



Cool Winter Science Experiments to Blow Your Kid's Mind

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It's the new year, and the Christmas hype and excitement has long worn off. For many people both young and old, the winter season following the holidays means spending a lot of time indoors, often bored while enduring the seemingly endless dreary days. But who says that spending time inside needs to be boring?

Winter is the perfect time to review science skills and conduct winter science experiments! In fact, time spent inside can be exciting when it's filled with activities that practice new skills or hone the old. Help your child beat the winter doldrums by introducing refreshing new winter-themed activities.



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A January Blizzard... In a jar!

Hasn't snowed much lately? Perhaps your family lives in the South, which rarely sees a winter weather warning. Bring the snowstorm right inside your own home and create a fizzy blizzard with this awesome experiment perfect for preschoolers.

Materials Needed:

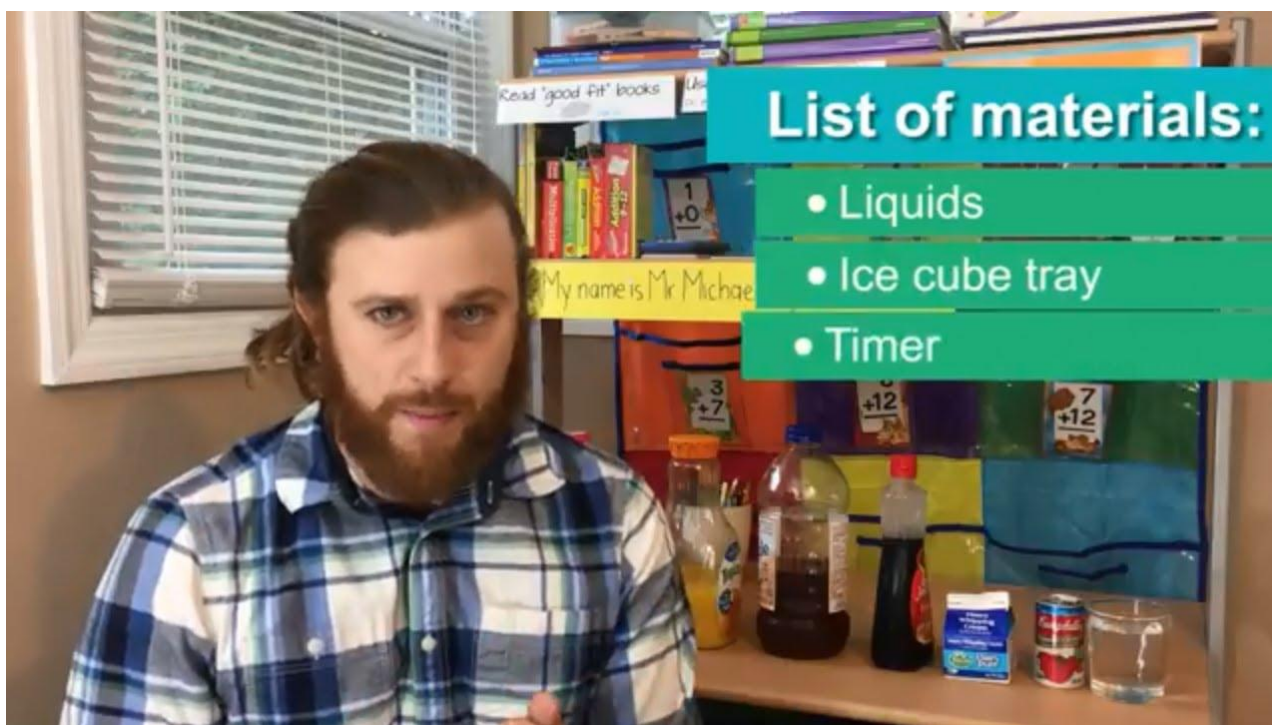
- A clean jar
- White paint
- Baby oil
- Shiny iridescent glitter
- Water
- Alka Seltzer tablets
- Blue food coloring (optional)
- Mixing bowl

Preparation:

1. Fill the jar $\frac{3}{4}$ full with baby oil and set aside.
2. Using the mixing bowl, combine 1 teaspoon of the white paint with 1 cup water.
3. Mix until the paint is dissolved in the water, which will look a lot like skim milk or white-colored water.
4. After mixing, pour the paint water into the jar, leaving a space at the top.
5. At this point, encourage your child to sprinkle in a bit of the glitter, and watch the glitter fall to the bottom of the jar.
6. Once prepared, move on to making the blizzard!

The Experiment:

Using the Alka Seltzer tablets, break a few tabs into small pieces and instruct your child to drop the tablet pieces into the water to see what happens... a snowstorm! After the water has settled, add more Alka Seltzer tablet pieces into the jar to make more blizzards! Use the experiment as a catalyst to talk about real snow and snowstorms, and then discuss why the Alka Seltzer tablets make the water fizz. Search the internet with your child to find the answer and talk about chemical reactions!



Watch on [YouTube](#)

Polar Plunge Blubber Experiment

Have you ever wondered how arctic animals like the polar bear keep warm while swimming in icy cold waters? Humans couldn't swim for very long in such conditions, but penguins and seals seem to fare just fine in the frigid temperatures! The answer lies in a thick layer of fat these animals have in common called blubber. To demonstrate this natural insulation for your child, experiment with a layer of fat that mimics blubber and teaches your child about amazing arctic animals!

