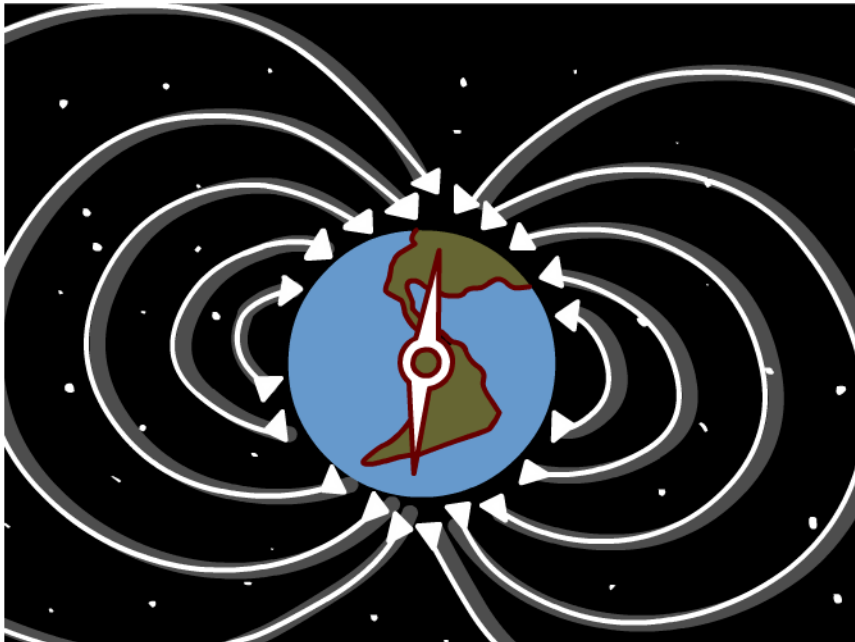


WAY BACK WHEN

So, what causes Earth's magnetic field? Most physicists believe that the earth's magnetic field is explained by something called the **Dynamo Theory**.

During the 19th century, British scientist Michael Faraday discovered that you could create, or **induce**, an electric current in a wire by moving the wire closer to or farther away from a magnet.

The earth's magnetic field operates on this principle. Instead of a wire, however, the earth uses the churning, flowing liquid iron of its outer core to

generate an electrical current. **Convection** (the movement of fluid due to differences in temperature) and the earth's rotation are responsible for the outer core's constant movement.

As the fluid moves across the weak magnetic field that's present in the earth's core, it generates a pretty strong electrical current. The strength of this current induces another magnetic field, which reinforces and strengthens the weak field at the core and allows the entire system to sustain itself.

Pretty amazing, huh?