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| Chemical Demonstrations |
| Hydrogen balloons |

What you will need:

This reaction can be applied to curriculum for excellence.

SCN 3-19a

*Through experimentation, I can identify indicators of chemical reactions having occurred ...*

National 4 – Chemical Change & Structure

*Energy changes of chemical reactions*

* A hydrogen cylinder with regulator
* A balloon
* Tubing to fill balloon.
* Demonstrator should wear eye protection and (possibly) ear defenders
* A length of cotton or string, about 1M long, (with a weight to hold the balloon down if needed)
* A metre stick with a wax taper/wooden splint on the end
* Lighter

# What you do:

# Connect up the hydrogen cylinder and fill a balloon with the gas.

1. Tie off the end
2. Tie one end of some thread/string round a weight and the other to the balloon. Place the weight on the floor in an open area.
3. Make sure everyone is standing at least 3M back from the balloon
4. Light the splint/taper on the end of the metre stick and ignite the balloon at arm’s length
5. There will be a loud, whooshing explosion.

The explosion will not be loud enough to cause hearing damage but nervous pupils might be better off covering their ears.

Do **not** repeat this in this fashion with a hydrogen/oxygen mixture and the bang will be extremely loud

## Safety

Perhaps wear ear defenders Wear eye protection

**It is the responsibility of teachers doing this demonstration to carry out an appropriate risk assessment.**