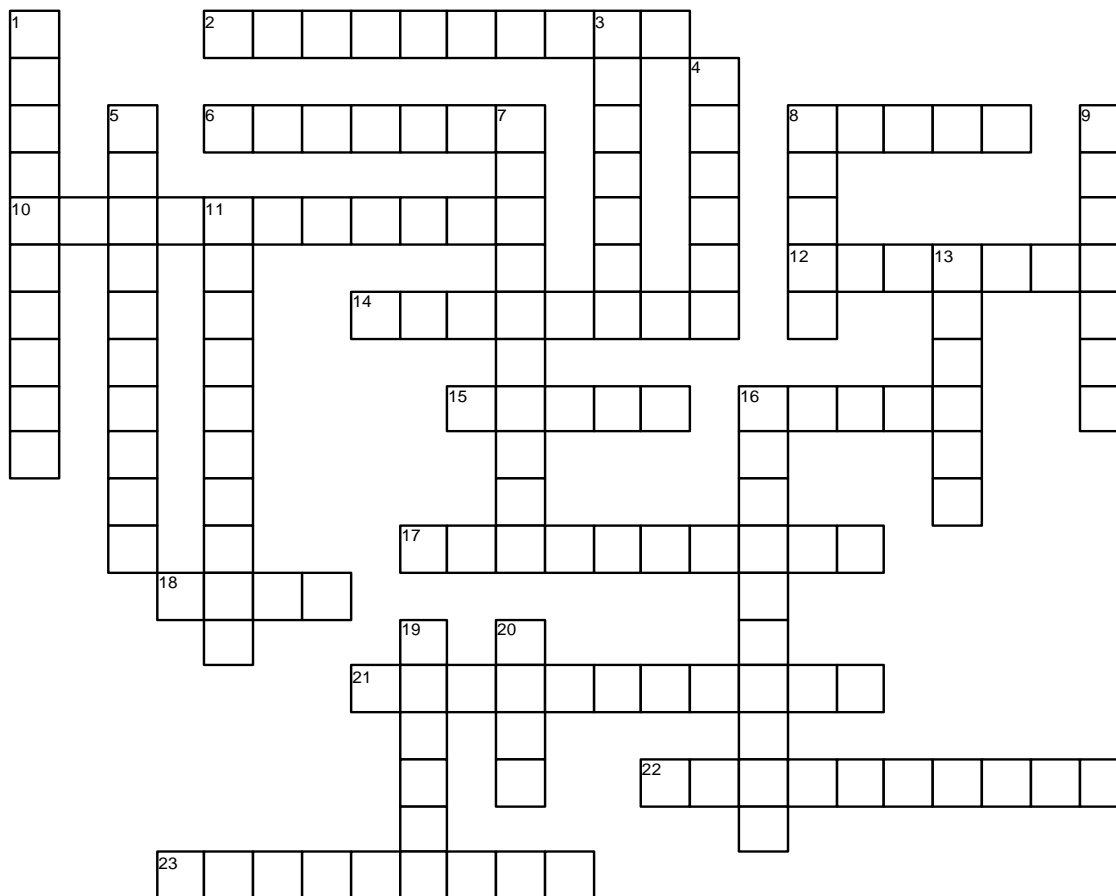


Scientific Principles And Materials

Chapter 12



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ACROSS

- 2 Another name for the explanation is the _____.
- 6 Heat is measured in units called _____ Thermal Units.
- 8 The load holds the engine speed, so it is called a _____.
- 10 The actual horsepower produced by an engine is measured with a _____.
- 12 Energy in the form of a moving object is called _____ energy.
- 14 The primary mechanical principle used to increase application force in every brake system is _____.
- 15 Torque is measured as the amount of _____ multiplied by the length of the lever through which it acts.
- 16 The term _____ means the

rate of doing work

- 17 A _____-_____ lever increases the force applied to it and also changes the direction of the force.
- 18 _____ is the amount of matter in an object.
- 21 A _____-_____ lever increases the force applied to it and passes it along in the same direction.
- 22 The _____ method is a series of steps taken to solve a problem.
- 23 Energy is called _____ energy if it is capable of being changed to useful energy, such as the potential energy stored in a battery or a vehicle at the top of a hill.

DOWN

- 1 A _____-_____ lever actually reduces the force applied to it, but the

resulting force moves farther and faster.

- 3 _____ is defined by Isaac Newton's first law of motion, which states that a body at rest tends to remain at rest, and a body in motion tends to remain in motion in a straight line unless acted upon by an outside force.
- 4 _____ is the term used to describe a rotating force that may or may not result in motion.
- 5 _____ is the process of the heat traveling from a hotter part to a colder part of the same object or by direct contact.
- 7 One _____ is the power required to move 550 pounds one foot in one second, or 33,000 pounds one foot in one minute.
- 8 The horsepower derived from a dynamometer is called _____ horsepower.
- 9 In the science of mechanics, a lever is a simple machine that consists of a rigid object, typically a metal bar that pivots about a fixed point called a _____.
- 11 Leverage creates a _____ advantage that, at the brake pedal, is called the pedal ratio.
- 13 _____ is the ability or the capacity to do work.
- 16 Leverage creates a mechanical advantage that, at the brake pedal, is called the _____.
- 19 The _____ of an object is the force of gravity on the object and may be defined as the mass times the acceleration of gravity.
- 20 The _____ cause is the true cause of a failure, which may not be noticed at first.