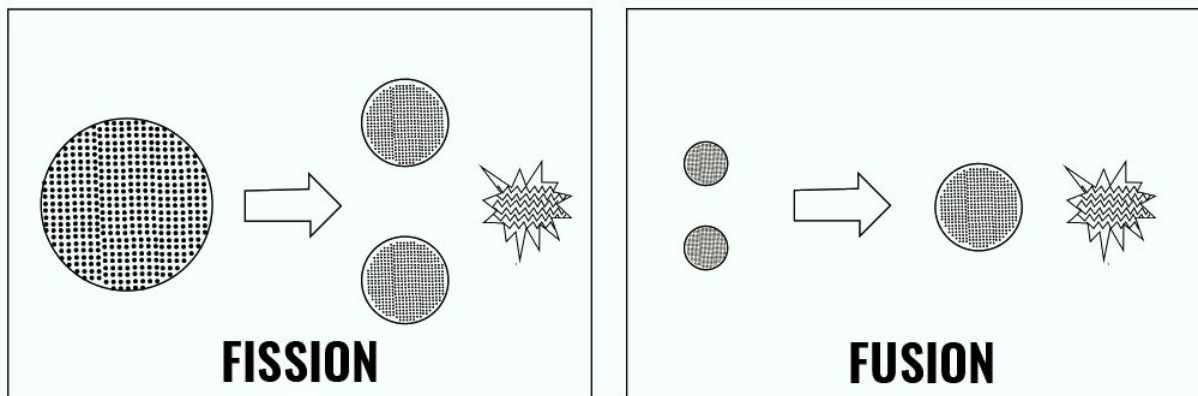


10.3: Fission and Fusion

Fission is the splitting of large nuclei of certain isotopes into smaller nuclei along with the release of energy with several free neutrons. Almost all of the fission fragments or products are radioactive. Neutrons released during the fission process can strike other nuclei and cause them to split, called a **Chain Reaction**. **Fusion** is the combining of particles to produce a new isotope and energy; **think of nuclear fusion as being the opposite of nuclear fission**. Fusion is the combining of particles into larger particles, whereas fission is the splitting of particles into smaller particles. The fusion process involves smaller nuclei than the fission process. When fusion occurs at a very high temperature — 50 million degrees Celsius, this is referred to as **thermonuclear fusion**.



The Fission versus Fusion processCC BY-SA 3.0 | Image courtesy of Wikimedia Author: Kelvinsong.

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