Energy Changes 1

Energy is what makes things happen.

Energy cannot be created (made) or destroyed .

Energy *can* be transformed (changed) from one form into another.



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| **Experiment 1** – Glycerol + Crushed potassium permanganate |  |
|  Chemical energy | turns into | Heat and light energy |
| The chemicals gave heat (or light) and light (or heat) when put together. |
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| **Experiment 2** – Catapult |  |
| Elastic Potential energy | turns into | Kinetic energy |
| When you stretch the spring, it stores elastic potential energy. |
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| **Experiment 3** – Heated match head | scan0003.jpg |
| Heat (chemical) energy | turns into | Kinetic energy |
| The match moved when heated. |
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| **scan0004.jpgExperiment 4** – Thermocouple |  |
| Heat energy | turns into | Electrical energy |
| When the thermocouple was heated, the meter needle moved, showing that electrical energy was generated. |
| **Experiment 5** – Magnesium metal burned |  |
|  Chemical energy | turns into | Heat and light energy |
| Magnesium metal burns with a bright, white flame. |
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| **Experiment 6** – Inflated balloon |  |
| Elastic Potential energy | turns into | Kinetic energy |
| When you inflate the balloon, it stores elastic potential energy. When you let go, this turns into movement (kinetic) energy. |
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| **Experiment 7** – Empty tube heated |  |
| Heat (chemical) energy | turns into | Sound energy |  |
| When the Bunsen burner was placed underneath the tube, a sound was made. |  |
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| **Experiment 8** | Rub your finger on the bench |
|  | Describe the energy change. |
|  | Kinetic energy | is changed into | Heat energy. |

Energy Changes 2

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| **Experiment 9** | Shake the tin with the nails in it. |  |
|  | Describe the energy change. |
|  | Kinetic energy | is changed into | Heat energy. |
|  |  |  | scan0010.jpg |  |
| **Experiment 10** | Move the clamp stand so the spiral is above the Bunsen burner.  |  |
|  | Describe the energy change. |
|  | Kinetic energy | is changed into | Sound energy. |
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| **Experiment 11** | scan0011.jpgWind up the spring in the clockwork toy, or pull it back on the bench. The wound up spring has elastic potential energy.  |  |
|  | Describe the energy change. |
|  | Heat energy | is changed into | Kinetic energy. |
|  |  |  | scan0012.jpg |  |
| **Experiment 12** | Turn on the switch. What happens to the bulb? |  |
|  | Describe the energy change. |
|  | elastic (pot) energy | is changed into | Kinetic energy. |
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| **Experiment 13** | scan0013.jpgTurn on the switch. What happens to the bell? |  |
|  | Describe the energy change. |
|  | Electrical energy | is changed into | light (heat) energy. |
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| **Experiment 14** | scan0014.jpgTurn on the switch. What happens to the motor? |  |
|  | Describe the energy change. |
|  | electrical energy | is changed into | Sound (energy. |
|  |  |  | scan0019.jpg |  |
| **Experiment 15** | Turn the handle on the dynamo. |  |
|  | Describe the energy change. |
|  | electrical energy | is changed into | Kinetic energy. |
|  | We know that kinetic energy is changed into electrical energy in the dynamo, because this energy changes into light energy in the bulb. |  |
| **Experiment 16** | scan0018.jpgPull the metal wire and let go. |  |
|  | Describe the energy change. |
|  | electrical energy | is changed into | Sound (energy. |
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| **Experiment 17** | scan0016.jpgA coil has been connected to a power pack. Switch on the power pack. What happens to the coil? | **DO NOT TOUCH COIL!** |
|  | Describe the energy change. |
|  | electrical energy | is changed into | Heat light energy. |
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| **Experiment 18** | scan0017.jpgTurn the photocell so that it faces the sunlight from the window.  |  |
|  | Describe the energy change in the photocell. |
|  | electrical energy | is changed into | Sound (energy. |
|  | We know that light energy is changed into electrical energy in the photocell, because this energy changes into kinetic energy in the fan . |  |
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