

Magnetism

alloy — metal made by mixing two or more metals.

atom — the building block of molecules and all things. Atoms are made of a nucleus of protons and neutrons surrounded by orbiting electrons.

aurora — bands of light that appear near the polar regions of Earth, usually at night. These bands are due to the impact of charged particles from the sun on the upper atmosphere, where they are directed by Earth's magnetic field to the magnetic poles.

coercivity — measure of how permanent a magnet is; permanent magnets have a high coercivity. The intensity of a magnetic field needed to demagnetize a substance.

Curie point — temperature above which a magnetic material will lose its magnetism. Discovered by the French scientist Pierre Curie in the 1890s.

declination — measure of the angle between the magnetic north or south pole and the geographic North or South Pole.

Electromagnet — piece of metal, usually iron or steel, that temporarily becomes a strong magnet when an electric current is passed through a wire coiled around it.

galvanometer — instrument used to measure and detect small electric currents.

geomagnetism — natural magnetism of Earth.

inclination — measure of the angle between the horizontal plane and Earth's magnetic field.

induced magnetism — the temporary alignment of the magnetic domains in magnetic material when it is placed near a magnet.

iron — a magnetic metal that is one of the most common elements on Earth and in the universe.

lodestone — naturally magnetic rock that is made up of the mineral magnetite.

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magnetic domain — small magnetized regions of a magnetic surface.

magnetic field — area of force that exists around a magnet or a current-carrying conductor.

magnetic storm — a large particle disturbance of Earth's magnetic field due to solar flares.

magnetism — the force of attraction between an object and a magnet, which pulls the object toward the magnet.

magnetite — mineral that is naturally magnetic and mostly made of iron oxide.

magnetometer — instrument that measures the strength and direction of magnetic forces.

magnetosphere — Earth's magnetic field.

permanent magnet — a magnet that has a high coercivity, meaning that it retains magnetism for a long time.

polar reversal — event during which Earth's magnetic fields switch, probably due to the volatile nature of the liquid outer core that generates Earth's electromagnetism.

solar flare — sudden eruption of hydrogen gas on the surface of the sun that releases a large amount of charged particles.

solar wind — continuous stream of charged particles emitted by the sun in all directions.

solenoid — current-carrying coil of wire that acts like a magnet when a current passes through the wire.

steel — an alloy of iron, which is mostly pure iron combined with some other elements, such as carbon.

temporary magnet — a material whose magnetic domains align under the influence of another magnet or electric current, but can't be maintained. Temporary magnets have a low coercivity.