Materials Needed:

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- Two bowls filled with ice water
- Vegetable shortening, like Crisco

How to Complete:

1. Set the two bowls of ice water close to each other on a table.
2. Using the vegetable shortening, take a chunk and wrap a thick layer around your child's pointer finger on one hand. Keep the pointer finger on the opposite hand clean.

3. Instruct your child to place his or her pointer fingers in the opposing bowls of water, with the covered finger in one bowl, and the clean finger in the other.

4. While your child's fingers are in the bowl, ask him or her which finger is the coldest and see which finger lasts longer in the bowls of ice water.

Conclusion:

Your child probably noted that the finger with the Crisco is able to stay in the water longer. This is because the layer of fat kept that finger warmer, while the unprotected finger was colder and unable to stay in the water as long. Discuss with your child how and why blubber keeps arctic animals warm, and talk about different animals that have blubber and why they need it to survive.

Grow a Polar Bear!

As you may remember from science class, osmosis is the process of equalization in which molecules from a solvent, typically a liquid, pass through a semipermeable membrane to a more concentrated solution. This process, which might be complicated for little learners to understand, can be easily demonstrated through one of the coolest winter science experiments for kids! Get ready to grow a polar bear in this fun experiment!



Materials Needed:

- 4 clear plastic cups
- At least 8 gummy bears
- ½ cup of salt water
- ½ cup of tap water
- ½ cup vinegar
- ½ tablespoon of baking soda mixed with ½ cup tap water
- Permanent marker

Preparation:

1. Using the plastic cups, fill each with a solution listed in the materials list. For example, fill the first plastic cup with ½ cup of salt water, the next with ½ cup of tap water, and so on.

2. Label the cup with its contents.

3. Set out 4 of the gummy bears on the table nearby. These will be the control bears for the experiment. Leave these on the table until the experiment results are observed or recorded.

The Experiment:

Place each of the remaining gummy bears into the cups. For example, place one gummy bear into the cup with tap water, one into the vinegar, one into the baking soda solution, and one into the salt water. Let the bears soak for a minimum of 4 hours and watch them grow! When the time is up, remove the gummy bears and place next to the control bears to compare the growth to the original size of the candy. Which polar bears grew the most? Why did this happen? Discuss all this and more with your child as he or she hypothesizes the reasons behind the process of osmosis.

Make it Melt! Melting Ice Experiment

Rock salt is used to melt ice on the roads during the winter, so do different variables affect the speed at which ice melts? Help your child [discover how to make ice melt faster or slower](#) with this fun science experiment. Please note: this winter-themed experiment is great for kindergarten as well as for first or second graders, but adult supervision and help is important when handling hot liquids and steam.



Materials Needed:

- Muffin tin with at least 6 compartments
- Small paper Dixie cups
- Water
- Scissors
- Salt
- Sugar

The Experiment:

1. To prepare, make ice the night before the experiment by filling the Dixie cups with plain water. Freeze overnight.
2. Using the scissors, help your child to cut the Dixie cup paper away from the ice so you have only blocks of ice remaining. Place the one blocks of ice inside the muffin tin, one block per compartment.
3. Working quickly, pour hot water on the first block of ice, steam (from a kettle; handle with care) on the next, sugar on another, salt on another, and cold water on another. Finally, don't pour anything on the last ice block, since this will be the control.

4. Observe what happens to each block immediately, after 30 minutes, and after an hour. Record observations.

Discuss with your child what happened to each ice block and how it compared to the control. Which ice block melted the fastest? Were there any surprises? Be sure to talk about how the ice responded, and hypothesize why something like salt would melt the ice quicker than sugar.

The Water Content of Snow: How Much Water Is In It?

Elementary students are endlessly curious about snow. It's so much fun to play in, but it melts into water when the weather warms up. Water expands when its frozen, so your child might be surprised to find how little water is leftover after it melts considering some evaporation will also occur. The next time it snows, head outside to collect some for this exciting winter science experiment!



Materials Needed:

- A clean, clear jar
- Colored rubber bands

- Ruler
- Sticky notes or paper, and a pen or pencil

The Experiment:

1. After it snows, go outside and collect snow in the jar. Fill up the jar and make sure to pack it down so you have a good amount to start with.
2. After bringing it inside, use one of the colored rubber bands to wrap around the jar to mark the level of snow in the jar.
3. Next, ask your child to make a prediction of how much water will be left in the jar after it melts. Have them select a rubber band in a different color to wrap around the jar to indicate where the water line will be.
4. Measure the snow using the ruler and mark it on the sticky note or on your paper. Be sure to write the time you took the measurement!
5. Check the jar after an hour. Measure and record the time. You might notice that the snow line is lower, but there might not be much water in the jar. This is due to evaporation!
6. After the snow is completely measured, mark the water line with another colored rubber band and measure using the ruler. Record your final observations.

Talk with your child about his or her results, and ask why the water line is so low in comparison to the snow level when the experiment first began. Discuss the water cycle to bring this lesson full circle!

When the weather is cold and dreary, winter science experiments for kids are the perfect pick-me-up! Inject some winter-themed fun into your child's science lessons using the above experiments, and watch as your child's skills and knowledge grows all while your child is having fun! In between experiments, don't forget to check kidsacademy.mobi for the latest resources to meet all your child's educational needs!