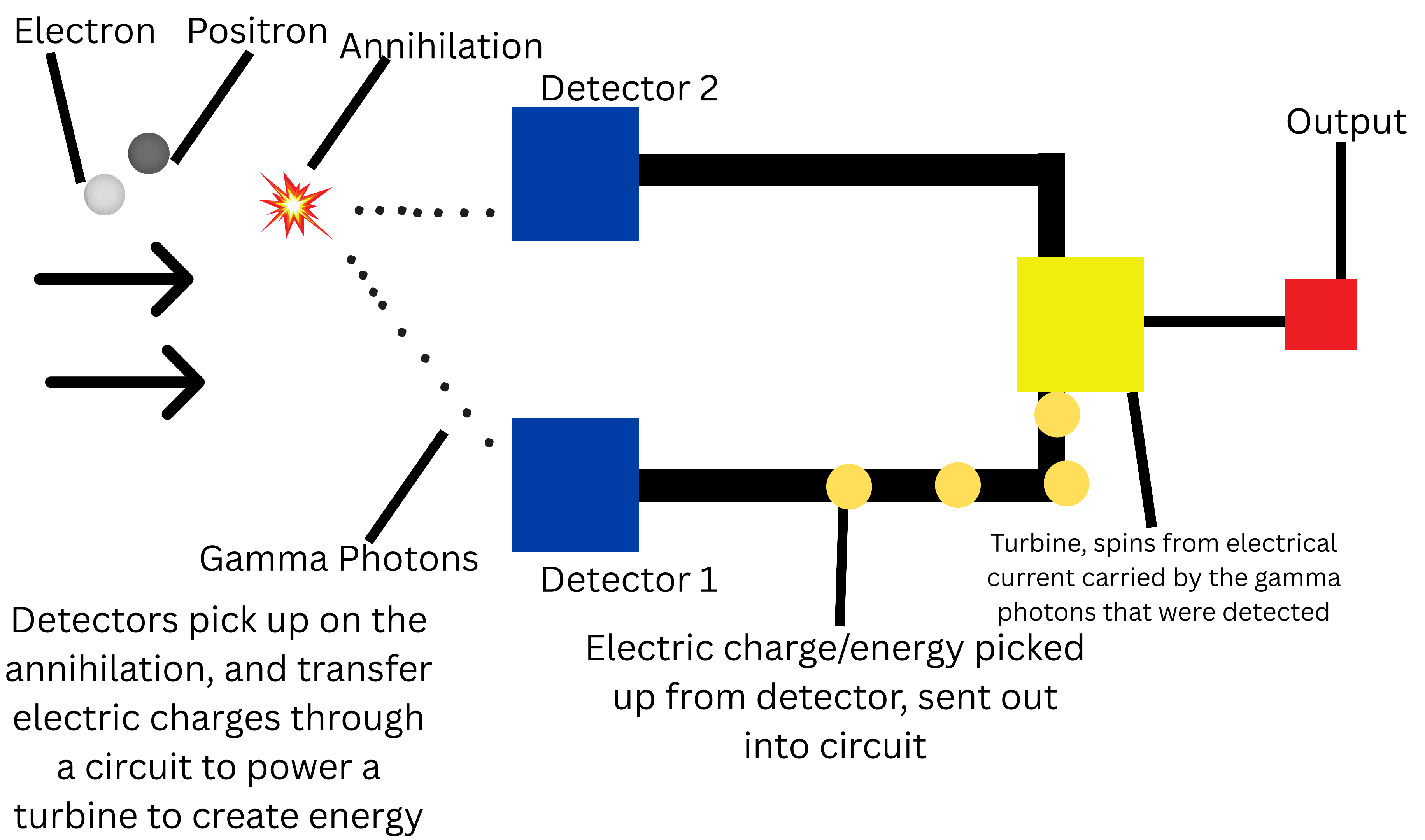




Black Hole Energy

My idea for a sustainable energy source for our future is to harness energy from a black hole. Humans will need to become an inter-planetary species for our survival, and if technology continues to advance at the rate, it does today, humans could have colonies on Mars by 2050. My idea is all about powering the Earth, Mars colonies, and many years beyond them for generations. Theoretically, electricity could be generated from a black hole's magnetic field, by a process called magnetic reconnection, humans could possibly harness this energy that a black hole generates from its magnetic field and rotation. This could work, as black holes having an electric field around the event horizon, and some are strong enough to create electrons and positrons. If the conditions were just right, the positrons of a fully charged black hole (which is a theoretical concept that a black hole reaches its limit for mass, making it very stable), would be ejected and could be harnessed for electricity. A way I think harnessing positrons' and electrons' energy that physicists came up with, is by a process called positron-electron annihilation, the process states that a moving positron, like an electron is a charged particle, creating an electric current, if there was enough antimatter to build a circuit, you could theoretically harness its electric charge, creating heat to power things. This could work, because when a positron meets an electron, they annihilate each other, as one is matter, and the other anti-matter, the annihilation converts their combine mass into energy in the form of gamma photons. The high energy output could be harnessed, by using heat to spin turbines to generate electricity. We don't currently have the technology to do this though, but with continued research, it could become reality.

-Harrison