

The Nature of Static Electricity

Electric Charges

Some examples of experiences of electric charge:

1. _____
2. _____
3. _____

What is electric charge?

- _____

Electrically Charged Particles

Recall from the chemistry unit:

- an element is a pure substance that cannot be _____ any further
- pure substances are made of _____
- atoms are made of _____

Particle	Charge	Location

Draw the Bohr-Rutherford diagram for nitrogen

When a substance has no charge, it is _____.

This means that it has an _____ number of _____ and _____ charges.

When a substance becomes charged, it gains or loses _____.

Static Charges

When two neutral substances are rubbed together

- one substance becomes _____ charged by _____ electrons
- one substance becomes _____ charged by _____ electrons
- only the _____ in the outer orbit move
- protons are embedded in the nucleus and _____

Static charge or static electricity

- _____
- _____

Electrically Charging Materials

How do atoms gain or lose electrons to become electrically charged?

- one common cause of electron transfer is _____
- when two objects are rubbed together, the force of friction can _____ electrons from one object and cause the electrons to _____ to another

Electron Affinity

- different substances have different abilities to hold on to _____.
- the tendency of a substance to hold on to the electrons is called _____.

Tend to lose electrons ↑ Tend to gain electrons	(+)
	human hands (dry)
	glass
	human hair
	nylon
	cat fur
	silk
	cotton
	steel
	wood
	amber
	ebonite
	plastic wrap
	Teflon®
	(-)