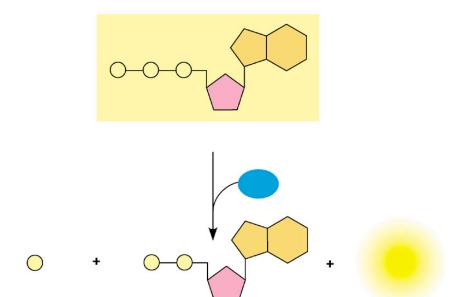
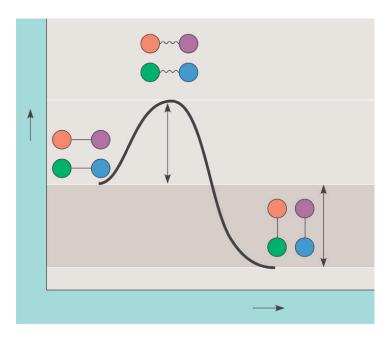
AP Biology Name		
Chapter 6 Reading Guide (Campbell BIF, 2e)		
1.	Con	ntrast catabolic and anabolic pathways.
2.	Defi	ine the following terms:
	a.	Kinetic energy
	b.	Heat/thermal energy
	C.	Chemical energy
	d.	Thermodynamics
	e.	First Law of Thermodynamics
	f.	Second Law of Thermodynamics
	g.	Free Energy
3.		ntrast exergonic and endergonic reactions in terms of: free energy, stability, acity to do work.
4.	Hov	v do you know if a reaction is spontaneous?
5.	Can	a closed system at equilibrium do work? Why or why not?

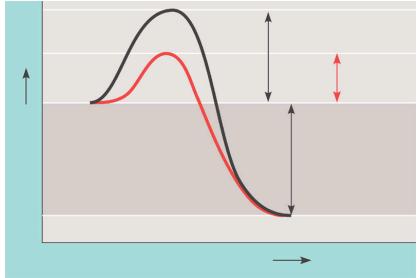
- 6. List the three main kinds of cellular work done by ATP and give an example of each.
- 7. Label the diagram below and indicate how cellular work is done by ATP.



- 8. What is energy coupling?
- 9. Examine Figure 6.9. How is ATP used to do cellular work?
- 10. See Figure 6.11. What is the relationship between exergonic reactions, endergonic reactions and the use and regeneration of ATP?
- 11. What is activation energy?

12. Label the diagrams below including the change in free energy.

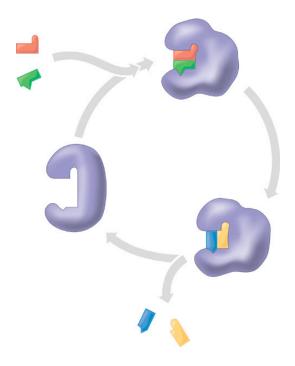




13. Define the following terms:

- a. Substrate
- b. Enzyme-substrate complex
- c. Active site
- d. Induced fit

14. Label the following diagram:



- 15. How do temperature and pH (specifically) affect enzyme activity?
 - (a) Temperature
 - (b) pH
- 16. Compare cofactors and coenzymes. What is their function?
- 17. Compare and contrast competitive and noncompetitive inhibitors.
- 18. What is allosteric regulation and how does it assist in the regulation of metabolism?
- 19. What is cooperativity?
- 20. How does feedback inhibition work?