Painting with Oobleck

Here’s what you’ll need:

(The basic ratio is 2 parts cornstarch to 1 part water)

- 2 Cups Cornstarch
- 1 Cup Water
- Food coloring
- Mixing bowls
- Plastic fork(s)
- Cardstock or thick paper

Directions:

1. Pour 2 cups cornstarch into a bowl.
2. Add 1 cup of water and stir to combine.
3. Add food coloring (we suggest making different colors of oobleck in separate bowls).
4. Once your colors are mixed it’s time to start painting! Using a fork, drizzle the oobleck all over your cardstock.
5. When you’re done painting, allow the oobleck on your paper to dry completely.
6. Then scrape off the dried oobleck with a spatula and enjoy the design if leaves behind!

Oobleck sometimes requires some fine-tuning. Start with the basic ratio and then add more water or cornstarch depending on the consistency. When mixed you should be able to press a handful of oobleck into a ball in your hand, and when you release the pressure the ball should “melt” back into a liquid. If your oobleck is too watery, add a couple tablespoons of cornstarch and mix. If your oobleck is too flaky or solid, add a couple tablespoons of water and mix.

See the art experiment in action:
www.youtube.com/watch?v=b1f0g8KHvKc

Understanding the science:

Oobleck is a non-Newtonian fluid, a fancy term for a liquid whose viscosity changes depending on pressure. Viscosity is the measure of friction in a liquid and determines how fast or slow a liquid flows. Most liquids follow Newton's law of viscosity in that they have constant viscosity independent of stress. For instance, honey and water will always flow the same no matter how you pour or press them. Oobleck, on the other hand, does not have constant viscosity. If you apply pressure to it, it forms a solid. Loosen the pressure and it will melt back into a liquid. Because its viscosity changes, oobleck is classified as a non-Newtonian fluid.

A few more tips:

- Oobleck tends to dry out quickly with a lot of play. If that happens simply refresh it by adding a little more water.
- Oobleck is messy! But here’s a tip for cleaning it: LET IT DRY! Once oobleck dries it returns to a cornstarch powder that can be easily swept or vacuumed up.
- To store oobleck let it dry out in a bin open to the air, then refresh it with water when ready to use again.