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| 1. A ball stuck in a tree has \_\_\_\_\_\_\_\_\_\_\_ energy | potential |
| 2. Define: Kinetic Energy | Energy in motion |
| 3. Energy is the ability to \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ in the motion or position of something. | Cause change |
| 4. The higher an object is off the ground, the more \_\_\_\_\_\_\_\_\_\_\_\_ potential energy it has. | gravitational |
| 5. List and give examples of the three types of potential energy. | 1. Gravitational PE – throwing a ball2. Elastic PE – Rubber band stretched3. Chemical PE - digestion |
| 6. Define Mechanical Energy | KE + PE = ME |
| 7. Differentiate between HEAT and THERMAL ENERGY | Heat: thermal energy movingThermal energy: objects contain thermal energy |
| 8. An electrical generator makes a light bulb glow when a hand crank is turned. What is the flow of energy transformations that occurs? | Mechanical 🡪 electrical |
| 9. Define and give examples of:Insulator:Conductor: | Insulator: transfers thermal energy slowly (plastic on plug, air)Conductor: transfers thermal energy quickly (metals, pots/pans) |
| 10. Explain with a diagram and words, and provide 1 example of each:Conduction:Convection:Radiation:  | Conduction: molecules touching to transfer heat (Handle on a pot)Convection: rising and sinking of liquid/air to circulate warmth (water boiling)Radiation: electromagnetic waves (heat lamp for food) |
| **Matching** |
| A. friction B. heat C. mass D. mechanical E. speed F. work\_\_\_\_ 1. \_\_\_\_\_\_\_ is the transfer of energy that occurs when a force is applied over a distance.\_\_\_ 2. The kinetic energy of an object depends on its \_\_\_\_\_\_\_ and \_\_\_\_\_\_.\_\_\_ 3. A system of object’s \_\_\_\_\_\_\_\_ energy is the total kinetic and potential energy.\_\_\_ 4. \_\_\_\_\_\_\_\_ is thermal energy moving from high concentration to lower  concentrations. \_\_\_ 5. Due to \_\_\_\_, when surfaces rub together, some mechanical energy will always  transform into thermal energy. | 1. F2. C, E3. D4. B5. A |
| A. chemical potential energy C. elastic potential energy B. nuclear energy D. thermal energy\_\_\_ 1. Energy due to motion of particles that make up an object\_\_\_ 2. Energy stored in objects that are compressed or stretched\_\_\_ 3. Energy stored and released in the nucleus of an atom.\_\_\_ 4. Energy stored in the bonds between atoms. | 1. D2. C3. B4. A |