Name: _____ Hour: _____ Teacher: Rozema

Date: _____

Review for Biology-Unit 1: EXAM
[Content: Living Requirements, Biomolecules, Enzymes]

DIRECTIONS:

- This review WILL be collected for a grade (100points). This assignment is due by the end of the start of class Monday (October 13, 2014).
- You need to be able to answer every single question, without notes, in order to be successful on the exam.
- We will go over the answers to this review in class on Monday (October 13, 2014).

STUDY SUGGESTIONS:

- I cannot stress enough, that "lazy studying" will not help you be successful on any quiz/test in here.
  "Lazy Studying" = Looking over / Reading over your notes and this review, over and over again, until you feel "comfortable" or fall asleep.
  "Fake Quizzing" = When you have the questions and answers in front of you, but you ask yourself the question, and look up/away from the answers and say the answer to yourself.
- To prepare you should cover up the answers, ask yourself the question, and either write out the answer OR say the answer out loud (for real out loud). Check your answer, if you got the question COMPLETELY CORRECT, put a check next to it, if not then you need to continue to study that content.
- Also try asking yourself questions out of order.

WHAT'S ON THE EXAM?

- 45 Questions Total → 62 Points Total
- 41 Multiple Choice Questions:
  - 6 = Living Characteristics, Water, Biomolecules, Biological Elements, Cells, Energy
  - 6 = Biomolecule Monomers & Polymers
  - 10 = Biomolecule Functions
  - 6 = Enzymes
  - 10 = Dehydration Synthesis & Hydrolysis
  - 3 = ATP & ADP
- 4 Written Questions:
  - Monosaccharide vs Polysaccharide Graph
  - Reaction with vs Reaction without Enzymes
  - Enzyme Denaturing + Fevers
  - Living Requirements + Characteristics

Right or Wrong?	Question	Answer
	1. What is ATP?	
	2. List out the biological elements:	
	3. List out the biomolecules:	
	4. List out 5 different characteristics something needs to be considered living:	
	5. What are the basic units of matter? (Previously learned)	
	6. What are the basic units of life?	
	7. What is kinetic energy?	
	8. What is chemical potential energy?	
	9. Explain why viruses are NOT living:	

Right or Wrong?	Question	Answer
	10. What are the monomers for carbohydrates called?	
	11. What are the monomers for lipids called?	
	12. What are the monomers for proteins called?	
	13. What are the monomers for nucleic acids called?	
	14. What are the polymers of carbohydrates called?	
	15. What are the polymers of nucleic acids?	
	16. What are the polymers of proteins?	
	17. What are the polymers of lipids?	
	18. What is the function of monosaccharides?	
	19. What is the function of polysaccharides?	
	20. What is the function of phospholipids?	
	21. What is the function of a lipid?	
	22. What is the function of a nucleic acid?	
	23. What is hemoglobin used for in your body?	
	24. What does it mean, to say that water is polar?	
	25. What makes water special in cells?	

Right or Wrong?	Question	Answer
	26. What is an enzyme?	
	27. What is the function of an enzyme?	
	28. What is a substrate?	
	29. What is the active site?	
	30. What happens when an enzyme is denatured?	
	31. What can cause an enzyme to denature?	
	32. What is dehydration synthesis used for in cells?	
	33. What happens with water in dehydration synthesis?	
	34. What happens with the molecules in dehydration synthesis?	
	35. What happens with energy in dehydration synthesis?	
	36. Draw a picture of dehydration synthesis:	

Right or Wrong?	Question	Answer
	37. What is hydrolysis used for in cells?	
	38. What happens with water in hydrolysis?	
	39. What happens with the molecules in hydrolysis?	
	40. What happens with energy in hydrolysis?	
	41. Draw a picture of hydrolysis:	
	42. What is the most important element in living things?	
	43. How can cells release energy from ATP?	
	44. How can cells store energy in ADP?	

Right or Wrong?	Question	Answer
	45. Draw a graph to represent a monosaccharide. On the X-Axis place "time", on the Y-Axis place "energy". Explain WHY you drew it like this….	
	46. Draw a graph to represent a polysaccharide. On the X-Axis place "time", on the Y-Axis place "energy". Explain WHY you drew it like this….	
	47. Draw two graphs to compare a chemical reaction WITH and WITHOUT an enzyme. On the X-Axis place "time", on the Y-Axis place "Activation Energy".	

Right or Wrong?	Question	Answer
	48. In detail, explain why a fever can be so dangerous to enzymes. Explain exactly what happens with the enzymes.	
	49. In detail, explain what a scientist would use to determine if something was living or not. (You should use MORE than just the living characterstics.)	