

## Static electricity recall questions

1. How can insulating materials become electrically charged? **When insulating materials rub together electrons can transfer.**
2. How does a material become negatively charged? **Gains electrons.**
3. How does a material become positively charged? **D'oh!**
4. Two materials with the same electrical charge will **repel**, those with an opposite electrical charge will **attract**.
5. Why are electrostatic attraction or repulsion non-contact forces? **The force doesn't require the charged objects to touch.**
6. What does a charged object create around itself? **An electric field.**
7. Where is this electric field strongest? **Closest to the charged object.**
8. What happens to another charged object placed in this field? **It experiences a force.**

## Static electricity application questions

1. Explain why a spark goes from a charged surface through a conductor.
2. A plastic rod is rubbed with a duster. The rod loses electrons. Describe fully what happens to these electrons.
3. Draw a sphere. Draw a + sign on the sphere to show that it is positively charged. Draw electric field lines and include the direction of the field.
4. Repeat question 3 for a negatively charged sphere.
5. How do field lines show that the force gets weaker the further you are from the charged object?
6. How can electric fields be used to explain attraction and repulsion?
7. How can electric fields be used to explain sparking?