**Year 8 Physics**

**Energy Fundamentals– Revision**

1. Unscramble the following terms and write them next to their definition in the table below:

A person standing next to each other

Description automatically generated

|  |  |
| --- | --- |
|  | The energy of moving objects |
|  | Energy stored in objects |
|  | The use of force to move an object |
|  | The ability to do work |

1. Which unit is used when measuring energy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How many joules are in a kilojoule? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Convert:

|  |  |  |  |
| --- | --- | --- | --- |
| 76 kJ to J |  | 270 J to kJ |  |
| 400 kJ to J |  | 12 kJ to J |  |
| 0.019 kJ to J |  | 278 kJ to J |  |
| 72 460 J to kJ |  | 97862 J to kJ |  |
| 900 000 J to kJ |  | 8.7 kJ to J |  |
| 2.4 kJ to J |  | 1. 913 kJ to J |  |

1. How many joules are in a megajoule? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How many kilojoules are in a megajoule? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| 30 MJ to J |  | 270 kJ to MJ |  |
| 160 MJ to J |  | 1200 kJ to MJ |  |
| 24 MJ to J |  | 1200 MJ to kJ |  |
| 7 020 460 J to MJ |  | 901 862 kJ to MJ |  |
| 900 000 J to MJ |  | 8.7 MJ to kJ |  |
| * 1. MJ to J |  | 1. kJ to MJ |  |

1. a) Unscramble the 9 different types of energy:

A crossword puzzle with words

Description automatically generated

1. Sort the types of energy above into the correct groups:

|  |  |
| --- | --- |
| **Kinetic Energy** | **Potential Energy** |
|  |  |

1. Match the types of energy with their correct definition:

|  |  |
| --- | --- |
|  | Energy stored in the bonds of chemical compounds. |
|  | The energy found in electricity**,** of moving electrons |
|  | Energy possessed by an object due to its motion |
|  | Energy stored in an object when it is stretched or compressed |
|  | Energy stored in an object due to its position above the ground. |
|  | Energy caused by an object’s vibrations that allow us to hear |
|  | Energy carried by electromagnetic waves that allow us to see |
|  | Energy released what atoms split or get fused together |
|  | A form of energy that is transferred by a difference in temperature |

1. Write the main type of energy associated with each item underneath the images:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | A blue balloon with a string  Description automatically generated |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  | A drawing of a log  Description automatically generated |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  | Mushroom Cloud Cartoon Stock Illustrations – 3,386 Mushroom Cloud Cartoon  Stock Illustrations, Vectors & Clipart - Dreamstime |

1. In which image below does the skateboarder have more gravitational potential energy?

\_\_\_\_\_\_\_\_ Explain why:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **A** | **B** |
| A person on a skateboard  Description automatically generated |  |

1. In the images above, which skateboarder has the most kinetic energy?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Explain why:

1. Can you decide if Road Runner or the Coyote or has more Kinetic energy? Explain why/why not?
2. What other information do we need to determine if the Road Runner or the Coyote has more kinetic energy?