

Rainbow Paper

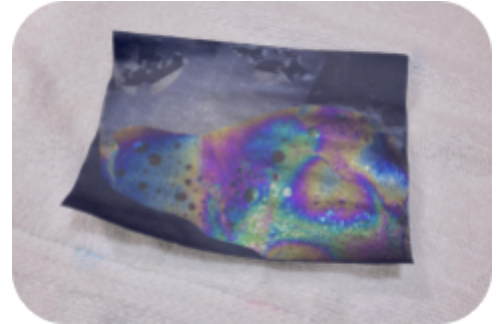
Try this simple activity that doesn't need a lot of time or materials, but still has beautiful results! Learners will use clear nail polish and the power of chemistry to create paper with a rainbow sheen.

Recommended Age: 6+ years old

Time needed: 5+ minutes

Link to the Video:

https://youtu.be/bQI_Vgqmxko



What You Need

- A container of water
- Black paper (construction paper, cardstock, etc) cut to size to fit into the container of water
- Clear nail polish (any kind will do!)
- A rag or towel to dry your paper on

What You Do

- Fill your container with 2-3" of water.
- Open the nail polish and make sure there's plenty of polish on the brush.
- Hold the brush above the water, and allow one drop to fall in.
- Slide a piece of paper into the water, lift it out, and set it aside to dry on your rag or towel.



What Else?

Play around a little bit! What if....

- you used more than one drop of polish?
- you tried warmer or colder water?
- you waited before or after putting the paper in?
- you put the paper in first, and then the nail polish?
- What else can you think of?

What will you do with your rainbow paper?



Tips for Adults

- If your child is sensitive to smells, do this outside or with a fan on.
- Because each paper is quick to do, be prepared to do several.

Learning and Skills Connection

- **Curiosity:** Wondering about the world, wanting to explore, willingness to try new things and take risks
- **Experimenting:** Making and testing predictions, trying multiple solutions
- **Being playful:** Engaging with a playful spirit; fooling around with alternatives; making and breaking rules; taking a whimsical approach, tapping into humor; feeling pleasure and joy

What's Going On?

When you drip nail polish in water, it spreads out and forms a thin film through a chemical reaction. When white light strikes the film, some of it bounces back from the outer edge of the film, while other rays continue through the substance and bounce off the back part of the film. Light that continues into the film and back out travels a little bit further than the light that reflected off the outside. This creates waves that are slightly out of step with each other. As the waves merge, some add to each other, while others cancel each other out. The wavelength of the light changes, so you see different colors.

Adapted from ScienceNotes.org

Doing STEAM with Kids

STEAM stands for Science, Technology, Engineering, Art, and Math. There are lots of ways you can explore these letters, apart or together. Ask your child to make predictions, describe what they see, and to imagine possibilities and solutions. Don't worry so much about the "right" answer. Developing curiosity, and problem-solving skills are important first steps to doing STEAM!

