

EXPLORE

Weather Investigation Station

Learning Goal

Children investigate water, weather, and seasonal changes through observation, prediction, experimentation, and conversation.

12–18 Months

Materials

Shallow water bin, cups, sponges, ice cubes, weather picture cards, towels

Step 1: Fill a shallow sensory bin with a small amount of water.

Step 2: Add only one or two materials to begin (cup and sponge).

Step 3: Invite children to touch, squeeze, pour, and splash.

Step 4: Introduce an ice cube. Allow children to hold it, watch it melt and feel the temperature.

Step 5: Add simple vocabulary throughout the experience. Wet. Cold. Splash. Water.

Step 6: Allow children to repeat the experience as many times as they choose.

Development

Sensory exploration, cause and effect, fine motor, early language, observation

EXPLORE

Weather Investigation Station

19–36 Months

Materials

Funnels, measuring cups, water table, spray bottles, float and sink objects, ice cubes

Step 1: Invite children to freely explore the materials.

Step 2: Ask them to predict. "What do you think will happen?"

Step 3: Test ideas together. Can we fill the funnel? Will this float?
Can you pour from high to low?

Step 4: Encourage comparing. Which cup holds more? Which object stayed on top?

Step 5: Repeat using different materials.

Development

Prediction, vocabulary, scientific inquiry, problem-solving, observation

EXPLORE

Weather Investigation Station

3–4 Years

Materials

Weather chart, rain gauge, magnifying glasses, measuring containers, clipboards, ice and water

Step 1: Begin with a weather observation. What is happening outside today?

Step 2: Record observations. Clouds. Temperature. Rain. Wind.

Step 3: Choose a simple experiment. How long does ice take to melt? Which container holds the most water?

Step 4: Record discoveries.

Step 5: Discuss why children think it happened.

Development

Scientific inquiry, recording observations, critical thinking, communication, prediction

CREATE

Water & Weather Art Studio

Learning Goal

Children express ideas through open-ended process art using water, colour and natural materials.

12–18 Months

Materials

Water, large paint brushes, outdoor wall or sidewalk, coloured ice cubes

Steps

1. Give each child a large brush.
2. Paint with water outdoors.
3. Introduce coloured ice cubes.
4. Watch colours appear as they melt.
5. Encourage repeating movements.

Ask

What do you see?

Where did the colour go?

CREATE

Water & Weather Art Studio

19–36 Months

Materials

Spray bottles, watercolour paint, ice paint, large paper

Steps

1. Fill spray bottles.
2. Spray water onto paper.
3. Paint using frozen paint cubes.
4. Mix colours.
5. Compare changes.

Ask

What colour did you make?

Can you spray higher?

What happens when they mix?

CREATE

Water & Weather Art Studio

3–4 Years

Materials

Watercolour paint, salt, ice paint, natural materials, large paper

Steps

1. Invite children to choose weather they wish to create.
2. Experiment with different art materials.
3. Add natural materials.
4. Discuss artistic choices.
5. Display artwork with children's words.

Ask

Tell me about your picture.

What weather did you create?

How did you make that?

BUILD

Water Works Challenge

Learning Goal

Children investigate engineering through water movement.

12–18 Months

Materials

Water table, cups, funnels, buckets

Steps

1. Pour water.
2. Watch water move.
3. Repeat.
4. Add another cup.
5. Explore together.

Ask

Where did it go?
Again?
Watch!

BUILD

Water Works Challenge

19–36 Months

Materials

Gutters, funnels, tubes, buckets, water table

Steps

1. Build a simple pathway.
2. Pour water.
3. Watch where it travels.
4. Make one change.
5. Test again.

Ask

Can we make it go farther?
What changed?
How could we fix it?

BUILD

Water Works Challenge

3–4 Years

Materials

PVC pipe, gutters, funnels, connectors, loose parts

Steps

1. Plan a design.
2. Build together.
3. Test the flow.
4. Redesign.
5. Improve.
6. Explain the solution.

Ask

Why didn't it work?

What could we change?

How can we improve it?