



LESSON: *Frantastic Rainbow Feet*

Episode: "Paint Job"

Franny travels to an island, where she meets an artist and his daughter, Penny. Franny shows Penny that a little creativity -- and paint -- can often make old things even better than new. In *Franny's Treasures*, the audience discovers how to mix colors to create different colors.

Learning Objectives/Skills

Children will:

- * **make predictions about what will happen when they mix two colors together.**
- * **use their fine motor skills to carefully stir the paint on their plates and create "footprint" pictures.**
- * **use creative skills to invent a name for their new and unique color, and then describe or write about how they mixed it.**

Grade
PreK - 2nd Grade

Subject
Physical Science

National Standards
NS.K-4.1, NS.K-4.2,
NA-VA.K-4.6

Approx. Times
30-40 minutes
(Plus 10 minutes prep)

Overview

Our eyes are great at seeing colors. We can see different hues, like orange and purple. We can see different shades of the same hue, like light blue and dark blue. We can also notice a color's intensity - some seem more bold or colorful than others, like fire-engine red compared to brick red. Variations in hue, shade, and intensity enable our eyes to recognize hundreds of different colors. All these colors help us make sense of the world around us. Artists can fool our eyes with paintings that match the colors of things we've seen in real life. They often have to mix paints and invent new colors to make their paintings look realistic.

The following activities begin with questions about familiar colors. The children will then mix paint colors, becoming "color inventors," and name the colors they create. Each child will use his/her special color to paint a footprint picture.



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Materials

Classroom materials:

- Squeezable bottles or jars of each of the following colors of tempera paint:
 - Black and white
 - Primary colors: red, yellow, and blue
 - Secondary colors: orange, purple, and green
- Copies of colorful painted landscapes or portraits
- Pictures or objects matching each of the colors of paint (optional: use the room you are in if there are matching colors around you)
- Crayons
- Soap and water
- Sponges and/or paper towels

Each child will need:

- 1 *Frantastic Rainbow Feet* template photocopied on card stock
- 2 paper plates (doubled up for strength)
- 1 plastic spoon or craft stick for stirring paint
- 1 smock

Prep

Activity 1:

- Set up the bottles of paint (out of reach) so the children can see what's inside.



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Prep (continued)

Activity 2:

- Keep the stack of plates and a container of mixing spoons or sticks near the paint bottles.
- Have the *Frantastic Rainbow Feet* sheets (template photocopied onto card stock) ready to hand out.
- Make sure you have paper towels or sponges in case of a spill.
- Set out crayons for the children to share. Each child will need enough table space to work on the activity sheet and the paper plate at the same time.





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Activity 1 - Name That Color

1. Begin a discussion about colors. Call the children's attention to the colors of paint and then challenge them to find additional colors. Ask the children:
 - *Who can name the color of these paints? (Hold up each bottle)*
 - *What colors do you see around the room?*
2. Holding a bottle of paint, ask the children if they see the same color somewhere in the room. Repeat with each bottle of paint.
3. As they identify the colors of objects around the room, children may demonstrate their awareness of shades, saturation, and hues. "Hue" is another word for a color. Some colors are the same hue, only lighter or darker shades, such as "light blue" or "dark blue." Some colors are more bold and vivid than others, some look a little dusty and dim like "brick red," while others look bright and fresh like "fire engine red." Ask:
 - *Can anyone find two different shades of blue? How are they different?*
 - *How many colors do you think there are in the whole world?*
4. Engage children in a conversation about how painters create pictures.
 - *Do you know what an artist is?*
 - *What kinds of things do artists use to make art?*
 - *Has anyone ever seen a painting before?*
5. Show the children the photocopies of paintings. Introduce the idea of artists as "color inventors" who use a small number of paints to create a picture that looks like it has hundreds of colors. Ask:
 - *How many colors do you see in this painting?*
 - *How can we use these eight colors to make lots of new colors?*
 - *How can we be color inventors too?*



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Activity 2 - Become a Color Inventor

