A Montessori
Year-long Water Curriculum

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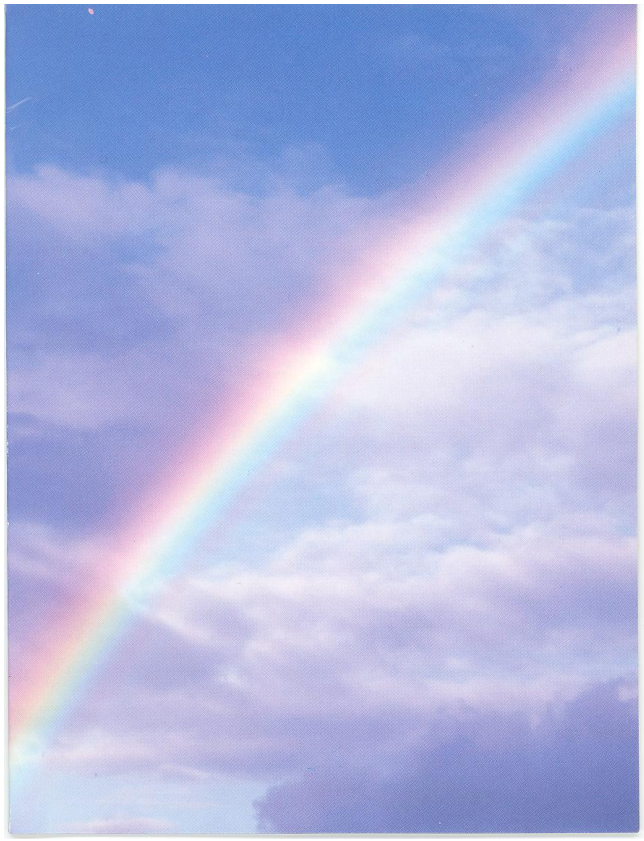

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Montessori Water Curriculum

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Introduction

Children have a natural attraction and love for water.

The purpose of this Montessori Water Curriculum is to further develop this natural love by learning more about the uses and properties of water. These activities are also intended to foster responsibility for water now and in the future. In focusing on the love for water, responsible actions should naturally follow. We take care of what we love.

We are also developing problem-solving skills in learning about the properties of water which hopefully will result in creative answers to meet the challenges of the future. The world's increasing demands on the limited supply of clean water can be met with love and ideas which are limitless!

This curriculum contains lesson topics; a book list; poems and songs about water and water resources. I hope you will find it fun and useful!

Happy Splashing!

General Uses of Water

Watering plants

- Tray with pitcher; container with blue sticks to put into pot to indicate plant has been watered.

Flower Arranging

- Use water from rain barrel and reuse water from Land and Water forms work.

Serving water

- Set up as an individual work; serving water to others

Aquarium

- Students involved in care of fish and cleaning aquarium

Geography

- Containers with land (dirt), air and water with matching picture cards

Land and Water Forms

- Water for land and water forms used and reused from flower arranging water

Making Ice

- Fill bottle caps with water, record temperature and time.

Rain barrel

- Uses of water from the rain barrel: water for the water science work; watering plants; water for flower arranging; water for Land/Water forms

Natural Playground with water pump

Tornado Bottle

- Two plastic bottles connected with a 'tornado bottle connector' available on-line or from nature centers and science centers.

Lesson Topics

Rationale for Sequence

This water curriculum is built as a whole, assuming lessons are given at all levels, starting with basic concepts. As always at the elementary level, lessons from previous levels may need to be given or reviewed.

The first lesson of the year at each level is designed to capture the wonder of water and its importance world-wide. The lessons then move into the science of water and how these effects can be seen in the bigger world. This is followed by lessons that involve multiple properties of water that occur simultaneously and can be seen in weather and the ocean. Next lessons involve the practical application of filtering water, the importance of the watershed concept and closing with the big picture of the water cycle.

As stated in the Introduction, the focus is on the love of water and creative answers coming out of that love. Topics such as water conservation, water pollution and world-wide water shortages are not addressed specifically but would be the natural follow-up coming from the children themselves. The goal of this water curriculum is to focus on the joy and wonder. Responsibility and creative solutions will be the result.

