

KEY

Remote HW 6

Topic: Static Electricity

1. What is static electricity?

Static electricity, typically produced by friction, is an imbalance of electric charges within or on the surface of a material, causes sparks or Zap

2. What is a matter?

Matter is any substance that has mass and takes up space by having volume.

3. What are the connections between static electricity and matter?

Matter is made of atoms, which is the home of charges.

4. What is charge imbalance?

the charges do not all add up to zero

5. What is static discharge?

Static discharge is the release of static electricity when two objects touch each other.

6. What types of materials have loosely bound electrons?

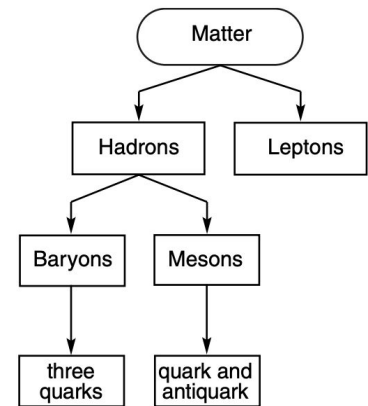
Conductors like copper or zinc

7. What happens when charge separation forms in the clouds?

Heavier, negatively charged particles sink to the bottom of the cloud. When the positive and negative charges grow large enough, a giant spark - lightning - occurs between the two charges within the cloud.

This is like a static electricity sparks you see when you touch a door knob, but much bigger.

Classification of Matter



8. How did Franklin make connections between lightning and electricity?

On this day in 1752, Benjamin Franklin flies a kite during a thunderstorm and collects ambient electrical charge in a Leyden jar, enabling him to demonstrate the connection between lightning and electricity. ... He also invented the lightning rod, used to protect buildings and ships.

9. How did he test his theory: Lightning is electricity?

On this day in 1752, Benjamin Franklin flies a kite during a thunderstorm and collects ambient electrical charge in a Leyden jar, enabling him to demonstrate the connection between lightning and electricity.

10. How did he identify charges?

Franklin knew of two types of electric charge, depending on the material one rubbed. He thought that one kind signified a little excess of the "electric fluid" over the usual amount, and he called that "positive" electricity (marked by +), while the other kind was "negative" (marked -), signifying a slight deficiency