ANSWERS  
1. In thylakoid space  
2. From water splitting; Proton pumps in ETC move H+ from stroma to thylakoid space  
3. NADP+  
4. C6H12O6 + 6 O2 → 6CO2 + 6 H2O  
5. Exact opposite  
6. Red and blue-violet  
7. C4  
8. Corn, sugar cane  
9. Photosynthesize in hot dry conditions; avoid photorespiration  
10. Need more ATP than NADPH to do Calvin cycle  
11. H2O  
12. O2, ATP, NADPH  
13. B; products have more energy than reactants  
14. Activation energy would be lower; energy of products/reactants stays same  
15. allosteric  
16. Fermentation  
17. NADH = 3 ATP; FADH2 = 2 ATP  
18. Glycolysis- net 2 ATP; Krebs cycle- 2 ATP; ETC- (10 NADH X3 + 2 FADH2 X 2) =34 ATP  
 (34 + 2 + 2 = 38 minus 2 ATP for transport = 36 total ATP/1 glucose)  
19. Availability of oxygen  
20. Alcoholic- bacteria make beer, wine; yeast makes bread  
 Lactic acid-human muscle cells during exercise;   
 bacteria –yogurt, sauerkraut, pickles  
21. Needs to regenerate NAD+  
22. oxygen  
23. As CO2 in atmosphere  
24. Citric acid cycle  
25. Increasing temp speeds up reaction up to a point. Too hot-denatures enzymes  
26. Rubisco  
27. Disrupts hydrogen/ionic bonds in 2°, 3°, 4° structure  
28. Magnesium (Mg)  
29 glycolysis- found in bacteria (oldest organisms); can run without oxygen (early atmosphere didn’t have oxygen; can run without mitochondria (bacteria don’t have these)  
30. FALSE- plants have both