

# PHYSICAL SCIENCE CHAPTER 15

## ENERGY WORDWISE ANSWERS

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**What is energy the ability to \_\_\_\_\_?** Scientists define energy as the ability to do work.

**What can be done to make present energy resources last longer?**

**What is the energy of a moving object called?** Answer and Explanation: The energy of motion is called Kinetic Energy. This energy is called so because it depends on the movement of the object.

**What is an example of an object having elastic potential energy?** Example of elastic potential energy: Stretched bow, compressed spring, etc.

**Is heat a form of energy?** Thermal energy, or heat, is the energy that comes from the movement of atoms and molecules in a substance. Heat increases when these particles move faster. Geothermal energy is the thermal energy in the earth. Motion energy is energy stored in moving objects.

**Which are examples of forms of energy?** Energy exists in many different forms. Examples of these are: light energy, heat energy, mechanical energy, gravitational energy, electrical energy, sound energy, chemical energy, nuclear or atomic energy and so on. Each form can be converted or changed into the other forms.

**What are the different types of energy sources?** Primary energy sources take many forms, including nuclear energy, fossil energy -- like oil, coal and natural gas -- and renewable sources like wind, solar, geothermal and hydropower.

**What is the best form of energy?** Out of all energy resources, we consider green power (solar, wind, biomass and geothermal) as the cleanest form of energy. So, if we were looking at clean energy on a spectrum, these would be farthest from “dirty” or emissions-heavy energy.

**Which energy source will last longer?** The energy from the sun, the movement of the waves, the flow of the river – these are some activities that have been happening for millions of years and will continue to happen in the future. They are constant and reliable sources.

**What are the most common forms of potential energy?** The two main types of potential energy are gravitational potential energy and elastic potential energy.

**What two factors determine how much momentum an object has?** Putting “Momentum” in Conceptual terms: Two factors affecting momentum is the mass and velocity of the object.

**What is the step by step formula for kinetic energy?**

**What is the simple definition of chemical potential energy?** Energy is the capacity for doing work or supplying heat. When you fill your car with gasoline, you are providing it with potential energy. Chemical potential energy is the energy stored in the chemical bonds of a substance.

**What are the important facts about elastic energy?** Elastic energy is stored in the bonds between the atoms in an object or substance. These bonds absorb energy as they are stressed, and release that energy as they relax. Think of it like a coiled spring – the spring absorbs energy when it is compressed, then releases it when it springs back out.

**What is the standard unit of measurement for potential energy?** The standard unit for measuring potential energy is the joule, which is abbreviated as "J".

**What are three differences between potential and kinetic energy?** Kinetic energy can easily be transferred from one body to another whereas potential energy cannot be transferable from one body to another. Kinetic energy has its determining factors and those are mass and speed or velocity whereas the determining factors of

potential energy are height, distance and mass.

**What is the transfer of thermal energy between two bodies?** Conduction transfers thermal energy through direct contact. If two objects are placed in contact with each other, thermal energy flows from the warmer object (with faster-moving particles) to the cooler object (with slower-moving particles).

**What are the conditions necessary for sublimation to occur?** For sublimation to occur, a solid must exhibit a higher than usual vapor pressure, i.e. it must have weak intermolecular attractions. This is normally true for solids with molecules in the shape of a sphere or a cylinder. The theory for process of sublimation lies in basic chemical properties.

**What is one energy transformation that happens in your home?** For example, to heat a home, the furnace burns fuel, whose chemical potential energy is converted into thermal energy, which is then transferred to the home's air to raise its temperature.

**What does kinetic energy depend on?** What Factors Affect Kinetic Energy? The two main factors that affect kinetic energy are mass and speed. Why? Because the motion of an object depends on how fast it's traveling, but also how much mass it has, though velocity is the more important factor.

**Which two objects have stored energy?** Explanation: The two objects that have stored energy are the a stretched rubber band and the a small rock sitting on top of a big rock. A ball rolling on the ground and a stone lying on the ground do not have stored energy because they are not in a position to do work.

**What is the ability to do \_\_\_\_\_ is defined as energy?** 1. Energy :The ability to do work or cause a change. 2. Kinetic Energy: The energy of moving things.

**What are the abilities of energy?** Energy is the ability to do work Heat (thermal) Light (radiant) Motion (kinetic)

**What is energy the ability to do biology?** The laws of thermodynamics govern the transfer of energy in and among all systems in the universe. In general, energy is defined as the ability to do work, or to create some kind of change. Energy exists in different forms. For example, electrical energy, light energy, and heat energy are all

different types of energy.

**What does energy measure the ability of?** This unit derives from the definition of energy, which is the ability to do work. Work is measured also in Joules, which results from multiplying Force (in Newtons) by distance (in meters).