A note regarding set-up

You may want to have a table designated as your 'water table' or a certain position on a shelf in the science area of your classroom that you will be able to keep this sequence of activities going throughout the year.

Following are the Lesson Topics, one page overview and then printed per level. For specific lesson plans and further lesson ideas, contact waterjes@gmail.com

	EARLY CHILDHOOD	LOWER ELEMENTARY	UPPER ELEMENTARY
SEP	Sink and Float	Oceans and Seas: Travel by Boats	Explorations by Water
OCT	What Absorbs Water?	How Different Soils Absorb Water	Wetlands
NOV	Water Drops on a Penny	Surface Tension	Adhesion and Cohesion
DEC	Water Evaporates	Evaporation/Condensation	States of Water
JAN	Fresh Water/Salt Water	How the Ocean became Salty	Water Density
FEB	What Dissolves in Water?	Water as a Solvent	Solutions and Suspensions
MAR	Clouds and Rain	Clouds	Water in Motion: Waves
APR	Clean Water/Dirty Water	Filtering Water	Testing Water
MAY	Watershed	Watershed	Watershed
JUN	Water cycle	Water cycle	Water cycle

EARLY CHILDHOOD

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LOWER ELEMENTARY

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NOV Surface Tension

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NOV Adhesion and Cohesion

DEC States of Water

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FEB Solutions and Suspensions

MAR Water in Motion: Waves

APR Testing Water

MAY Watershed

JUN Water cycle

Field Trip/Going Out Ideas

Bottled Water Company

Community Pool

Local Areas of Water: Lakes, Reservoirs, Rivers, etc.

Nature Centers

Storm Management

Water Treatment Plant

Books

(for the classroom)

A cool drink of WATER
National Geographic Society; Barbara Kerley

A Drop Around the World
Barbara Shaw McKinney

A Gift for the King
A Persian Tale retold by Christopher Manson

All About Water
Melvin Berger

I Love Our Earth
Bill Martin Jr. and Michael Sampson

The Trip of a Drip
Vicki Cobb

The World that We Want
Kim Michele Toft

Water
Scholastic Book; Susan Canizares and Pamela Chanko

Water Dance
Thomas Locker

Poems and Songs

Little drops of water,
little grains of sand,
make the mighty ocean
and the beauteous land.
(first verse of a poem by Julia Carney, 1845)

Rain by Robert Louis Stevenson
The rain is falling all around,
It falls on field and tree,
It rains on the umbrellas here,
And on the ships at sea.

Itsy-Bitsy Spider
The itsy-bitsy spider went 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 went up the spout again.

Japanese Rain Song
Raining, raining how it's raining,
Rain a little more.
Mother's bringing my umbrella,
It can rain and pour.
Pitter-patter, pitter-patter, drip, drip, drop.

Water Cycle Song (tune: She'll Be Coming 'Round the Mountains)
[shared by Camilla Roberts, MSNV]
Water travels in a circle, yes it does. (using pointer finger make a big circle)
Water travels in a circle, yes it does.
It goes up as evaporation (move your hands up to the sky)
It forms condensation (move hands around above your head)
It comes down as precipitation (sprinkle fingers while bringing arms down)
Yes it does, YES IT DOES (clap hands along with each word)

Resources

Books

Blue Planet Run: The Race to Provide Safe Drinking Water to the World
Smolan and Erwitt
Exploring Water and the Ocean
Gayle Bittinger Totline Books
Hands-on Science
Evan-Moor book
Rub-a-Dub-Dub Science in the Tub
James Lewis
Science Experiments for Young Children: Water
Rosemary Althouse and Cecil Main
Science: Games and Puzzles
Laurence B. White, Jr.
Sink and Float: A Hands-on, Minds-on Approach Using the National Science Education Standards
Deirdre Englehart
Sink or Swim! The Science of Water
Barbara Taylor Step into Science

Websites

www.projectwet.org
www.worldwatermonitoringday.org
www.wateruseitwisely.com
www.water.epa.gov