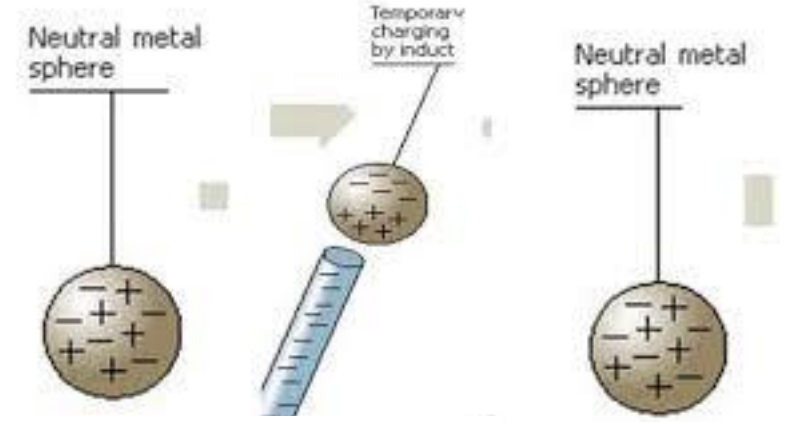
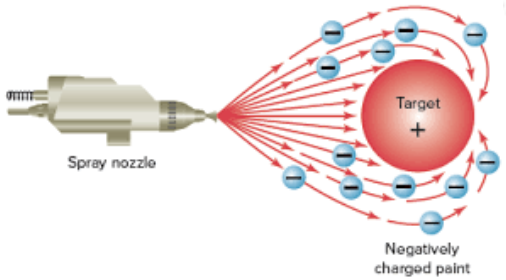
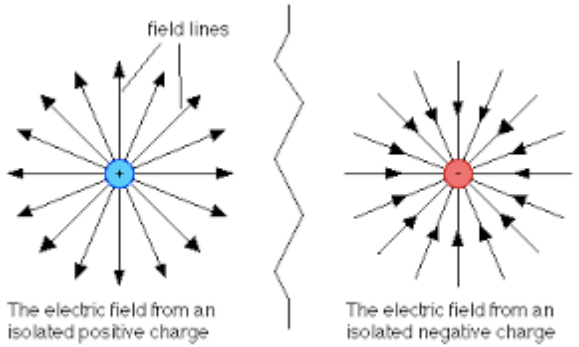
1	Materials that conduct electricity poorly or not at all are called **insulators**
2	Materials that conduct electricity are called **conductors**
3	Insulators are able to collect charge as the charged particles cannot flow through them into other materials
4	Plastics such as acetate and polythene are able to collect charge because they are insulators.
5	Like charges will repel one another
6	Opposite charges will attract one another
7	You can charge an object by friction. This transfers electrons to one object and leaves one or both objects involved with an overall charge (positive or negative)
8	When charging by friction it is only electrons that are transferred (negative charge).
9	Charging by induction occurs when an object with an overall charge comes into close contact with a neutral object and causes an attraction of oppositely charged particles.
10	When there is a build up of charge, electrons flow in whichever direction removes the excess charge to become 'discharged' or 'earthed'. This may sometimes cause a spark.
11	Static electricity can be dangerous if too much charge builds up near flammable materials due to the spark.
12	This means objects in use around flammable materials need to be earthed e.g. petrol pumps
13	Static electricity can be used to distribute particles more evenly and this is used in paint sprayers for bikes and cars as well as crop sprayers
14	A charged object has a force field around it called an electric or electrostatic field. We can draw diagrams to represent the charge and strength of the fields.







17	The field is strongest where the lines are closer together and weakest where the lines are furthest apart. The field lines never cross.
18	We use arrows to show the direction a positively charged particle would move within the electrical field.