## **Week by Week Phonics Word Study Activities for the Intermediate Grades**

### **35 Mini Lessons with Skill Building Activities to Help Students Tackle Their Fluency, Vocabulary, and Comprehension**

#### **Introduction**

Phonics word study is a crucial component of reading instruction, especially in the intermediate grades. These activities provide students with the tools they need to decode unfamiliar words, expand their vocabulary, and improve their fluency and comprehension. This article outlines 35 engaging mini-lessons that can be implemented week by week to help students master these essential skills.

#### **Question 1: What types of activities are included in these mini-lessons?**

Answer: The mini-lessons incorporate a variety of activities, including phonemic awareness exercises, blending drills, sight word practice, vocabulary building games, and guided reading comprehension tasks.

#### **Question 2: How do these activities benefit students?**

Answer: These activities help students develop their phonics skills, improve their decoding abilities, enhance their vocabulary, and build their fluency and comprehension strategies.

#### **Question 3: How often should these mini-lessons be conducted?**

Answer: It is recommended to conduct these mini-lessons once a week to provide consistent support and reinforcement of phonics concepts.

#### **Question 4: How long should each mini-lesson be?**

Answer: Each mini-lesson is designed to be approximately 15-20 minutes in duration.

### **Question 5: How can these mini-lessons be integrated into the classroom routine?**

Answer: These mini-lessons can be incorporated into the beginning or end of reading instruction or as a standalone activity during intervention or enrichment time.

### **Conclusion**

These 35 week-by-week phonics word study activities offer a comprehensive approach to developing students' phonics skills, vocabulary, and comprehension strategies. By implementing these mini-lessons regularly, teachers can help intermediate grade students become confident and successful readers.

## **Scissor Jack Force Analysis: Questions and Answers**

### **1. What is a scissor jack?**

A scissor jack is a mechanical device used to lift heavy objects, typically vehicles, by applying force through a system of interlocking arms. It consists of two or more pairs of crossed metal arms that intersect and pivot at the center, forming a parallelogram shape. The arms are designed to extend and retract, allowing the jack to raise and lower objects.

### **2. How does a scissor jack work?**

When a force is applied to one end of the scissor jack, the arms extend or retract, changing the height of the platform attached to the top end of the jack. The force is transferred through the intersecting arms and acts to lift or lower the object placed on the platform.

### **3. What is the force analysis for a scissor jack?**

The force analysis for a scissor jack considers the forces acting on the arms and the platform. The force applied to one end of the jack is balanced by equal forces acting on the other arms, creating a moment that causes the arms to extend or retract. The force applied to the platform is equal to the weight of the object being lifted.

#### 4. What factors affect the force required to operate a scissor jack?

The force required to operate a scissor jack depends on several factors:

- **Weight of the object being lifted:** A heavier object requires greater force to lift.
- **Mechanical advantage of the jack:** The design of the jack determines its mechanical advantage, which is the ratio of the output force (weight lifted) to the input force (applied force).
- **Friction:** The friction between the arms and pivot points can increase the force required to operate the jack.

#### 5. How can you safely use a scissor jack?

To safely use a scissor jack:

- Place the jack on a stable surface.
- Position the jack correctly under the vehicle's designated lifting point.
- Slowly pump the jack to raise the vehicle.
- Do not exceed the jack's rated capacity.
- Use jack stands to support the vehicle after lifting it.
- Carefully lower the vehicle by releasing the pressure on the jack.

### Textbook of Veterinary Diagnostic Radiology: A Comprehensive Guide

#### Q: What is the purpose of the Textbook of Veterinary Diagnostic Radiology?

**A:** This textbook provides a comprehensive overview of veterinary diagnostic radiology, covering fundamental principles, techniques, and applications in various animal species. It is an invaluable resource for veterinary students, practitioners, and radiologists seeking an in-depth understanding of this essential diagnostic modality.

#### Q: What are the key features of the textbook?

**A:** Key features include high-quality images and illustrations, detailed explanations of imaging principles and techniques, and a focus on clinical applications and

interpretation. The text is organized into sections covering topics such as imaging equipment, radiographic anatomy, contrast agents, computed tomography, and magnetic resonance imaging.

**Q: What animal species are covered in the textbook?**

**A:** The textbook encompasses a wide range of animal species, including dogs, cats, horses, cattle, sheep, goats, swine, and exotic animals. Chapters are dedicated to specific animal groups, providing tailored information on imaging techniques and anatomical variations.

**Q: What is the intended audience for the textbook?**

**A:** The Textbook of Veterinary Diagnostic Radiology is targeted primarily at veterinary students, veterinary practitioners, and radiologists. It is also a valuable reference for veterinary technicians, animal scientists, and anyone involved in the field of veterinary medicine.

**Q: Where can I find more information about the textbook?**

**A:** For further details about the Textbook of Veterinary Diagnostic Radiology, visit the publisher's website or consult your local veterinary bookstore. The textbook is available in both print and electronic formats, catering to the diverse learning needs of readers.

[week by week phonics word study activities for the intermediate grades 35 mini lessons with skill building activities to help, scissor jack force analysis, textbook of veterinary diagnostic radiology](#)

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