



GOD'S SPRING

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.

NOTEBOOK SPRING LAUNCHER

INGREDIENTS

- Plastic Spiral Notebook
- Dowel Rod
- Ruler

INSTRUCTIONS

STEP 1: Remove the paper from the plastic spiral notebook spring.

STEP 2: Hold the dowel rod by placing your thumb and index finger at one end of the dowel rod. Slide the plastic spiral notebook spring onto the other end of the dowel rod.

STEP 3: Using your hand, barely compress the plastic spiral notebook spring against your thumb and index finger. Release the plastic spiral notebook spring and observe. Using the ruler, determine how far the plastic spiral notebook spring launched. Use this evidence to construct an explanation relating the speed of the plastic spiral notebook spring to the energy of the plastic spiral notebook spring.

STEP 4: Using your hand, completely compress the plastic spiral notebook spring against your thumb and index finger. Release the plastic spiral notebook spring and observe. Using the ruler, determine how far the plastic spiral notebook spring launched. Use this evidence to construct an explanation relating the speed of the plastic spiral notebook spring to the energy of the plastic spiral notebook spring. Compare the effects of the different directions of the pushes and pulls on the motion of the plastic spiral notebook spring. Provide evidence that a pattern can be used to predict future motion of the plastic spiral notebook spring.

EXPLANATION

When the plastic spiral notebook spring is compressed, energy is stored. Potential energy is stored energy. When the compressed spiral notebook spring is released, potential energy is transformed or changed to kinetic energy, and launches across the room. Kinetic energy is energy of motion.



BIBLE TRUTH

Although it may not seem possible at the time, if it is God's will, He will spring into action, launching you beyond any obstacles, making the impossible, possible.

WHAT THE BIBLE SAYS

Matthew 19:26

Jesus looked at them and said, "With man this is impossible, but with God all things are possible."

BIBLE CONNECTION

Pulling the plastic spiral notebook spring back, stores energy and when released launches across the room. Just as the spring launches across the room, if it's God's will, he will give you the energy to launch across any obstacles making the impossible, possible.

SCIENCE WORDS

FORCE – A push or pull, which can cause an object to be in motion.

MOTION – A change in position.

ENERGY – The ability to do work.

POTENTIAL ENERGY – Stored Energy

KINETIC ENERGY – Energy of motion.