

**Marbling paper: Painting with water and oil.**

**Age: 5th and 6th grades together.**

We used science (chemistry) to marble paper:

## **MATERIALS**

Baking dish

Cooking oil

Liquid watercolor (or food coloring)

Heavy paper (sketch paper, watercolor paper, cardboard)

Eye droppers, pipettes or paint brushes.

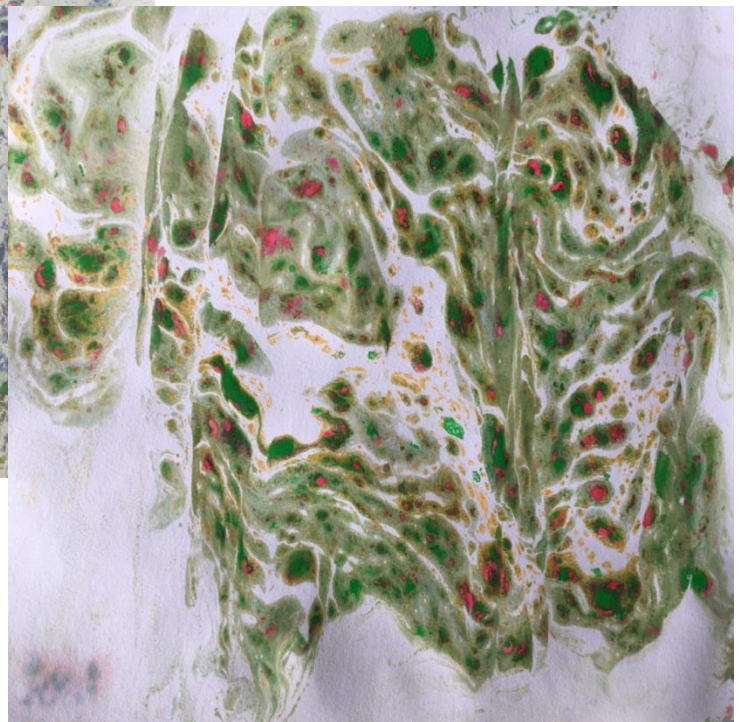
## **PROCESS**

- Mix up some food coloring with cooking oil in a few cups.
- Use a tray and add a thin layer of water to cover the bottom.
- Next use your eye dropper to drop the colorful oil in various patterns on top of the water.
- Place the paper on top of the creation.
- The oils will be absorbed into the paper along with the colors.
- Remove the paper and let it settle on a surface to dry out.

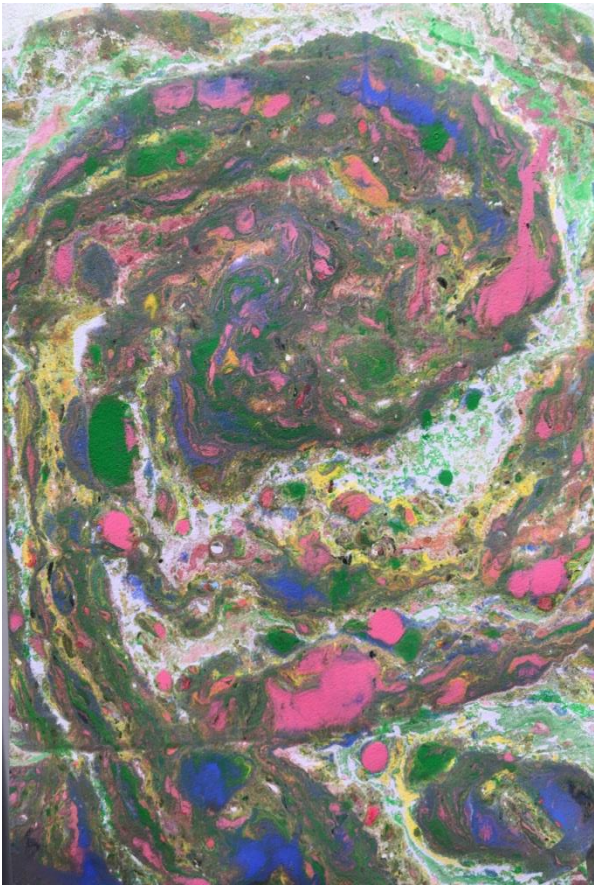
## **SCIENCE BEHIND**

- Oil is less dense than water. That means that the molecules that make up water are packed more tightly than those in the same amount of oil, so water will always sink below the oil.
- Oil and water don't mix because water likes itself more than oil. Oil is non-polar, which means it's "afraid of water" so it doesn't like to mix and water molecules are more attracted to other water molecules than oil molecules because they are polar. So, oil only likes non-polar molecules and water only like polar molecules.

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**PUPILS MADE NOTEBOOKS USING THE MARBLED PAPER.**

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