

Exploring Oobleck

Fluids, Solids, and In Between

Solids

- Solids have a preferred shape
- Pushing (force) makes it change shape, but it springs back when released
- Bigger force = more shape change
- Elasticity = how much deformation when poked?

Fluids

- Fluids take the shape of their container, leaving no gaps
- Force makes a fluid flow
- Bigger force = faster flow
- Viscosity = how fast does it flow when poked?

A **viscoelastic material** has properties of both fluids and solids

How to make **Oobleck** :

6 heaping spoons cornstarch + 8 spoons water + stir slowly and thoroughly = oobleck!
 (You may need a little more water to make it just come together into a goopy viscoelastic substance)

| Water (fluid) | Sponge (solid) | Oobleck (viscoelastic material) |
|---|-------------------|------------------------------------|
| • Can you make it flow? | | |
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| • Can you rip a hole in it? | | |
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| • Can you bounce a ball off of it? | | |
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| • What happens if you leave a ball on it? | | |
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| • Can you paint a line on it? | | |
| | | |
| • Can you stir paint into it? Will it mix? | | |
| | | |
| • Can you make it hold its shape? (try rolling the oobleck into a ball) | | |
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