

Wet & Dry

Science for 3–5 year-olds



At SCIENCE WORLD we know that early childhood educators are already providing many opportunities for young children to explore their world. We hope that these resource materials complement what you are already doing and offer additional ideas to inspire further exploration.

The activities have been designed for experiential learning. The intent is for children to experience each concept rather than simply talking about it.

Each activity can serve as a starting point for further exploration.

The activities are divided into the following categories:

Introductions — These could be used to set the stage for the topic, or to find out how much the children already know. They're low-preparation, low-mess activities for a large group to do together.

Explorations — These require a bit more set-up and clean-up. They work best with small groups of children. They're intended to be open-ended, with a teacher or other adult available to pose questions and expand the activity as required.

Make This — These explorations result in a product that children could take home or display.

All Together — This big whole-group activity would make a great wrap-up to the topic.

Connections — Ideas for extending the topic in cross-curricular ways.

You know your group best! There is no perfect way to order or arrange these activities. They could be combined into a whole day on a theme, or taken one at a time over several weeks. Please pick and choose, expand or contract as makes sense for your group of children

Topics Now Available:

Round the Circle

Activities to explore round things and things that roll.

Wet & Dry

Activities to explore being wet and dry.

Check for more resource packages coming soon at www.scienceworld.ca/preschool.html



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Science World British Columbia

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We gratefully acknowledge the financial support of the Province of British Columbia through the Ministry of Education.

Wet & Dry



The flowchart shows you one possible way to put the activities together. We used it to create a one-hour workshop for 16 three- to five-year-olds in a Montessori classroom.

A path through 'Wet & Dry'

Here's one possible way to put the activities in this resource together.

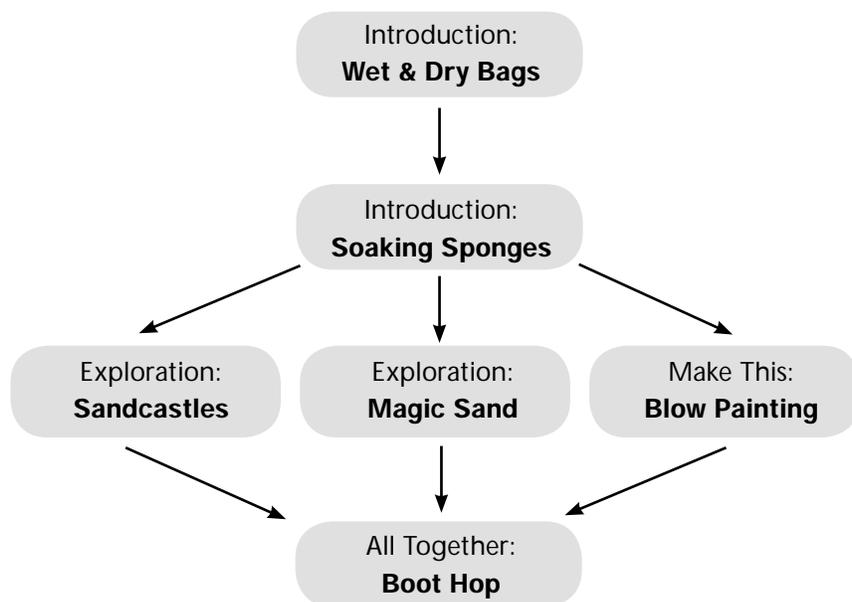
We did the **Introductions** at circle time in a large group.

The children tried out the **Explorations** and **Make This** in smaller groups at stations around the room.

We did the **Boot Hop** all together just before the end of the school day.

Thank-you to Lise-Lotte Loomer who devised and tested the Big Science for Little Hands activities.

Thanks also to the staff and students of Reach for the Stars Montessori Learning Academy.



Share with us!

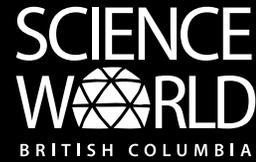
Please send us your feedback, suggestions and ideas.

Email bslh@scienceworld.ca

Or visit www.scienceworld.ca/preschool.html and fill in an online survey.



Wet & Dry: Introductions



Soaking Sponges

A sponge can absorb water. The water clings to the sponge and fills up the holes in the sponge. You can squeeze the sponge to release the water (but you can't squeeze it completely dry!).

What you need (for each child)

- A small sponge
- A clear plastic cup or container

Hands-on

- Put a little bit of water in the container.
- Ask children to make the sponge wet.

What next?

Mark the original level of the water on the side of the container. Once you soak up the water with the sponge, can you get all the water out again?

Try soaking up water with different kinds of cloth, for example nylon from a jacket, a washcloth, fleece... Which kinds of cloth can soak up lots of water? Can you squeeze the water out?

Hold the wet cloth in front of a fan. Which ones dry quickly or slowly?

Notes for next time



Key question

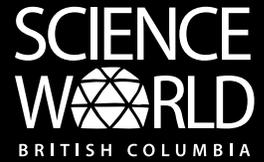
Can you make the sponge dry again?

Where to next?

- INTRODUCTIONS**
 - Wet & Dry Bags
 - Soaking Sponges
- EXPLORATIONS**
 - Sandcastles
 - Magic Sand
- MAKE THIS**
 - Blow Painting
 - Wax Resist
- ALL TOGETHER**
 - Boot Hop
- CONNECTIONS**
 - More Ideas



Wet & Dry: Explorations



Sandcastles

Water clings to grains of sand to “glue” them together.

