Kinetic Energy: God's Creation in Motion

A 7th Grade Creation Science Workbook



By Katie Swank

Kinetic Energy: God’s Creation in Motion

"By the word of the Lord the heavens were made, their starry host by the breath of his mouth." — Psalm 33:6 (NIV)

When God spoke the universe into existence, He did not create a static, motionless world. He set atoms vibrating, oceans churning, planets orbiting, and creatures running. In science, we describe this magnificent capacity to do work or cause change as energy. Today, we will explore the specific form of energy given to objects in motion: kinetic energy.

Part 1: Vocabulary & Definitions
Before we dive into the physical laws God designed, let's learn the scientific language used to describe motion and energy.

- Energy: The ability to do work or cause change in the physical world.
- Kinetic Energy: The energy an object possesses due to its motion.
- Mass: The amount of matter inside an object, typically measured in kilograms (kg).
- Velocity: The speed of an object in a specific direction, measured in meters per second (m/s).
- Joule: The standard metric unit used to measure energy, abbreviated as (J).
- Squared: A number multiplied by itself

Part 2: Fill-in-the-Blanks
Directions: Use the words from the Word Bank below to complete the sentences about God's laws of motion.

Word Bank

• Kinetic Energy • Mass • Joule • Velocity • Energy • Squared

1. God filled the universe with _____, which gives objects the ability to do work or cause a change.
2. Every moving masterpiece in creation—from a soaring dove to a rushing river—possesses _____.
3. The measurement of how much matter is inside Noah's Ark or any other object is called its _____.
4. Because speed is _____ in the formula, doubling an object's speed will actually quadruple its total moving energy!
5. When tracking a migratory bird's speed and direction through the skies God created, scientists measure its _____.
6. If a physics problem states that a stone thrown from David's sling has an energy value of (10\J), the "J" stands for _____.

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Part 3: Mathematics in Motion
Scientists calculate this moving energy using a precise mathematical formula designed by God:

$$KE = \frac{1}{2} mv^2$$

KE = Kinetic Energy (Joules, J)
m= Mass of the object (kilograms, kg)
v = Velocity/Speed of the object (meters per second, m/s)

Example Problem: A small smooth stone with a mass of 0.2kg is slung at a velocity of 10m/s. What is its kinetic energy?

Step 1:KE = 1/2 x 0.2kg times 10m/s squared

Step 2: KE = 0.1 times 100

Answer: 10 Joules

Problem 1: A dove with a mass of 0.6kg flies back to Noah's Ark at a velocity of 4m/s. Calculate its kinetic energy.

Your Work:

Answer: _____

Problem 2: During creation, God set the celestial bodies in motion. Imagine a small space rock with a mass of 1,000kg moving at a velocity of 3m/s. Calculate its kinetic energy.

Your Work:

Answer: _____