Do #'s 13, 14, 17-20, 22-26, 28

13. At the center is a sugar molecule ribose. The base is adenine and there are 3 rings around it which are phosphate.

14. ATP is used by the cell as an immediate source of energy. ATP has more energy because it is the energy formed from glucose whereas glucose is indirect energy.

17. 6CO2+ 6H2O ------> C6H12O6+ 6O2

18. Plant pigments are responsible for the absorption of the photons.

19.

A-Stroma

B-Thylakoids

C-Granum

20. They become red or yellow because the light waves are now getting picked up by these yellow and red pigments whereas before they were getting picked up by the green pigment.

22. Because the temperature would be hot in an airtight jar, photosynthesis will become more rapid to match the temperature.

23.NADP+ carries high electrons to the Calvin cycle.

24. It uses the potential energy of flowing hydrogen ions to make ATP.

25. A five-carbon carbon catcher catches one molecule of carbon dioxide and forms a six-carbon molecule. The enzyme RuBisCO (with the energy of ATP and NADPH molecules) breaks the six-carbon molecule into two equal parts. A trio of three carbons leaves and become sugar. The other trio moves on to the next step. Using ATP and NADPH, the three carbon molecule is changed into a five carbon molecule. The cycle starts over again.

26. Three factors are water, temperature and light.

28. In order to get the “ingredients” needed for the cycle, the light dependent reaction is needed because that is what makes ATP and NADP.