



## 360 Degrees of Separation

### *Nuclear Fission*

#### **Josie Long:**

When have-a-go physicist, Richard Handl, tried building a nuclear reactor in his kitchen, the authorities were a little concerned, because with Nuclear Fission, the difference between running your kettle and wrecking your county is just a little moderation.

To make your own nuclear reactor, you will need...

- Some Uranium-235 (or plutonium-239 will do)
- A lot of concrete and cooling water
- Some neutrons
- A Neutron moderator and control rods to control the reaction

Fire your neutrons at your uranium, splitting the nucleus into two smaller nuclei. This releases energy and two or three more neutrons. These neutrons can then hit more uranium nuclei and cause them to split, creating a chain reaction that spreads like office gossip.

The Neutron moderator and control rods help you manage the reaction so you don't make a big hole in the world.

Would be physicist, Richard was arrested just before he went nuclear, but if he'd built his own power station, he may've been surprised to find some strange little creatures living in its walls and feeding off the fallout.

These alien-like organisms living amongst us, impervious to the most hostile environments – have a name that would make any sci-fi fan tremble with excitement... They are known as... Extremophiles.