



What's Your State?

What matters is how you hold your matter!

Materials:

A large crowd
Lots of balloons

To do and notice:

1. Have everyone blow-up and tie-off a balloon.
2. To model the various states of matter:

Solid:

Have everyone hold their balloon above their head. The balloons should be held fairly steady.

Liquid:

Have everyone gently pass his or her balloon from person to person.

Gas:

Have everyone throw his or her balloon in the air. As soon they catch another balloon they should throw it in the air again.



What's going on?

Each balloon models a single atom or molecule.

States of matter are based on atomic or molecular motion.

In a solid, atoms or molecules don't move that much, they are held in a rigid structure.



In a liquid, atoms or molecules move past each other.

This movement allows a substance to flow.

In a gas, atoms or molecules zoom all over the place.

This active kinetic motion and associated molecular collisions allows gases to produce pressure. This motion also enables molecules to move from regions of higher pressure to regions of lower pressure.

Etc:

If a balloon pops during this activity - nuclear decay!

Resources:

This activity was borrowed from Paul Doherty (He borrowed, then warped this activity from the "Weird Science Guys.").