Forms of Energy and Energy Transformations Practice

Name_______________________________ Date ______________

LT: I can identify and describe the different forms of potential and kinetic energy. _____

LT: I can give/explain examples of energy transformations. _____

Potential and Kinetic Energy
Identify each of the following forms of energy as either potential energy (P) or kinetic energy (K).

_____ Sound  _____ Nuclear  _____ Elastic  _____ Electric

_____ Chemical  _____ Gravitational  _____ Thermal  _____ Electromagnetic

a. Choose one of the above forms of potential energy and describe why it fits in this category.

b. Choose one of the above forms of kinetic energy and describe why it fits in this category.

Forms of Energy
Match the energy form(s) to the description provided. Questions may have more than one answer. Pick the form(s) of energy most clearly demonstrated.

_____________1. A boulder resting at the top of a hill  a. Translational motion

_____________2. Release of energy from the Sun  b. Electric

_____________3. A coiled spring  c. Electromagnetic (radiant)

_____________4. Batteries not in use  d. Chemical

_____________5. The energy that runs a refrigerator  e. Nuclear

_____________6. Nuclear fission reactors  f. Sound

_____________7. The rumble of thunder from a storm  g. Elastic

_____________8. Rubbing your hands together  h. Gravitational

_____________9. Gasoline stored in a tank  i. Rotational motion

_____________10. Food before it is eaten  j. Thermal (heat)

_____________11. A guitar string vibrating

_____________12. A top spinning

_____________13. Sledding down a hill

_____________14. Candle burning

_____________15. A taut rubber band (fully stretched)
Transformation of Energy
Use the following forms of energy to fill in the table below: rotational motion, translational motion, electric, thermal, electromagnetic, chemical, nuclear, and sound. The first one has been done for you.

<table>
<thead>
<tr>
<th>EXAMPLE</th>
<th>ORIGINAL ENERGY FORM</th>
<th>FINAL ENERGY FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Electric motor</td>
<td>electric</td>
<td>rotational motion</td>
</tr>
<tr>
<td>2. A battery that runs a moving toy</td>
<td></td>
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<tr>
<td>3. A solar panel on the roof of a house</td>
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<td>4. A person lifting a chair</td>
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<tr>
<td>5. A nuclear power plant</td>
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<tr>
<td>6. A toaster</td>
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<td>7. A church bell ringing</td>
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<td>8. Gasoline powering a car</td>
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<td>9. Turning on a lamp</td>
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<td>10. Photosynthesis</td>
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</tbody>
</table>

Transformation of Energy II
Describe a scenario with the following energy transformations (do not include examples from the table above):

a. Electric energy being converted into sound energy

b. Chemical energy being converted to motion energy

c. Thermal energy being converted to sound energy

d. Gravitational potential energy being converted to motion energy

e. Electric energy being converted into electromagnetic energy