

## Law of Conservation of Energy Quiz PDF

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| In a closed system, the total energy is:   |
|--|
| ○ Constant   |
| ○ Increasing   |
| Decreasing   |
| ○ Unpredictable  |
|  |
| The energy stored in the bonds of molecules is known as:                             |
| ○ Kinetic Energy   |
| ○ Thermal Energy   |
| ○ Chemical Energy  |
| Electrical Energy  |
|  |
| What happens to energy when it is "lost" in a system?                                |
| It disappears completely.  |
| It is transformed into another form, often heat.                                     |
| It becomes potential energy.   |
| It is converted into mass.   |
|  |
| In which scenarios is energy conserved? (Select all that apply)                      |
| A pendulum swinging in a vacuum  |
| A car braking to a stop  |
| A closed circuit with a resistor   |
| A perpetual motion machine   |
|  |
| What factors can affect the efficiency of energy conversion? (Select all that apply) |
| ☐ Friction   |
| ☐ Air resistance   |



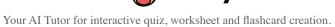
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| ☐ Temperature                              |   |
|--|---|
| Mass of the system                         |   |
|  |   |
| Which of the following systems can         | be considered closed systems? (Select all that apply)           |
| A sealed thermos bottle                    |   |
| An open pot of boiling water               |   |
| A battery-operated flashlight              |   |
| A solar panel exposed to sunlight          |   |
| How does the concept of energy effi        | iciency relate to the Law of Conservation of Energy?            |
|  |   |
|  |   |
|  |   |
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|  | /r  |
|  |   |
| Describe a real-world example wher energy. | re energy is transformed from chemical energy to mechanical     |
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|  |   |
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|  |   |
|  |   |
| Why are perpetual metion machines          | s considered impossible according to the Law of Conservation of |
| Energy?                                    | s considered impossible according to the Law of Conservation of |
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| Discuss the implications of the Law of Conservation of Energy for renewable energy technologies. |    |
|--|----|
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|  |    |
|  | // |
| Explain how the Law of Conservation of Energy applies to a roller coaster ride.                  |    |
|  |    |
|  |    |
|  | // |
| Which of the following is NOT a form of energy?  |    |
| ○ Mechanical   |    |
| ○ Thermal  |    |
| ○ Gravitational  |    |
| ○ Mass   |    |
| The First Law of Thermodynamics is another name for:   |    |
| ○ The Law of Conservation of Mass  |    |
| ○ The Law of Conservation of Energy  |    |
| ○ The Law of Inertia   |    |
| ○ The Law of Gravity   |    |
| Which type of energy is associated with motion?  |    |
| ○ Chemical Energy  |    |
| ○ Thermal Energy   |    |
| ○ Kinetic Energy   |    |
| O Potential Energy   |    |





| What does the Law of Conservation of Energy state?  |
|---|
| Energy can be created and destroyed.  |
| <ul> <li>Energy can only be transformed from one form to another.</li> </ul>              |
| ○ Energy is always increasing in a system.  |
| Energy is always decreasing in a system.  |
| Which of the following statements about energy are true? (Select all that apply)          |
| Energy can be transformed into mass.  |
| ☐ Energy transformations are always 100% efficient.                                       |
| Energy can be stored and transferred.   |
| Energy can exist in different forms.  |
| Provide an example of a closed system and explain how energy is conserved within it.      |
|   |
|   |
|   |
|   |
|   |
|   |
| Which of the following is an example of potential energy?                                 |
| O A moving car  |
| A stretched rubber band   |
| Flowin water  Application   |
|   |
| Which of the following are examples of energy transformation? (Select all that apply)     |
| ☐ A battery powering a flashlight   |
| A book sitting on a shelf   |
| A wind turbine generating electricity   |
| A car engine running  |
| Which types of energy are involved when a ball is thrown upwards? (Select all that apply) |



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| Kinetic Energy    |
|-------------------|
| Potential Energy  |
| ☐ Thermal Energy  |
| ☐ Chemical Energy |