





Watch Video

Patterns of Motion & Friction Activity for Kids

Pendulum Painting DIY

 Duration: **30-60 min**  Difficulty: **Easy**  Cost: **\$0 to \$10**

Build a paint pendulum and study its pattern of motion!

Material List

- 3** Empty glue bottles
- 1** Hole puncher
- 1** 3 foot piece of string or yarn
- 1** Pair of scissors
- 3** Tubes of water-soluble paint different colors
- 1** Large sheet of paper
- 1** Tripod or easel with a hook on the bottom

Tip: This can be messy! Lay down old newspaper and wear old clothes.

Instructions

- 1** Cover your work area with old newspaper.
 - 2** Cut off the base of the glue bottle using scissors (adult help required).
 - 3** Use the hole puncher to make two holes near the bottom of the bottle.
 - 4** Feed the string through the two holes in the glue bottle.
 - 5** Tie the string so that the bottle hangs upside-down about 2 inches above the floor.
 - 6** Place a sheet of paper under the tripod and pour paint into the glue bottle.
 - 7** Hang the paint-filled bottle back on the tripod.
 - 8** Carefully open the glue bottle tip and give it a gentle swing.
- Tip:** Most paints are thick and need to be mixed with an equal part of water to flow easily.

How It Works

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 changes direction and how it slows down over time due to friction! You can make different patterns by swinging it harder or softer, swinging it in a different direction, or changing the length of the string!