Shaving Cream Nebula Prints

What colors will you use in your nebula prints?

Preparation: 5 minutes
Activity: 3 minutes
Cleanup: 20 minutes

Description

In this activity, visitors will swirl paint into shaving cream to make an extravagant nebula print.

Suitable for children ages 4 and up.

Materials

- Red, blue, and green tempera paint
- White construction paper
- Trays
- Shaving cream
- Pick comb, wooden skewer, or plastic fork
- 1 Ruler (or paint spatula) per station
- Large waste bucket
- Towels
- 3 Bowls
- 3 Spoons
- Water
- Sign Holders (*optional*)
- Markers (*optional*)
- Labels (*optional*)

Safety

- Use normal precautions while doing this activity.

Prepare

Advanced Preparation

- Add 3 squirts of paint and two spoonfuls of water to a bowl and mix. Repeat this process until you have the desired amount of paint. Aim for a syrup-like consistency for the paint mixture-not too watery. Have one bowl for each paint color.
- Set aside a large bucket for dumping shaving cream.
- Label the different color paints with their corresponding elements or use the activity sign: red= hydrogen, blue=oxygen, and green=carbon
- Print out attached activity signs and place them around the activity area.

Visitor Prompts

- Would you like to make your own shaving cream nebula print?
- Nebulae are made of different elements (represented by the colored paint that you see here) What colors will your nebula have?"

Background Space Science

Nebulae are **large clouds of gas and dust in space**. Powerful telescopes let scientists look closely at nebulae, many of which were formed by dying stars. While some massive stars explode in dramatic **supernovas**, other stars will gradually expand and start to lose their outer layers. Strong forces from dying stars, called **fast winds,** push out **important elements.** This action mixes up the gas and dust between stars—the **interstellar medium**.

Helix Nebula from the Hubble Space Telescope. In this image red is used to show hydrogen, green for oxygen, and blue for helium.

Scientists can use color as a tool in nebulae images to code for elements detected by telescopes. This results in beautiful and informative images that show separate elements and mixtures in nebulae. Elements spewed out into space can eventually come together to form new stars and planets**. In this activity, visitors are making a model of a nebula by mixing up paint representing different elements—but models are not completely perfect.** Elements mixed up and spread out by nebulae, from long ago dead stars, helped make our Solar System, Earth, and even you.

- ***A nebula is nature's way of mixing up materials in space.***
- ***Different colors of a nebula image represent different elements.***
- ***Elements from dying stars helped make Earth and all its life forms.***

Activity Steps

Step 1

Spray a palm-sized dollop of shaving cream onto half of the tray. Spread the shaving cream with a ruler or paint spatula to make one flat layer the size of a sheet of construction paper. To Using half the tray allows 2 visitors to do the activity at once.

Step 2

Drizzle some paint across the shaving cream and use a pick comb, skewer, or plastic fork/spoon to spread the paint around.

Tips for Step 2:

- *Suggest holding a spoonful of paint over the shaving cream and shaking it to allow the paint to spread out, rather than pouring it all in one spot.*
- *When spreading the paint, try to mix the colors gently so that all of the colors are still present in your nebula. Over-mixing will result in all of the colors combining into one.*
- *Suggest making different types of patterns when spreading the paint, such as swirls, to make interesting shapes.*

Step 3

Lay a piece of white construction paper over your shaving cream and paint. Press gently for a few seconds.

Step 4

The facilitator takes the artwork and holds it over the waste bucket. Scrape the shaving cream off in one motion with the ruler into the bucket to reveal the nebula art on the paper! Scrape the excess shaving cream still on the tray into the bucket before the next visitor makes their art.

Tips for Step 2:

- *If markers are available, visitors can write their name on their nebula print and/or name their creations.*

Questions to Ask Visitors

- What shapes do you notice? Did any colors blend together? What is your favorite part of your nebula?
- (*With printout signs*) Does your nebula look like some of the space images of nebula around the activity?
- What elements did you use in your nebula? How mixed up did they get?

Check out prompts for visitors on the next page to foster more creativity in this activity.

Before you say "Good Job!" consider these Creativity-Enhancing Alternatives suggested by the Children's Creativity Museum:

Say "thank you"

- Not only is "thank you" what we often really mean ("thank you for helping me clean up" rather than "good job cleaning up") but children mimic the language they hear adults use and "thank you" is a powerful phrase to have on heavy rotation.

State what you see

- "**I noticed ...** you used a lot of brown color, you spun around on just one foot, your play dough sculpture feels sharp, you've been jumping for more than a minute, etc. "

Ask questions

- "**I wonder …** if this square block would fit in your tower?"
- "**Can you tell me about …** your creation? Your dance? Your song?"
- "**Did you notice ...** the red and blue are mixing together? You climbed higher than my head?"
- "Do you have a **favorite part** of your creation?"
- "What was **challenging** about this project?"

Say simply "you did it!"

- The accomplishment is the reward. Children should be proud of themselves, not of our approval.

Focus on the action

- "You've been **working really hard** on that drawing"
- "**Wow!** It seems like you've been really **practicing ...** "
- "That's **not easy**"

Engender empathy

- Instead of "Good job sharing!" try, **"Look at Max,** he seems pretty happy to be playing with your truck."

Remain silent

- By stepping back, we allow greater independent exploration and creativity. This is reward enough.

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