SCIENCE MOM'S Guide to WATER, Part 1



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c) Remove hand and be amazed!

INVERT the cup (turn it upside

bins bil and on the lid and

a) Pour water in the cup and place

cardstock or cardboard.

1. Gravity Defying Lid

THE WATER'S STAYING

IN THE JAR! AMAZING!

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Plastic lid or a piece of

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the lid on top.

COLOR THE SCIENTIST



SEE? RAIN IS NO

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2. Magic Screen

Materials:

- Water Lid
- · Canning jar with a metal ring
- A piece of screen or other mesh fabric

Method:

- a) Fill jar to rim and secure screen
- over the top. **b)** Cover with lid and flip over.
- c) Remove lid and observe.

No jar? No problem! Just use a cup and rubber band. But be sure the screen or *4* mesh is FLAT and TIGHT across the rim of the cup

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marine life and the earth's climate. steadily circulates all the water in the oceans and strongly influences both circulation in the oceans—a massive system of currents that slowly but other hand, rises or "floats" on top. This phenomenon drives thermohaline Cold water is more dense than warm water so it sinks. Warm water, on the



Water is the only thing on our planet that exists naturally in all three states of matter-as a solid, liquid, and a gas SOUD WATER UNUID WATER HEY, WH

IS ICE OR SNOW.	LIQUID WATER IS WHAT WE DRINK.	THE GAS?

Gaseous water, or water vapor, is invisible. You can't see it, but it's in the air around you and we call it humidity. The more water vapor in the air, the more humid it is.

The only other things on earth that come close to existing in all three states of matter are mercurv. acetic acid. and carbon dioxide While all three states of matter are **possible** for each of these, they don't occur **naturally**. Water, on the other hand? It's everywhere



HOW DOES IT WORK? THAT MEANS WATER MOLECULES LIKE TO STICK TOGETHER! COOL SCIENCE WORDS



The water molecules are sticky, or

cohesive. They are attracted to each other and the jar and the screen. That

attraction is strong enough that they

effectively form a "lid" on the bottom of

the jar, just like the plastic lid did in the

first investigation. If air doesn't come

in, the water can't go out. So the water

stays inside-until you shake or tip the

jar. If you do either of those things,

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steady while the other pulls out the lid.

with two people: one to hold the cups

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Note: Removing the lid is best done

carefully.

ino bil Slide the

then gravity wins.

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water over

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water over cold,

noitegitsəvni ziht misw htod htiw

Kui oi auns ag



THE GRAVITATIONAL FORCE OVERCAME OUR œ HYDROGEN BONDING 10

HAHA! OUR ATTRACTION FOR EACH OTHER IS STRONGER THAN GRAVITY. HEY! WHAT HAPPENED?







⁺Hawai

Pacific Ocean

Oceans cover most of the surface of

50-70% of the planet is covered by

another form of water: clouds. 2

WOLECULE! A WATER

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It's 1 oxygen atom plus 2 hydrogens. WHAT EXACTLY IS WATER?

the earth, and at any given time about

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why we call it:

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xo

New

Zealand













ofher cup.

μ .sdup

d) Slowly, slide the flat lid or



c) Place a flat lid on one cup and with cold. with warm water and the other

:poyjəw Warm and cold water 2 identical clear cups or jars · A flat lid or cardboard

3. Hot & Cold Cups

· Food coloring

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cardboard out from between the

invert it, then set it on top of the

a) Add different colors of food

coloring to each cup. **b)** Fill each cup to the brim, one



