Colorful Ways to Explore Science: Our "Kaleidoscope of Color" Class at First School

April 2021

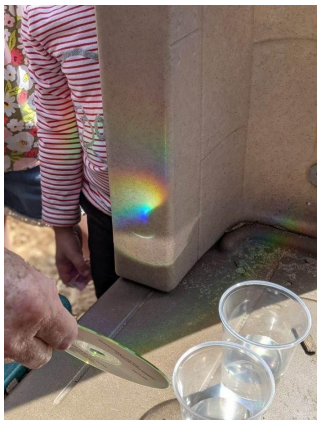
Springtime brings so many wonderful things, including rain showers - and rainbows! So it was the perfect time for our teachers at First School to offer a special Explorers' Class called "Kaleidoscope of Color" in April.

For four weeks, Mrs. Merrill and Mrs. Schroeder used science and creativity to teach preschoolers all about colors. It was a huge hit with our students, and we wanted to share it with all of you, as well!

Week 1

Week 1 started with the book What is a Rainbow? by Chris Arvetis and Carole Palmer and a basic introduction of ROY G BIV and the colors it stands for (Red, Orange, Yellow, Green, Blue, Indigo, Violet). The students then made a word chart of what each color made them think of, such as different foods, animals, toys.

Next they went outside with prisms to see how the color comes from sunlight! They loved creating rainbows on the playground, and even tried to do the same thing with glasses of water and some special rainbow glasses that separate colors from light. The biggest hit came from shining CD's into the sun, which made very pretty rainbows!



TRY THIS AT HOME: Take an old CD next to a sunny window or outside and tilt it at different angles in the sun. The rainbow that appears is amazing! Try watching this video for additional ways to explore rainbows with CD's at home.

Week 2

Week 2 discussed how people use color in a variety of careers, including as artists. We learned about the Russian artist Wassily Kandinsky, who was famous for making colorful paintings such as these:

Photo: https://www.wassilykandinsky.net/

Students did their own interpretation of Kandinsky's work, and they turned out great!

Next we did a science experiment by halving a lemon and using a plastic knife to cut inside and get some acidic juice out, then dropping food coloring on the juice, followed by baking soda. The result was a colorful, bubbly, messy volcanic reaction! We tried the experiment again with limes and grapefruits, and hypothesized that the larger fruit would create a larger reaction. This wasn't the case though - the lemon actually worked the best!

For our final experiment of the day, we introduced clear molded gelatin and used pipettes to squirt food coloring and water into the gelatin to see what kinds of designs and colors they could create. Some were tall and thin, some were blotchy, and some were spread out in sections. The kids loved it!

TRY THIS AT HOME: Learn about Kandinsky and even make your own Kandinsky-inspired art together by watching this great video. Try your hand at the simple citric fruit and baking soda experiment! This website has a great tutorial on how to do it step-by-step.

You can also make your own clear gelatin molds at home by buying unflavored gelatin (available at Kroger or Target), mixing it according to the package directions, and pouring it into small ice cube molds or muffin tins. Pipettes can be found at the dollar store, at craft stores, or even large stores like Walmart. Your kids will love squeezing the food coloring into the clear molds!

Week 3

Week 3 started with students making their own crayons by melting broken pieces in a silicone mold. Ours were dog bone shaped, and the kids brought home their very own one-of-a-kind dog bone crayons! We talked about the properties of wax and how it melts in the heat and cools at room temperature.

Next we discussed colors and tints, and learned that adding white makes a color lighter (tint), and black makes a color darker (shade). They created new colors this way and even gave them their own unique names. We also learned about the three primary colors (red, yellow and blue) and how all other colors originate from them. We discussed terms such as mixing, blending, dilution and suspension.

Finally, we made our own rainbows in a jar by filling glass containers of various shapes and sizes with water, then adding a drop or two of food coloring from primary colors to the water. We turned on some calming music and watched as the colors slowly moved through the waters and blended in different ways. We tried this with water that was filled a few days ago, fresh water, hot water, and sugar water and compared the differences. Not much changed, but the sugar water seemed to dilute the colors more quickly and completely. We also set aside a bottle to see what it would like the following week.

TRY THIS AT HOME: Make your own crayons at home by peeling the wrapper off broken ones and breaking them into smaller pieces. Try different combinations to get the crayon color of your choice, then place them into small silicone molds (such as these). Bake them in the oven for about 20 minutes at 230 degrees, then take them out and let completely cool before using them.

To see what food coloring does in different temperatures of water, watch this video and try it yourself at home. The differences are amazing!

Week 4

The final week of our Color Class, students did an experiment by dropping food coloring into dishes of whole milk, then gently touching them with Q-tips and cotton balls soaked in dish soap. It was so exciting to see the reaction! Since the soap is attracted to molecules of fat in the milk, the color moved quickly in different patterns. We tried to capture some of the creations by dropping a piece of paper on top of our bowls.

For the grand finale of Color Class, we went outside and did an experiment by filling old film canisters (remember those?!) with paint and Alka Seltzer tablets. We then quickly snapped on the lid, and placed the canister upside down on a piece of white paper. The students saw lots of fizzing and bubbling coming from them, and a few of the lids completely popped off! The color that exploded made some pretty amazing color creations.

TRY THIS AT HOME: You can recreate our milk experiment at home, as well! Try different kinds of milk to see if the reactions are similar or different. What happens with skim milk, almond milk or heavy cream? Here's a fantastic video that shows how to do it!

We hope you enjoyed learning more about our Kaleidoscope of Colors class at First School and hope you'll try some of these science experiments or art projects at home!

For more information about class offerings such as this, we invite you to contact our school and inquire about our upcoming Explorers' Classes, Preschool, Kindergarten, Afternoon Enrichment, and Summer Camps.

There are so many fun ways to learn and grow at First School!

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