

Making Gak!

A very fun, and very special kind of goo. The history of Gak is quite interesting. 1943 James Wright, an engineer, was attempting to create a synthetic rubber. He failed, and kept the Gak on the shelf. It wasn't until someone else had a play with the goo and thought 'hey, kid's would love this!' that the goo was turned into a science toy. Now it has seen use as a grip strengthener, as an art medium, and it even went into space on the Apollo 8 mission!

How to make Gak. (the simple way).

1. Get some Borax (the cleaning soap, not the ant poison), some food colouring, sealable plastic bags, and some PVA glue.



4. Add some food colouring. This can be messy, so be careful. It is quite OK to have plain white Gak! Next add about 1/4 of a cup glue.



2. Place about 1/4 of a teaspoon of Borax in the plastic bag.



5. Mix thoroughly. All the glue must react with the borax.



3. Add some water, about 1/4 of a cup. Mix it together to get the water to dissolve the borax.



6. Squeeze out any excess glue (and borax) under running water. Wash your hands. Congrats, you got Gak!



How it works: very much like wet spaghetti.

The glue forms long, long chains of molecules called polymers. These are like strands of spaghetti. The borax forms millions of very weak links between the long strands, this is like our water. When spaghetti is hot and wet, the strands all slip and slid over each other, just like in a liquid. This is also what is happen when gak is flowing; the polymers slide over each other and there aren't too many bonds to hold them. When the water evaporates (or the bonds have time or enough pressure to form many, many links) it holds the spaghetti together like a fat, bouncy brick. Not that I'd recommend it, but did you know that a big ball of damp, cold spaghetti can actually bounce!