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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 ball  2. Elastic PE – Rubber band stretched  3. Chemical PE - digestion | |
| 6. Define Mechanical Energy | KE + PE = ME | |
| 7. Differentiate between HEAT and THERMAL ENERGY | Heat: thermal energy moving  Thermal 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. F  2. C, E  3. D  4. B  5. 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. D  2. C  3. B  4. A |