

Day 5 Light: Colors/Sight

Science

Our eyes are able to distinguish between different colors because of the signals they send to our brain.







For this experiment, you'll need markers or paint. Using primary colors, how many different colors can you make?

Materials

- Primary color food coloring (red, blue, yellow) or paint or watercolors or markers
- Water
- Rimmed cookie sheet or a place to experiment without worrying about mess
- White Paper (for testing)
- Colored markers (at least 8 colors)
- Plastic spoon (if using paint or food coloring to mix)

Directions

1. Put all materials on a rimmed cookie sheet or conduct your experiment in a place that parent approved in case of mess.
2. Before mixing any colors together, make a hypothesis or a prediction about the new color
3. Use the chart to record your experiment and hypotheses results.
4. Time to start mixing and hypothesizing! Use markers to write your experiments and hypotheses on the observation chart. Then start mixing the colors on your white testing paper see the results. Repeat until the chart is full.
5. How many new colors are you able to create?

Color 1	Color 2	Hypothesis	Results
			

Additional resources:

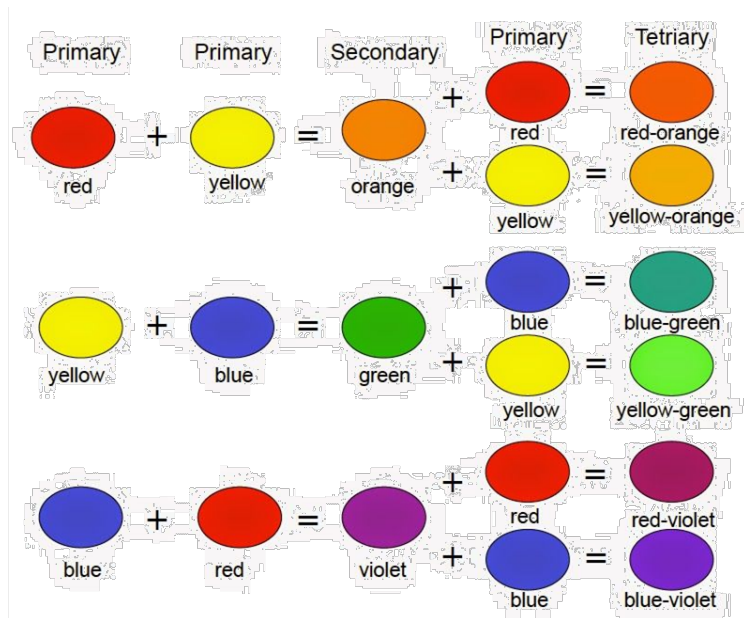
Light and Color

<http://ow.ly/WXew50APAxB>



What is Color

<http://ow.ly/MkPg50APAFp>



Day 5 Light: Colors/Sight

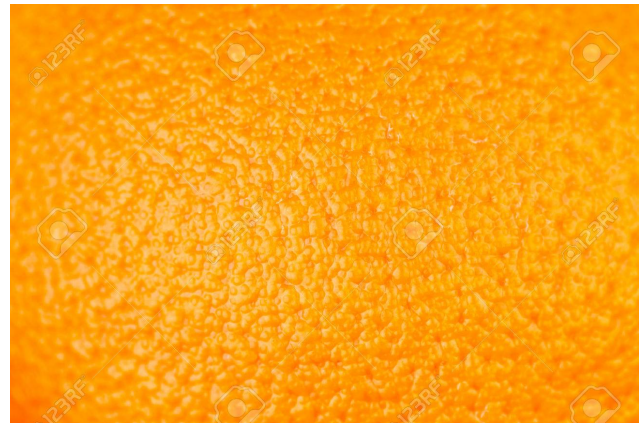
Social Studies

Perspective is the way in which we look at an object. Have you ever heard someone say, “Look at this from my perspective?” or “Try to get a new perspective?”

Our brain interprets what our eyes see. We can view an object from different perspectives and experience it in entirely different ways! Take a look at the photos below. They are of the same location, but each one makes you think differently about the place.

Look at items around your home. How does changing your perspective change the way you view each item?





Day 5 Light: Colors/Sight Math

Kaleidoscopes are optical instruments that use reflective surfaces to create new images. Can you design your own? Use the how-to guide to make one!

The reflective materials in a kaleidoscope make objects appear to replicate themselves (show up over and over again) in a pattern formation. Use your kaleidoscope to solve the math problems attached.

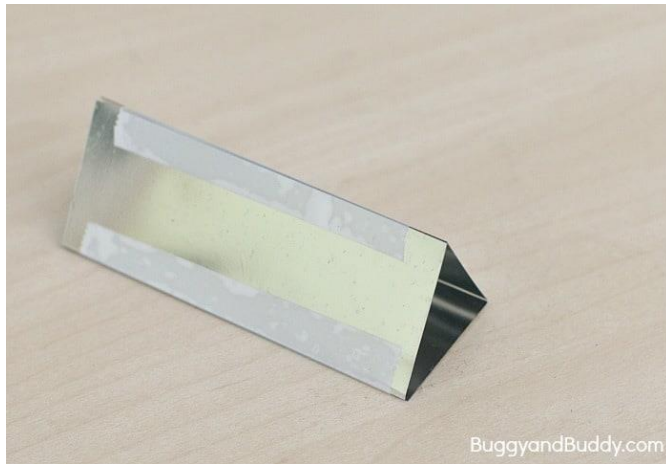
Directions for Homemade Kaleidoscope

Adapted from: <https://buggyandbuddy.com/science-for-kids-how-to-make-a-kaleidoscope/>

- Toilet paper roll
 - Mylar sheets (thicker sheets, not rolls of thin paper) or mirrored sheets or tinfoil (shiny side out)
 - Scissors
 - Tape
 - White cardstock
 - Bendy straw
 - Markers, stickers, or other materials for decorating your spinning circle
1. Cut your mylar sheets or mirrored sheets into three equal strips. You'll want the size to be just right so the finished kaleidoscope inserts fits snugly in your cardboard tube and won't fall out. We cut our mylar into strips that measured 9.7cm x 3.5 cm.
 2. Line up your mylar strips, leave a tiny space between each one. (Place the shiniest/least scratched sides face down.) Tape them together over the spaces.



