



PAINT PENDULUM

Create a pendulum to observe how the trajectory of a free moving object changes.

Materials

- Drop cloths or old newspaper
- Several old glue or squeeze bottles
- Hole puncher
- Yarn
- Scissors
- Paint (more than one color)
- Large sheets of paper
- Tripod or easel
- Paper towels

Results

The paint showed the path of the pendulum!.

Why?

When the bottle is pulled back and released, it swings. The paint in the bottle flows out continuously leaving a record of its path. By observing the pattern made by the paint, you can see how the swinging pendulum changed direction and magnitude of its motion over time.

Procedure

- This is a messy project, so make sure you have an adult's permission before you start. Wear old clothes that can get paint on them to complete this project.
- Start by covering the table and floor near where you will be working with a drop cloth or old newspaper.
- Clean and dry the insides of the squeeze bottles. Cut off the base of the bottle using scissors.
- Use the hole punch to make two holes on either side near the bottom of the bottle (just above where you removed the base). The holes should be on either side of the bottle.
- Place the paper you will be painting on a flat surface (table or floor). Place the base of tripod or easel on top of it.
- Cut a length of yarn 2.5 feet long and feed it through the two holes in the sides of the bottle. Now tie the yarn so that when hung from the center of the tripod or easel, it will hang upside down with its tip just above the paper.
- Pour paint into the upside down squeeze bottle. If the paint is thick, you may need to mix it with a little water to make it pour easily and flow smoothly out of the small tip of the squeeze bottle.
- Hang the paint-filled bottle back under the tripod or easel. Carefully open the tip. Gently pull back on and release the bottle. It should swing freely and paint should flow from the bottle to create patterns on the paper as the bottle moves.
- Repeat to make more hanging squeeze bottles with paint.
- Carefully lift the tripod and slide the paper to the side if you need a clean sheet. Allow the paint to dry thoroughly before you pick up the paper.