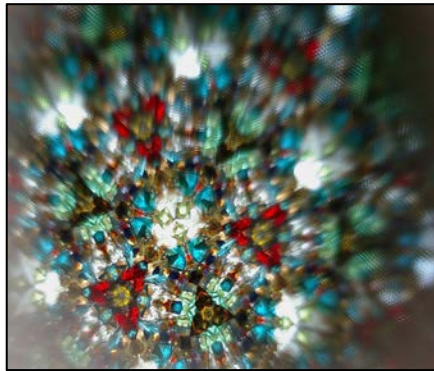


20 - 30
Minute
Activity
For
Everyone

Paper Towel Kaleidoscope

The kaleidoscope was invented in the early 1800's by Dr. David Brewster in hopes of inspiring artists with unique pattern combinations. Since their induction, kaleidoscopes have influenced new designs in stained glass, jewelry, architectural patterns, wallpaper as well as woven tapestries and rugs. Today, it is commonly used as an intriguing optical classroom instrument all around the world. Here is an activity for you and your family to make your own homemade kaleidoscope, how will it inspire you?



Activity:

- Start off by placing the end of your paper towel roll down on a sheet of plastic.
- Hold the paper towel roll in place and trace around the rim with a marker. Repeat this step to create two traced circles on your sheet of plastic.
- Using scissors, carefully cut out the two traced circles.
- Using a hot glue gun, glue one plastic circle to the end of the paper towel roll to seal it shut.
- Next, drop some colourful translucent beads into the paper towel roll so they cover the entire bottom, about a 1-2 tablespoons.
- Now, slide the second traced plastic circle into the paper towel roll, pushing it down until it is on top of the beads at the bottom.
- Use your ruler to measure the height and width of your paper towel roll.
- Using those measurements, cut out 3 pieces of aluminum foil and tape them together in a triangular prism shape.
- Slide the aluminum foil into the tube, secure with tape if necessary, as seen in the top image.
- If you want, decorate the outside of the tube with scrapbook paper, markers, and stickers!
- Angle it towards the light and watch the colourful patterns shine.

Reflection Questions:

- What was the most challenging part of building the kaleidoscope? How did you overcome it?
- What influenced your choice of colour and pattern?
- Why do you think kaleidoscopes are so popular?
- Did viewing your kaleidoscope inspire you in any way?

Materials Needed:

- Paper Towel Roll
- Ruler
- Sheet of Plastic (ex. Used Water Bottle or Used Container)
- Colourful Translucent Beads
- Tape
- Hot Glue Gun and Glue
- Marker
- Scissors
- Aluminum Foil

Optional:

- Colourful Scrapbook Paper