3. Fold the taped mylar into a triangular prism and tape along the top to hold in place.



4. This should fit snugly inside your cardboard tube.



5. Cut off the bendy end of a flexible straw.



6. Tape it along the top of your tube with the flexible part of the straw hanging over the edge.

7. Cut out 3 circles from cardstock. Ours measured 3.75 inches in diameter.

8. Poke a hole in the center of your circle. (I used a sharp pencil.)



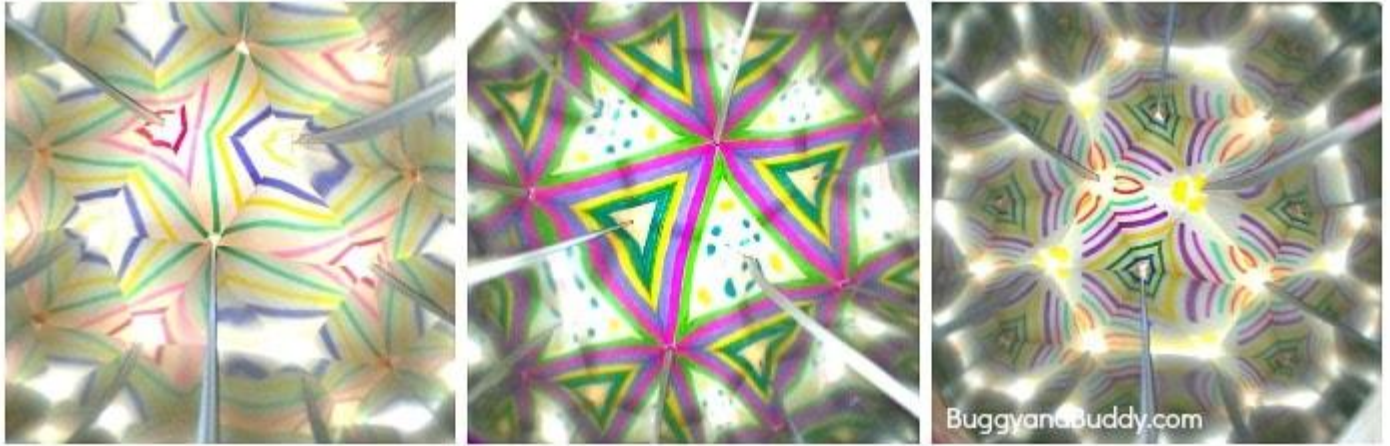
9. Decorate the circle using markers, stickers, crayons etc. Try out different designs, shapes, and letters!



10. Place the circle onto your straw with the design facing the kaleidoscope. You want the hole to fit over the flexible portion of the straw so it will turn easily.



12. Look into your kaleidoscope and explore all the reflections created by your design!



Tips

- If you have trouble getting your triangular prism to fit snugly into your cardboard tube, it will work on its own. Simply tape the straw directly on top of the prism rather than using a tube.
- Make as many cardstock circles as you want and try them all out!

Day 5 Light: Colors/Sight Math

NAME _____

Kaleidoscope Word Problems

Directions: Read each question and solve the equations.

Kylie and Khadijah love kaleidoscopes. But, they're not that good at solving math problems about kaleidoscopes. Use your amazing math skills to help them find the correct answers.

1. Khadijah had 114 kaleidoscopes. She kept 10. Then she divided the rest between Kylie and 7 other friends. How many kaleidoscopes did each of Khadijah's friends get?
2. Kylie bought 12 cases of kaleidoscopes. Seven of the cases had 10 kaleidoscopes each. The other five cases had 9 kaleidoscopes each. How many total kaleidoscopes did Kylie purchase?
3. Khadijah made kaleidoscope party favors for Kylie's birthday. She made 36 kaleidoscopes. There were nine kids at the party. How many party favor kaleidoscopes did each kid take home?
4. Khadijah and Kylie decided to open a kaleidoscope company. In one day, they made four orange, 97 purple, and 355 pink kaleidoscopes. They made the same amount of kaleidoscopes. How many kaleidoscopes did each girl make?

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English Language Arts

NAME _____

WHAT AM I MISSING (Observation)

Directions: Take two minutes to look closely at an item that you choose (ex. I did a deep observation of a penny). What is something about that item that you never noticed before (ex. I noticed on the back of the penny, there is a figure of a man in the middle of the Lincoln Memorial)? Draw a picture of the item with as much detail as possible. Write down what the item is. Then, write an explanation about why you think you never noticed the item before (ex. I don't think I noticed it before because it is so small and pennies aren't that valuable. I may have noticed if it was a hundred dollar bill 😊).

Item Observed: _____

What I Noticed: _____

Why I Never Noticed It Before: _____
