

Name _____

Hr. _____

Energy Review Sheet

Please place your answers on a separate sheet of paper!!!!

- 1) Write the equation for photosynthesis.
- 2) Write the equation for cellular respiration.
- 3) Define potential and kinetic energy.
- 4) Explain the difference between an open and closed system.
- 5) State the 1st Law of Thermodynamics. State the 2nd Law of Thermodynamics. How are they related?
- 6) How does energy enter a living system? Through what process does it enter this system?
- 7) What specifically does an enzyme do? How does it do this?
- 8) What does ATP stand for? What does ATP do?
- 9) What do NADPH and NADH do?
- 10) Diagram or explain why photosynthesis and cellular respiration are considered complimentary processes.
- 11) What are the two parts of photosynthesis? What are these processes called and can you diagram or explain what happens? Where does each of these processes occur?
- 12) What are the two parts of cellular respiration? What are these processes called and can you diagram or explain what happens? Where does the process of cellular respiration occur?
- 13) What environmental factors influence the rate of photosynthesis?
- 14) Why are "oxidation-reduction reactions" so important to life processes?
- 15) What does homeostasis have to do with how an enzyme functions?
- 16) How do cells regulate the function of an enzyme?
- 17) Where does the "Carbon" in living systems come from? Through what process does it enter the living system?
- 18) Define autotrophy and heterotroph. What are the differences between the two?
- 19) What is fermentation? Can you diagram or explain what happens?
- 20) Which gives more energy (ATP), fermentation or cellular respiration?
- 21) What are "other" names for cellular respiration and fermentation?
- 22) Explain how a biological pathway works. How are they used in living systems?