

Water Art

This water Art science experiment is a fun and easy activity to watch mixing of primary colors to give secondary colors and difference in density between hot and cold water.

Grow LOVE of science with this colourful and fun experiment!

Materials Needed:

- Food colouring
- Glasses or Jars
- Hot and Cold Water

Time: 15 minutes

Steps:

1. Assemble all materials required.

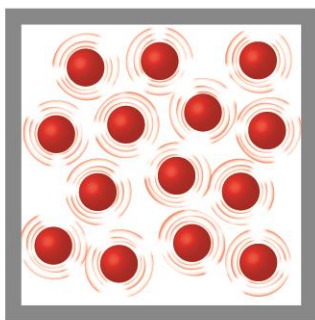


2. Add hot water to two glasses and cold water to the other two. You can also add drops of food coloring to each at this point.

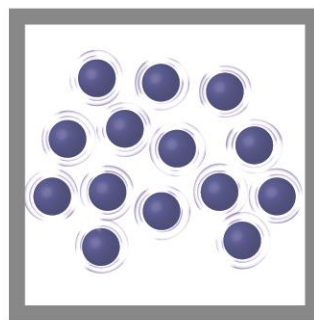
Notice how the food coloring added to hot water mixes quicker than the one added to cold water.



This is happening because in the hot water the molecules are moving around faster.



Hot water
(a)



Cold water
(b)

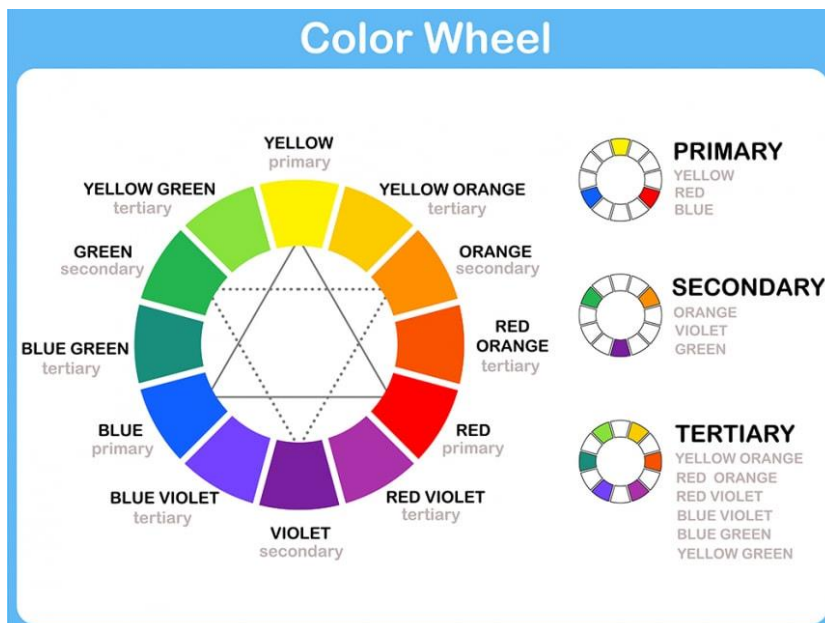
3. Now we get to the fun part. Try mixing different colors with each other.

You can notice how the primary colors – Red, Blue and Yellow when mixed forms the secondary colors like Green, Orange and Purple.



Try mixing the color back and see if they give the first color. See if there's a difference when you add hot water to cold water and other way round.

Use the color wheel below to understand it more.



Any idea why or how this happens?

The molecules in hot water move faster than those in cold water. Hot water molecules bounce around and leave gaps. This makes hot water slightly less dense than cold water.

So, when you put the cold water on the bottom, the denser cold water stays there.

But when you put the cold water on the top, heat molecules rise. So, the colors mix right away.

Because you're mixing primary colors, they mix into secondary colors when the hot water is on the bottom.

That's all for this month! Happy experimenting.