental factors on materials.
- **Curiosity and Discovery:** Ice exploration sparks children's curiosity and encourages them to investigate the properties and characteristics of ice. They engage in hands-on exploration and experimentation, promoting a sense of wonder and discovery.
- **Problem-Solving:** Children use problem-solving skills to navigate challenges encountered during ice exploration, such as finding ways to pick up ice chunks.
- **Sensory Regulation:** Engaging with ice can help children regulate their sensory experiences and emotions, providing a calming, grounding, or even exciting activity.



Exploring Solid Ice in Liquid Water

MATERIALS

- Water
- Ice cubes
- Bowl or shallow tray

DIRECTIONS

- Fill a large bin (at least half way up) with water & ice.
- Add several ice cubes to the bin of water.
- Ideally, you can set up the water table in a "yes" space, meaning your child has the opportunity to really splash the water as they see fit.
 - If you do not have an outdoor space to utilize, consider adding butcher paper and towels around a space in the home where you feel comfortable with water splashing about.

LEARNING OBJECTIVES

- **Sensory Exploration:** Children engage their senses by touching, feeling, and observing the texture, temperature, and movement of ice cubes in the water. They experience different sensory stimuli, enhancing sensory processing and awareness.
- **Fine Motor Skills:** Handling ice cubes promotes the development of fine motor skills as children grasp, pick up, and manipulate the slippery objects. They practice precise hand movements and coordination while transferring ice cubes between containers or scooping them with tools.
- **Cognitive Development:** Exploring ice in water encourages cognitive skills such as observation, prediction, and experimentation. Children observe how ice cubes float, melt, or change shape in water, fostering scientific inquiry and understanding of basic physics concepts.
- **Language Development:** Water and ice play provide opportunities for language development as children describe their observations, ask questions, and engage in conversations with peers or caregivers. They learn new vocabulary related to water properties, states of matter, and scientific processes.
- **Social Interaction:** Water and ice play can be a social activity when children engage with peers or adults, promoting social interaction, cooperation, and communication. Children learn to share materials, take turns, and collaborate on tasks, fostering social-emotional development.



Painting With Ice

MATERIALS

- Ice cube trays
- Water
- Watercolors
 - Alternative natural or artificial food coloring if concerned about children "mouthing" the ice.
- Craft sticks or popsicle sticks
- Paper or canvas sheets

DIRECTIONS

- Fill ice cube trays with water and add a few drops of watercolors or food coloring to each compartment.
- Place a craft stick or popsicle stick in each compartment as a handle. Freeze until solid. Provide each child with paper or canvas sheets for painting. Ensure the space is covered or suitable for potential drips.
- Remove the colorful ice cubes from the trays. Discuss the transformation from liquid paint to frozen cubes and the potential for vibrant artwork.
- Encourage children to explore the ice cubes by holding the craft stick handles and observing the changing colors as the ice melts onto the paper or canvas.
- Discuss the colors created as the ice cubes melt and blend together. Encourage children to observe the magical color transformations.

LEARNING OBJECTIVES

- **Sensory Exploration:** Stimulate sensory development as children engage with the cold, melting ice cubes and explore the changing textures and colors.
- **Fine Motor Skills:** Enhance fine motor skills through the manipulation of craft sticks and the delicate process of painting with melting ice cubes.
- **Color Exploration:** Introduce color concepts and color mixing as children observe the vibrant hues created by the melting ice cubes.
- **Creative Expression:** Foster creativity by allowing children to experiment with different painting techniques and the unpredictable nature of melting ice.
- **Canvas Manipulation:** Develop an understanding of cause and effect as children manipulate the canvas or paper to control the flow and direction of the melted paint.



DIY Water + Oil Sensory Bottles

MATERIALS

- Clear bottles with tight-fitting lids
- Water
- Vegetable or baby oil
- Food coloring
- Optional:
 - Glitter or beads
 - Hot glue gun (for sealing the lids, adult supervision required)

DIRECTIONS

- Collect clear bottles with secure lids. Ensure they are clean and dry before starting.
- Fill the bottles halfway with water. Then, add vegetable oil or baby oil to fill the remaining space, leaving a small gap at the top.
- Add a few drops of food coloring into the bottle. Observe how the color interacts with the water and oil. You can experiment with different colors.
- Add a pinch of glitter or small beads to enhance the sensory experience. Watch as they slowly float or sink in the oil and water mixture (optional).
- Apply hot glue to the inside of the bottle cap and quickly seal the lid onto the bottle. Ensure the lid is tightly secured.
- Once the lid is secure, invite children to explore the bottle and observe the interaction between the oil and water.

LEARNING OBJECTIVES

- **Sensory Stimulation:** Sensory bottles provide visual, auditory, and tactile stimulation, helping babies develop their sensory processing skills.
- **Fine Motor Development:** Manipulating and grasping sensory bottles encourages the development of fine motor skills, including hand-eye coordination and finger dexterity.
- **Focus and Attention:** Babies are captivated by the sights and sounds of sensory bottles, promoting sustained attention and focus as they explore different elements inside.
- **Language Development:** Sensory bottles can spark language development as babies vocalize, babble, and engage in conversations with caregivers about what they see, hear, and feel.
- **Cognitive Skills:** Observing and interacting with sensory bottles encourages cognitive development as babies begin to make connections between cause and effect, patterns, and object permanence.
- **Emotional Regulation:** Engaging with sensory bottles can have a calming effect on babies, helping them regulate their emotions and reduce stress or anxiety.



MADE FOR CHILDREN. DESIGNED FOR YOU.

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