



Kaleidoscopes

OVERVIEW

Students will create a kaleidoscope inspired by Dr. W. Hodges's "Intersections". Students will understand the importance of light and reflection. They will create a kaleidoscope by using a toilet paper roll, bendy straw, a reflective sheet and a circular sheet of paper. This project allows students to experience science with the involvement of art practices.

STANDARDS

ESSENTIAL QUESTION

What is light and how can we 'see' it?

STUDENT LEARNING OBJECTIVES

Students Will:

- Understand the use of light and reflection
- Learn to explore different media while creating art.

STANDARDS

Mathematics

25. Use a protractor to measure angles in whole-number degrees and sketch angles of specified measure.

Art Education

1. Individually brainstorm multiple approaches to an art problem.
3. Generate ideas and employ a variety of strategies and techniques to create a work of art/design
4. When making works of art, utilize and care for materials, tools, and equipment in a manner that prevents danger to oneself and others.

10. Compare responses to a work of art before and after working in similar media.

ART DISCUSSION

DISCUSSION PROMPTS

- What is a kaleidoscope?
- How does a reflection work?
- differentiate transparent, translucent, opaque, and shadows
- What is light?
- How can we see color?

CURRICULUM CONTENT

LEARN ABOUT THE INTERSECTIONS

In this photograph, Dr. William Hodges captures the installation of Dale Kennington's large, painted screens from Contemporary Mythologies during an exhibition at the Wiregrass Museum of Art in 2004.

Juxtaposing the hard edges of the screens with soft lines of the shadows, the artist creates a strong composition, which evokes an intimate feeling for the space.

Facts about LIGHT:

- Light is made up of energy made of photon. Photons are the smallest unit of visible light
- Light travels like a particle and a wave. Light will behave differently based on different material.
- If light hits an object and passes through it, it's a TRANSPARENT object
- If SOME light is allowed to travel through an object, it is called TRANSLUCENT
- Light cannot pass through certain objects which means it changes the path of light after hitting an object. This object is called OPAQUE
- A SHADOW is a dark area where light from a light source is blocked by an opaque object.
- Light reflects off objects and allows us to see.
- Reflection occurs when light bounces off a smooth surface such as a mirror



Kaleidoscopes

ART INSTRUCTION

MATERIALS

toilet paper roll, 9.7smx9.7cm mylar sheet, construction paper, circular white paper, scissors, tacky glue, 16cm bendy straw, pencils, markers, stickers or other objects need to decorate the kaleidoscope wheel, tape

INSTRUCTIONS

1. Begin by gluing the straw onto the toilet paper roll.
2. Cover the straw by gluing construction paper around the roll.
3. Fold the mylar sheet (reflective side up) into a tri-fold. Dividing the sheet into three equal parts.
4. Fold the mylar sheet into a triangle and tape the ends together.
5. On the circular paper ("wheel"), draw two lines creating the circle into four parts. Using markers, pens, stickers, etc. begin creating different patterns in the four spaces.
6. Attach the wheel onto the straw and the kaleidoscope is finished!



TERMS

LIGHT - made up of energy made of photons

PHOTONS - Smallest unit of visible light

TRANSPARENT- light hits an object and passes through it

TRANSLUCENT - some light is allowed to travel through an object

OPAQUE- light cannot pass through certain objects which means it changes the path of light after hitting an object

SHADOW- dark area where light from a light source is blocked by an opaque object

REFLECTION - occurs when light bounces off a smooth surface such as a mirror

KALEIDOSCOPE - an instrument with two or more mirrors tilted to each other at an angle, reflecting bits of colorful patterns in a symmetrical design through a viewer

SYMMETRY - equal pattern on both sides

EXPAND

USE QR CODE FOR GUIDE ACTIVITY VIDEOS

Follow our youtube at [wiregrassmuseumofart7239](https://www.youtube.com/channel/UC7239)

