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| Contrast particles gaining Eth versus gaining Eph  East.H.S. ©λ€M|5+rγ  visit http://genest.weebly.com |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  This Friday is a tiny quiz  Thursday Nov 11 is a big Test  Friday Nov 12 there is no school for students |

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| 1. Draw the energy diagram for a puff of steam (H2O gas) changing into condensation on a soda can. | new EBC |

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| 1. Draw the energy diagram for you, running to catch the bus, using the calories from a granola bar you ate at lunchtime. 2. Name a food that is healthy but tastes terrible: \_\_\_\_\_\_\_\_\_\_ | new EBC |

1. Define kinetic energy
2. Define potential energy
3. Decide which kind of energy was increased in each case.

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| Object | Type of energy that was added |  | Object | Type of energy that was added |
| a mousetrap has been set by pulling back the spring | □ kinetic  □ potential |  | cold tea was heated to hot tea | □ kinetic  □ potential |
| a book is moved from the floor up to a tabletop | □ kinetic  □ potential |  | solid iron at its m.p. was heated until it was liquid at the same temperature | □ kinetic  □ potential |
| When something gains Eth | □ kinetic  □ potential |  | When something gains Eph | □ kinetic  □ potential |

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| 1. Some H2O is heated from -20°C to -°10C (note the negative signs). Check the correct box at right and then draw a particle ‘movie’ of how the H2O particles are changing in the three squares as time goes on. | | | |  | Most of the added energy is going in and being stored as  □ kinetic energy  □ potential energy | |
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|  |  |  |  |  | | |
| 1 |  | 2 |  | 3 | | |

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| 1. Some H2O is heated from liquid at 100°C to solid at 100°C . Check the correct box at right and then draw a particle ‘movie’ of how the H2O particles are changing in the three squares as time goes on. | | | |  | Most of the added energy is going in and being stored as  □ kinetic energy  □ potential energy | |
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| 1 |  | 2 |  | 3 | | |

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| **The ramp-shaped graph at the right is a preview of our Friday lab this week.**  **This graph shows the temperature of a block of titanium as it is heated from solid, to liquid, and finally to gas.**   1. Put little K’s all along the line of this graph if it is a time when the titanium is gaining mostly kinetic energy 2. Put little P’s all along the line of this graph if it is a time when the titanium is gaining mostly potential energy 3. Draw a circle around the part of the graph where you think Eth is increasing. Label it Eth 4. Draw a circle around the part of the graph where you think Eph is increasing. Label it Eph | http://everythingmaths.co.za/science/grade-11/04-intermolecular-forces/pspictures/401afcc5edab2cbecbd764591e8f17ce.png |

1. A bike tire contains 8.38x1024 air molecules at 2.00 atm. When you filled it in the morning the air was 12°C and the pressure was 3.5x105Pa. By nighttime, the temperature of the tire is 0°C. What is the new pressure of the tire?