

## Objective

By the end of this lesson, you will understand the science behind tie dye and be able to create your own colorful designs.

## Materials and Prep

- White cotton t-shirts or fabric
- Various colors of fabric dye
- Squeeze bottles or spray bottles
- Rubber bands
- Plastic gloves
- Plastic tablecloth or garbage bags to protect your workspace
- Water
- Bucket or basin
- Access to a sink or outdoor area for rinsing
- Old newspapers or paper towels for drying
- Apron or old clothes to protect yourself
- Optional: plastic wrap or plastic bags for wrapping your dyed fabric

Before starting the lesson, make sure you have all the materials ready and set up a workspace that can get messy.

## Activities

- **Create a Tie Dye Design:** Learn different tie dye techniques such as spiral, crumple, or accordion fold. Experiment with different patterns and color combinations to create unique designs on your fabric.
- **Dye Your Fabric:** Use the fabric dye and squeeze bottles or spray bottles to apply the colors to your fabric. Make sure to follow the instructions on the dye packaging for mixing and application.
- **Let it Set:** Once you have applied the dye, let your fabric sit for the recommended time to allow the colors to set and bond with the fabric.
- **Rinse and Dry:** Rinse your dyed fabric under running water until the water runs clear. Remove the rubber bands and unfold your fabric to reveal your tie dye masterpiece. Lay it flat on old newspapers or paper towels to dry.
- **Show off Your Creation:** Wear or display your tie dye creation proudly and share it with your family and friends!

## Talking Points

- **What is tie dye?** Tie dye is a technique used to add colorful designs to fabric. It involves folding, twisting, or crumpling the fabric and then applying different colors of dye to create unique patterns.
- **How does tie dye work?** The dye molecules in the fabric react with the fibers and bond together, creating the vibrant and permanent colors. This process is called chemical bonding.
- **Why do we use white cotton fabric?** White cotton is a great choice for tie dye because it easily absorbs and holds the dye, resulting in bright and vibrant colors.
- **What are some tie dye techniques?** Some popular tie dye techniques include spiral, crumple, and accordion fold. Each technique creates a different pattern on the fabric.
- **Why do we need to let the fabric sit?** Allowing the fabric to sit for a specific amount of time

helps the dye molecules to fully penetrate the fabric fibers and create a long-lasting bond.

- **Why do we rinse the fabric?** Rinsing the fabric removes any excess dye and helps set the colors. It also prevents the colors from bleeding or fading when the fabric is washed later.
- **What can we do with our tie dye creations?** You can wear your tie dye creations as unique clothing or use them as decorative items like pillow covers, wall hangings, or even tote bags.
- **What other natural materials can we tie dye?** Besides cotton fabric, you can also experiment with tie dyeing other natural materials like silk, linen, or even paper.
- **How can we create different color combinations?** By mixing different colors of fabric dye, you can create a wide range of color combinations. Experiment with primary colors (red, blue, yellow) to create secondary colors (purple, green, orange).
- **Why should we protect ourselves and our workspace?** Fabric dye can stain surfaces and clothing, so it's important to wear an apron or old clothes and use a plastic tablecloth or garbage bags to protect your workspace from any accidental spills or splatters.