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