What is Magnetism?

Magnetism is the force exerted by a magnetic field on other materials. Magnets are made of materials that have unpaired electrons in their atoms. When these electrons spin, they create a magnetic field.

How do Magnets Work?

All magnets have north and south poles. Opposite poles are attracted to each other, while the same poles repel each other. When you rub a piece of iron along a magnet, the north-seeking poles of the atoms in the iron line up in the same direction. The force generated by the aligned atoms creates a magnetic field.

How do Electric Fields Work?

An electric field is created when there is a difference in electric potential between two points. The electric field is the force that would be exerted on a positive charge if it were placed in the field. The strength of the electric field is determined by the magnitude of the voltage difference and the distance between the two points.

How do Electric Motors Work?

An electric motor uses an electric field to convert electrical energy into mechanical energy. The electric field is created by a coil of wire that is wrapped around a metal core. When a current is passed through the coil, it creates a magnetic field. The interaction between the magnetic field of the coil and the magnetic field of the permanent magnet creates a force that rotates the coil.