



Static Electricity **Answers**

Use the key words in the box below to complete the paragraphs describing static electricity.

Key Words

atoms	electrons	force	gains	insulating	loses
negative	neutral	neutrons	non-contact	oppositely	positively
repel	rub	subatomic			

Everything in existence is made up of tiny particles called **atoms**. Atoms are made of even smaller particles known as **subatomic** particles. These subatomic particles are called protons, neutrons and **electrons**.

Charge is the property of a particle that causes it to experience a **force** in an electrical field. Some of the subatomic particles in an atom are charged. Protons are **positively** charged and electrons are negatively charged. **Neutrons** have no charge. Because atoms have the same number of protons and electrons, they have a **neutral** charge overall. The protons in an atom cannot move, but the electrons can. This means that **negative** charge can move, but positive charge remains fixed.

When two **insulating** materials come into close contact, electrons can be transferred from one material to the other. This can also happen when you **rub** two insulating materials together. The object which **gains** electrons becomes negatively charged, and the object which **loses** them becomes positively charged. The properties of the material each object is made from determines which one loses electrons and which gains them.

Two **oppositely** charged objects attract each other due to a force between them. This is called an electrostatic force. Electrostatic attraction is a **non-contact** force because objects do not have to be touching to experience it. When two objects with the same charge are brought together, they **repel** each other instead.