1. Once the children have put on their smocks, invite them to come to the paint station (one by one). Explain that each child will have the chance to mix up a brand new color from two of the colors of paint.
2. Ask each child to choose two colors. You (or an adult helper) can squeeze a dollop of paint on each side of the plate (Optional: for more color variety, each child may choose to have each color in the same amount, or to have more of one and less of the other). Remind each child not to touch his or her paints until everyone is ready to move on to the mixing stage.
3. While the children are waiting to mix their paint, ask the helpers to give each child a *Frantastic Rainbow Feet* sheet. Children may use crayons to write their names and decorate the bottom of the paper.
4. When each child has two colors on their plate, it's time to start mixing. Hand out the spoons/sticks. Encourage the children to mix their colors thoroughly and talk about what they notice as they work. Ask:
 - *What do you notice happenings as you mix your two colors together?*
 - *What does your new color make you think of?*





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Activity 3 - Make Some Colorful Footprints

1. As the children finish mixing, instruct them to make a footprint painting.
Prompt each child to do the following:
 - a) Curl their hand into the "thumbs up" position and then gently dip their fists into the paint on the plate so that the edge of their hand, from their little finger to their wrist, is coated with color.
 - b) Stamp their painted fist onto their *Frantastic Rainbow Feet* sheet to make a mark that looks like the sole of a foot.
 - c) Dip their thumb into the paint and stamp it on the page to make the big toe.
 - d) Use their other fingers to add the other four toes.
 - e) Repeat all of the steps with their other hand to paint the other foot.

2. After painting the footprint picture, the children should walk to the sink with their hands folded together to avoid leaving fingerprints around the room.

3. Place the paper plates and footprint pictures out of the way to dry.

4. Once the footprints are dry, invite the children to complete the *Frantastic Rainbow Feet* sheets. Prompt them to use crayons to write their name, the names of their original two colors, and the name they've invented for their brand new color.

5. Follow up with a group discussion about the colors the children mixed. Explain that some colors, like the secondary colors and shades of brown and grey are easy to make by mixing two others, and some - the primary colors - can't be made this way. Take a poll and see if the children discover any new trends. Ask:
 - *Did anyone mix up a brown or gray color?*
 - *Did anyone make a color that looks like one of the primary colors - red, yellow, or blue?*
 - *Did anyone make a color that looks like one of the secondary colors - orange, green, or purple?*



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Science Extenstions

1. Color inventors can also experiment with light to mix new colors. Aim a flashlight at a blank white surface and try layering different combinations of colored cellophane in front of the light beam. What new colors can you create?
2. Play "paint store."
 - Give children a limited assortment of paints, plastic cups, or clean recycled yogurt containers, and have them set up shop in one area of the room.
 - Some children can come up with a name for their store and pretend to be shopkeepers. Other children can pretend to be customers coming to the paint store to choose a color to paint their family's house or the rooms inside.
 - The shopkeepers can mix colors and sell them to the customers.
 - The customers can use the paints to make a picture of the house or the rooms.
3. Decorate a bulletin board with all the paper plates once they have dried to show the diversity of colors that can be mixed from the colors in a basic paint set. Label the plates with a card to identify the colors used to create the result: $\text{___} + \text{___} = \text{___}$ (for example red + yellow = orange).
4. Invite the children to choose their favorite color and go on a color scavenger hunt. Instruct them to draw and label five things they see that feature their favorite color. Invite them to compare the items they chose. Ask if they can tell whether any of the item's colors are lighter or darker shades of the same hue?
5. Encourage children to observe the paint around them. Ask:
 - Can you tell when something has been painted?
 - Why do you think people paint things?
 - Can you find any furniture or toys at home or around the classroom that look like they have been painted?
 - Paint can change the color of something -- can paint do anything else?
 - Are all the paints the same? (Shiny, thick, thin, etc.)
6. Try coloring different things with the children using dye.
 - Tie-dye a t-shirt or pillowcase. Encourage the children to notice the new colors that appear whenever two different colors touch.
 - Dye eggs or stain paper using natural dyes made from foods like blueberries, grape juice, beet juice, carrot juice, onion skins, or spinach.



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Literacy Connections

- ***I Spy: An Alphabet in Art***, by Lucy Micklethwalt
- ***Little Blue and Little Yellow***, by Leo Lionni
- ***Mouse Paint***, by Ellen Stoll Walsh

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