

## Colour Mixing with Rainbow Tie Dye



### Age Group:

KS1, KS2

### Time Allowance:

45 minutes - 1 hour plus 24 hours for the dye to fix

### Equipment Needed:

- White cotton T-shirts
- Large bowl
- Elastic bands
- Soda ash
- Cling film
- Procion MX dyes in Lemon Yellow, Magenta and Bright Turquoise (one 50g pot of each)
- Clothes pegs

### Additional Resources:

- Colour Wheel

### Lesson Objective:

To explore colour mixing primary colours using dyes  
 To learn about primary and secondary colours and how to mix them  
 To learn how to dye a T-shirt using Procion MX dyes  
 To learn how to tie dye a T-shirt into a spiral design

### Learning Expectations:

After completing the lesson, each student will understand colour mixing primary colours to produce secondary colours.

After these lessons, each student will have produced a rainbow tie dye T-shirt!

### Classroom Set Up and Preparation:

- Before the lesson, mix the dyes and decant into squirty bottles of Lemon Yellow, Magenta and Bright Turquoise. A couple of each per group should be enough.
- Each student needs their own T-shirt.
- All students need access to squirty bottles filled with dye and elastic bands.
- Table surfaces should be covered and it is advisable to use rubber gloves and aprons as the dyes will stain! Several cloths per table to wipe up excess dye will also be useful.
- Each student should have a piece of cling film on which to dye their T-shirt. This will mean a quicker, easier clean up!

### Vocabulary:

- Primary colours
- Secondary colours
- Procion Dye
- Tie Dye



### Prep 1

For each bottle of dye, add 1tsp of dye to 200ml of warm water. Mix up two or three bottles of each colour per table.



### Prep 2

Use a funnel to decant the dyes into the squirry bottles. Shake to mix well.



### Step 1

Lay out the T-shirt. Use a clothes peg to pinch the middle of the shirt (both the front and the back of the shirt need to be held in the peg).



### Step 2

Holding the peg, start to twist the shirt.



### Step 3

Tuck the fabric in and round as you twist.



### Step 4

Tuck the ends round, making sure they go in the same direction as the rest of the shirt.



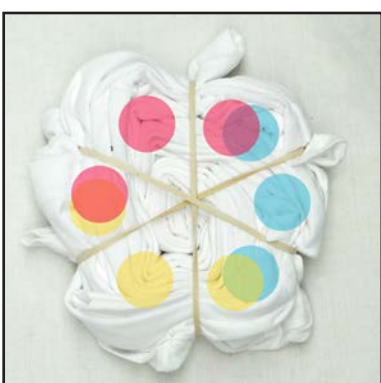
### Step 5

Use elastic bands to hold the spiral together. Use three bands over one another to divide the shirt into six pie segments.



### Step 6

Soak the shirts in warm water and soda ash. Mix in 1tbsp of soda ash for every litre of warm water. Soak for at least fifteen minutes.



### Step 7

Each dye will be squirted into 3 segments. Every other segment will have two colours squirted into it to create a secondary colour.



### Step 8

Squeeze any excess water out and lay on a sheet of cling film. Take a bottle of dye and squeeze it into three of the segments. Turn over and do this on the other side.





### Step 9

Wipe the cling film clean between each colour. Squeeze the red dye into three segments, starting with the last segment of yellow.



### Step 10

Finally, squeeze the blue dye into the last three segments. Check that you have all three colours on both sides.



### Step 11

You should be left with a shirt that looks something like this! You should be able to see the different colours mixed together.



### Step 12

Wrap the shirt in cling film and leave for 24 hours for the dye to fix. Try not to move it too much as you don't want the colours to mix.



### Step 13

After 24 hours, unwrap the shirts and, leaving them tied, rinse in cold water until it runs clear. Untie and wash with non-bio detergent to remove excess dye.



**The Finished Shirt!**

### Extension and Expansion Ideas:

Use pipettes with palettes and small amounts of dye. Students can watch the colours blend, mix their own shades and drop them onto small pieces of fabric in patterns. Experiment with different tie dye techniques. Try using the elastic bands to make stripes or concentric circles.