What you need

- Tarp for the floor, or suitable outdoor space
- Sand
- Small buckets and containers
- Small shades
- Spray bottles
- Water

Hands-on

- Have children fill buckets with dry sand and turn them over to make sandcastles.
- Show them how to spray the sand and make it damp before trying another sandcastle.



Questions to ask

Does dry or wet sand make a better sandcastle?

What next?

Leave sandcastles made from wet sand in the sun to dry.

What happens to the sand when the water evaporates?

Spray the walls or windows with water and “glue” paper to the wet surface.

Notes for next time

Hint

Yogurt containers
make great
sandcastle molds.

Where to next?

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► Sandcastles
Magic Sand

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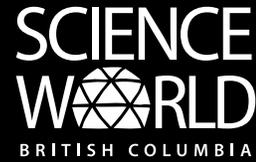
More Ideas

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Wet & Dry: Explorations



Magic Sand

Magic sand has a special coating that prevents water from clinging to it. When ordinary sand meets water, the water clings to the sand and makes it stick together. Water rolls right off magic sand, so it doesn't get wet!

What you need (for each child)

- Magic sand, a couple of tablespoons in a small cup or container
- Clear wide-mouth container of water
- Spoon

Hands-on

- Have children pour or spoon the magic sand into the water, a bit at a time.
- Have them sculpt the sand under water, and lift the sand back out of the water.



Hint

Magic sand, also called *hydrophobic sand*, is available from boreal.com or teachersource.com, but it may also be available in a toy store.

Questions to ask

Is the magic sand wet or dry? How can you tell?
How is magic sand different from ordinary sand?

What next?

Pour the water off the sand, then pour the sand out onto a paper towel. It can be used again and again.

Notes for next time

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Wet & Dry: Make This



Blow Painting

Wet paint moves around easily and drips. As the paint dries, it changes colour and texture.

What you need

- Tempera paint, thinned with water in a bowl
- Spoons or droppers for paint
- One drinking straw per child
- Paper (shiny fingerprint paper works well)
- An electric fan



Hands-on

- Children drip paint onto the paper.
- Children blow on the drops with the straws to make a design.

Questions to ask

How does the paint change as it dries? (colour, texture, behaviour)

What next?

Move wet paint around the paper using gravity.

Experiment with different kinds of paper.

Notes for next time

Hint

Cut a small hole near the middle of the straw to discourage smaller children from sucking up the paint.

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Wet & Dry: Make This



Wax Resist

Water does not cling to wax or oil. Water clings to paper and makes the paper wet. The wax protects the paper and keeps it dry.

What you need

- Crayons or oil pastels (not washable crayons!)
- Watercolour paint or ink (we like Sargent Watercolor Magic™, available from Creative Children: www.creativechildreneducational.com)
- Paint brushes or sponges
- Paper

Hands on

- Draw on the paper with crayons and/or oil pastels. Press hard!
- When your drawing is done, lightly brush or sponge ink all over the paper.

Questions to ask

- Does the paper get wet?
- Do the crayon marks get wet?
- How can you tell?

What next?

- What happens if you use different kinds of paper?
- Try using only white crayons, then making the invisible drawing appear!
- Try different kinds of drawing media, like coloured pencils or markers.
- What happens when these get wet?
- Try painting on waxed paper or plastic wrap. Do these surfaces get wet?

Notes for next time

Hint

The most dramatic effects come from using pale coloured crayons and dark coloured ink.

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Wet & Dry: All Together



Boot Hop

Water clings to bare feet (or sock feet) very well but does not cling to rainboots.

When the water evaporates, your foot gets cold!

What you need

- A wading pool with a few centimetres of water in it
- Tarp for the floor or suitable outdoor space
- One boot for each child
- Electric fan

Hands-on (actually, feet on!)

- Each child wears one boot and has one bare foot.
- Each child has a chance to walk in the water.
- The children then stand in front of the fan.



Questions to ask

What do your feet feel like in the water?

What do your feet feel like when you stand in front of the fan?

Notes for next time

Hint

For safety, keep the fan on the opposite side of the room from the pool. Make a path between pool and fan with bathmats or non-slip tile.

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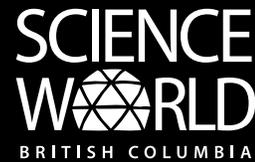
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- More Ideas

Wet & Dry: Connections



More Ideas

Wet & Dry songs, rhymes, stories, circle games

- Itsy Bitsy Spider
- Make a rainstorm

Have the children stand in a circle. The leader walks around the inside of the circle doing an action. The children copy the action as the leader passes (and continue until another action comes along).

To make 'rain' come and go, start by rubbing hands together, then gentle claps, loud claps, drum on knees, stomp on floor. Then reverse the order.

Wet & Dry snacks

- Sample different kinds of water (soda water, mineral water, bottled water, tap water). Can you tell the difference?
- Dip cookies or crackers in milk or juice.

Children's books about water and getting wet

- Ducks Don't Get Wet by Augusta Goldin
- Magic School Bus *Wet All Over: A Book about the Water Cycle* by Joanna Cole
- A Drop Around the World by Barbara Shaw Mckinney

Resources for teachers

- *Worms, Shadows and Whirlpools: Science in the Early Childhood Classroom* by Karen Worth and Sharon Grollman (ISBN 0-325-00573-7)
- *Exploring Water with Young Children* by Ingrid Chalufour and Karen Worth (ISBN 1-929610-54-8)
- *More Than Magnets: Exploring the Wonders of Science in Preschool and Kindergarten* by Sally Moomaw and Brenda Hieronymus (ISBN 1-884834-33-7)

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