

Sun-Warmed Crayons Art

PRE-K-K: SIMPLE SOLAR ART PROJECT



Overview

In this simple solar art project, children use the sun's heat to melt broken crayon pieces into brand-new colorful "sun crayons." Students see how the sun can change solids into liquids and back again while creating a take-home art piece.

Grade Level: Pre-K–Kindergarten

Time: 10–15 minutes setup; 30–60 minutes in the sun (varies by weather).

Objectives

- Observe the effect of sunlight and heat on crayon pieces.
- Describe changes in color, shape, and texture using simple language.
- Connect solar heat to changes they see in everyday materials.

Vocabulary

- **Melt:** To change from a solid to a liquid by heating.
- **Solid:** Firm and stable in shape; not liquid or fluid.
- **Heat:** A form of energy that makes things warmer.

Materials

- Old or broken crayons (paper removed)
- Silicone baking molds, muffin tin with liners, or small clear plastic cups (heat-safe if placing in direct sun)
- Tray or piece of cardboard to carry molds outside
- Sunny outdoor area (or a bright sunny window)
- Optional: Black construction paper under the molds to increase heat absorption

Safety Precautions

- Small crayons can be a choking hazard—supervise closely.
- Finished crayons may be warm—have students wait for teacher to check temperature before handling.

Implementation

Introduction:

Show students broken crayons and ask how they might give them a “second life.” Ask: “What happens to things when they sit out in the sun?” Guide toward ideas like “they get hot or melt.” Explain they will use the sun’s heat to melt and reshape crayons into new art crayons.

Procedure:

1. Help students peel paper from old crayons and break them into small pieces.
2. Let children choose colors and place crayon pieces into molds or cups, filling each about half full.
3. Set molds on a tray. Optional: Place black paper under the molds to absorb more heat.
4. Take the tray outside to a sunny spot (or place in a sunny window). Explain that the sun is the “oven.”
5. Check every 15–20 minutes. As pieces soften and melt together, encourage observations.
6. Once melted, carefully bring the tray indoors and let it cool completely so the crayons harden again.
7. Pop out the new “sun crayons” and let students draw with them or create rubbings over textured surfaces.

Questions to Prompt Inquiry

- What did the crayons look like before and after they sat in the sun?
- Where do you think the heat came from that melted the crayons?
- What would happen on a cloudy or cold day?

Conclusion (Key Takeaway)

The sun’s energy warmed the crayons enough to melt them and change their shape, then they became solid again when they cooled. Solar heat can change materials without using electricity or a regular oven.

Activity Extensions

- Compare crayons melted in the sun vs. in a warm indoor spot away from the sun.
- Talk about how the sun warms roofs and buildings and why material and color choices matter.