**SCHOOL:…………………………………………..**

**P.O. BOX …………………………………………….**

**SCHEME OF WORK FOR COMPETENCY BASED CURRICULUM**

**NAME OF THE TEACHER: ………………………………………………..**

**SUBJECT: PHYSICS CLASS: S.2 TERM: ONE YEAR: 2025**

**THEME:MECHANICS AND PROPERTIES OF MATTER**

**TOPIC:WORK, ENERGY AND POWER**

**COMPETENCY:** Understands and uses the relationship between energy, work done and power in the operation of simple machines

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| --- | --- | --- | --- | --- | --- | --- |
| Week | Period | Learning outcome | Learning outcome Focus | Suggested teaching and Learning resources | Evidence of achievement | Remarks |
|  |  | * Know that the sun is our major source of energy, and the different forms of energy(k) * Know that energy can be   changed from one form into  another and understand the  law of conservation of  energy (k,u)   * understand the positive and   negative effects of solar  energy(u)   * understand the difference   between renewable and non-renewable energy resources with respect to Uganda. (u, v/a)   * Know and use the relationship   between work done, force, and  distance moved, and time  taken (k,s)   * understand that an object may   have energy due to its motion  or its position and change  between kinetic and positional  potential energy (u,s)   * know the mathematical relationship between positional   potential energy and kinetic  energy, and use it in calculations (k, u, s,gs)   * understand the meaning of   machines and explain how  simple machines simplify work (u,s)   * understand the principles behind the operation of simple machines (u, s, gs) | * Natural and Artificial sources of energy * Different forms of energy * Conservation of energy * Effects of solar energy * Renewable and non-renewable source of energy * Work as product of force and distance moved in direction of force * Potential and kinetic energy * PE = mgh and KE= * Simple machines * Mechanical advantage * Velocity ratio * Efficiency. * Different types of Simple machines * Levers * Pulleys * Inclined planes * Wedges * Wheel and axle * Screws * Gears | * Video animations * Learners’ book 2 by different authors * Teachers’ guide * Swinging pendulum bob * Pulley wheels * Masses * Threads * Screws * Screw jack * G-clamp | * Identifying and categorizing different sources of energy as natural and artificial * Describing different forms of energy * Explaining energy changes * Stating effects of solar energy * Identifying and categorizing sources of energy into renewable and non-renewable * Using relationship between force and distance moved to calculate work done * Ability to use kinetic and potential energy formula to perform calculations correctly * Explaining how simple machines simplify work correctly * Ability to given data to compute: * Mechanical advantage * Velocity ratio and * Efficiency correctly * Identifying different classes of levers correctly * Applying principle of moments correctly to perform mathematical calculations on levers * Identifying different types of pulleys correctly * Identifying velocity of a given block and tackle pulley system correctly * Finding the mechanical advantage, velocity ratio and efficiency of different types of simple machines correctly |  |

**SCHOOL…………………………………………………………………………….**

**P.O. BOX …………………………………………………………………………………**

**SCHEME OF WORK FOR COMPETENCY BASED CURRICULUM**

**NAME OF THE TEACHER: ………………………………………………….**

**SUBJECT: PHYSICS. CLASS: S.2 TERM: ONE YEAR: 2025**

**THEME:** **Mechanics and properties of Matter**

**TOPIC:** **TURNING EFFECT OF FORCES, CENTRE OF GRAVITY AND STABILITY**

**COMPETENCY:** The learner should be able to investigate the relation between turning effect of forces and stability of bodies.

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| --- | --- | --- | --- | --- | --- |
| Week | Period | Learning outcome | Learning outcome Focus | Suggested teaching and Learning resources | Evidence of achievement |
|  |  | * Understand the turning effect   of forces and its applications  (u, s,v/a)   * Understand and apply the   concept of centre of gravity  (u, s,v/a) | * Moments * Principle of moments * Equilibrium * Centre of gravity * Determining centre of gravity * Stable, neutral and unstable equilibrium | * Charts * Video animations * Learners’ book 2 by different authors * Teachers’ guide * Metre rule * Masses * Knife edge * Retort stands * Pieces of threads | * Correctly explain the turning effects of a force * Correctly states the principle of moments and uses it to perform calculations * Correctly explains the centre of gravity and describes how to determine the C.O.G of regular and irregular bodies * Correctly describes stable, neutral and unstable equilibrium * Applies the principle to real life situation |