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| energy storage & transfer  East.H.S. ©λ€M|5+rγ  visit http://genest.weebly.com | http://1.bp.blogspot.com/-ieUvkHfvRDo/U--c8uKAuYI/AAAAAAAAIl0/-XM23N6PZPg/s1600/Robin%2BWilliams%2Bcopy.jpg R. Williams by Omar Momani | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Come for assistance and cheerful encouragement after school Tues, Thurs, or every day at lunch |

1. Heating is a form of ( energy storage / energy transfer )
2. Eth is a form of ( energy storage / energy transfer )
3. Ech is a form of ( energy storage / energy transfer )
4. Radiating is a form of ( energy storage / energy transfer )
5. Complete the description by circling the best choice. Eph is…
   1. a way to store energy
   2. a way for energy to enter or leave an object
6. Pushing (working) is a form of ( energy storage / energy transfer )
   1. a way to store energy
   2. a way for energy to enter or leave an object

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| ***You will always be given these numbers on tests and quizzes.*** |  |
| 0 degrees C = 273 kelvins  760. torr = 760. mmHg = 1.00 atm = 101 kPa = 101,300 pascals = 14.7 p.s.i.  R = 0.0821 liter-atm/mol-K (for PV=nRT problems, if you use this R value you must use these units)  1.00 mole of things is 6.02x1023 things. | |

**Conversions practice**

1. Your best friend gives you 0.00000044 moles of gummi worms. How many worms is this?
2. The pressure in a certain bike tire is 77.0 psi. How many kilopascals is this?
3. What is Standard Pressure in kilopascals?
4. If a scuba diver has 23,000 mmHg pressure in her air tank, what is the pressure in atm?
5. If a squirrel caches 235 acorns under an oak tree, how many moles of acorns does the squirrel have?
6. A small silver coin could have 3.06x1024 atoms of silver. How many moles of silver atoms is this?
7. American pennies contain about 0.0393 moles of copper. How many atoms is this?

**Match the name with the description of the scientist.**

1. \_\_\_\_\_\_ Wrongly thought heat was a fluid called ‘caloric’ [Oops!]
2. \_\_\_\_\_\_ Moving objects can create heat; Ekinetic can freely convert into Eth
3. \_\_\_\_\_\_ Adding salt to -3°C ice melts it to -7°C water (which shows Eph exists)
4. \_\_\_\_\_\_ Evidence that temperature isn’t caused by an invisible substance: showed the weight of frozen water is the same as weight of same water when liquid.
5. \_\_\_\_\_\_ Evidence that temperature isn’t caused by an invisible substance: showed that a nearly infinite amount of heat can come out of a cannon as you grind the metal.
6. Rumford
7. Joule
8. Lavoissier
9. Boyle
10. Drebbel

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| 1. For a girl peddling a bike, show arrows with Q, R, and/or W coming in and out of the circle. Show bar graphs for before and after. A girl peddling a bike.   new EBC   1. A water molecule in a microwave   new EBC |

1. At what temperature will 5.00mol of Cl2 exert a pressure of 900 torr at a volume of 750 mL? \*\*fix the units first! They must match the units of your “R”.

1. How many moles of nitrogen gas will occupy a volume of 347 mL at 6.680 kPa and 27oC?