

S U M M A R I E S

INVESTIGATION 1: Discovering Static Electricity

In Investigation One, you explored static electricity. During this Investigation, you:

1. tried to stick a balloon to a piece of paper on a wall.
2. tried to stick a balloon to the wall after rubbing it on different materials.
3. rubbed a balloon with wool.
4. tested whether or not a balloon stuck to the wall after rubbing it a different number of times.

Through these experiments, you found that:

1. when objects are rubbed together, each object can have an electrical charge.
2. static electricity can cause a balloon to stick to a wall.
3. if a balloon is rubbed with wool more times, the balloon is more likely to stick to the wall.

INVESTIGATION 2: Observing Electrical Charge

In Investigation Two, you continued to explore static electricity. During this Investigation, you:

1. held a balloon and a piece of wool over your arm.
2. rubbed the balloon with the piece of wool and then held both of them over your arm.
3. held a balloon and a piece of wool over a plate of pepper.
4. rubbed the balloon with the piece of wool and then held both of them over the plate of pepper.
5. held two balloons next to each other.
6. rubbed two balloons with wool and then held them next to each other.

Through these experiments, you found that:

1. objects with charges attract (move close to) neutral objects.
2. objects with the same charge repel (move away from) each other.

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INVESTIGATION 3: Understanding Simple Circuits

In Investigation Three, you explored simple circuits. During this Investigation, you:

1. explored a light bulb and a battery.
2. built a complete simple circuit using a light bulb, battery, and electrical wire.
3. labeled a diagram of electrical flow in a circuit.

Through these experiments, you found that:

1. when a complete simple circuit is made, the light bulb lights.
2. electricity flows only through a complete circuit.
3. electricity does not flow through a broken circuit.

INVESTIGATION 4: Examining Electrical Properties

In Investigation Four, you explored conductors and insulators. During this Investigation, you:

1. placed different materials between two wires in an electrical circuit.
2. found out whether electricity flowed through each material.
3. found out which materials were conductors (those that allowed electricity to flow).
4. found out which materials were insulators (those that did not allow electricity to flow).

Through these experiments, you found that:

1. electricity flows through some materials (conductors) and does not flow through other materials (insulators).
2. objects made of metal are conductors.
3. objects made of cotton, plastic, glass, wood, or rubber are insulators.

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INVESTIGATION 5: Exploring Series and Parallel Circuits

In Investigation Five, you explored series and parallel circuits. During this Investigation, you:

1. created a series circuit using two bulbs.
2. took out a bulb from the series circuit and watched what happened.
3. created a parallel circuit using two bulbs.
4. took out a bulb from the parallel circuit and watched what happened.

Through these experiments, you found that:

1. the two bulbs in a series circuit are not as bright as the two bulbs in a parallel circuit.
2. when a bulb is taken out of a series circuit, the other bulb does not stay lit.
3. when a bulb is taken out of a parallel circuit, the other bulb stays lit.
4. electricity flows along one path in a series circuit.
5. electricity flows along more than one path in a parallel circuit.