



CONDUCTOR OF GOD

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a **CHOKING HAZARD**. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

TOILET PAPER TUBE LIGHT BULB

INGREDIENTS

- Electrical Tape
- 8 “D” Batteries
- 0.7 mm Pencil Lead
- Mason Jar
- 2 Wires with Alligator Clips
- Toilet Paper Tube

INSTRUCTIONS

STEP 1: Use the electrical tape to secure all of the “D” batteries together in a series.

STEP 2: Use the electrical tape to secure the alligator clips to the sides of the toilet paper tube.

STEP 3: Place a 0.7 mm piece of pencil lead between the alligator clips at the top of the toilet paper tube.

STEP 4: Place the Mason jar over the toilet paper tube, alligator clips, and 0.7 mm piece of pencil lead.

STEP 5: Close the circuit by touching the ends of the alligator clips to the ends of the batteries. Make observations to provide evidence that energy can be transferred from place to place by electric currents. Apply scientific ideas to refine your toilet paper tube light bulb, which converts energy from one from to another.

EXPLANATION

The electrons, from the battery, flow through the alligator clips and pencil lead, creating a closed circuit. The pencil lead or filament becomes so hot, it glows, weakens, and eventually breaks.



BIBLE TRUTH

Sin is like an insulator; it keeps the light of God from flowing through us and into a world filled with darkness.

WHAT THE BIBLE SAYS

John 7:38

Whoever believes in me, as Scripture has said, rivers of living water will flow from within them.

BIBLE CONNECTION

The energy easily flows from the battery, through the alligator clips, which are good conductors of electricity, to the pencil lead, powering the toilet paper tube light bulb. We should be good conductors of God, allowing His light to flow through us, lighting a world filled with darkness.

SCIENCE WORDS

LIGHT – Energy in the form of waves the human eye sees as visible light.

CONDUCTOR – A material that transfers heat, electricity, or sound.

INSULATOR – A material that blocks or reduces the flow of heat, electricity, or sound.