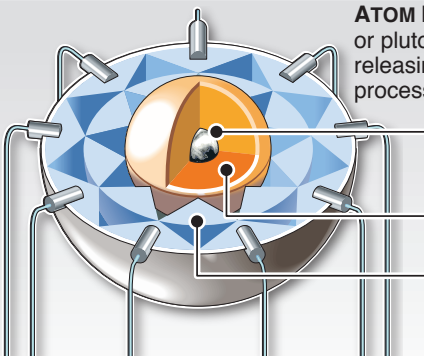


# What is a hydrogen bomb?

A hydrogen bomb, or thermonuclear weapon, uses the energy from a primary fission bomb to ignite a secondary nuclear fusion reaction. The result is the most destructive weapon ever created by man



**ATOM BOMB:** Compresses core of uranium or plutonium until nuclei of core splits up, releasing huge amount of energy in process called fission

**Neutron initiator:** Produces burst of neutrons needed to start chain reaction

**Uranium or plutonium core:** Fissile material

**Explosive lenses:** Use sphere of detonators to synchronize shock waves to compress core to supercritical mass

**HYDROGEN BOMB:** Uses energy from primary fission bomb to ignite secondary nuclear fusion reaction

**1** Small atom bomb explodes, emitting radiation

**2** X-rays from primary detonation reflect inside casing, heating foam

**3** Foam becomes plasma and compresses secondary package, igniting fusion fuel

**Miniaturization:** Hydrogen bombs can pack explosive power into smaller, light-weight packages delivered by ballistic missiles

