

AP Biology
Suggested Topics to Review
First 8 Chapters

Fig 1.5 Prokaryotic/Eukaryotic p 4
Fig 1.11 Three Domains of Life p 8
Chapter 1 Review p 16-17
Fig 2.9 Water molecule p 25
Fig 2.16 Hydrogens Bonds p 30
Fig 2.23 pH scale p 35
Fig 2.24 Ocean acidification p 36
Ch 2 Review p 38-39

Fig 3.5 Functional Groups p 43

Fig 3.6 Dehydration/hydrolysis reactions p 45
Fig 3.13 Saturated/unsaturated Fats p 50

Fig 3.14 Phospholipid Bilayer p 51

Fig 3.16 Protein Functions p 52

Fig 3.17 Amino acids-skim p 53

3.18 Peptide Bonds p 54

Fig 3.21 Levels of Protein Structure p 56-57*****

Fig 3.22 sickle cell anemia p 58
Fig 3.25 DNA-RNA-protein p 60
Fig 3.26 Nucleic Acids p 61
Ch 3 Review p 64-65
Fig 4.5 Plasma Membrane p 71
Fig 4.6 Surface area to volume p 71

Fig 4.7 Eukaryotic Cells p 72-73

Fig 4.18 Chloroplasts p 83
Table 4.1 Cytoskeleton p 86
Fig 4.27 Cell Junctions p 90
Ch 4 Review p 91-92
Fig 5.2 Plasma Membrane p 95

Fig 5.6 Transmembrane proteins p 97

Fig 5.8 Membrane components p 98
Fig 5.10 Osmosis p 100

Fig 5.11 Water balance p 101
Fig 5.13 Facilitated Diffusion p 102
Fig 5.14 sodium potassium pump . 104
Fig 5.15 active/passive transport p 105
Fig 5.16 proton pump p 105
Fig 5.17 co-transport p 105
Fig 5.19 Paracrine/endocrine signaling p 108

Fig 5.20 Cell Signaling p 109

Figs 5.21, 5.22, 5.23 G Proteins, gated channels p 110, 111

Fig 5.24 Phosphorylation Cascades p 112

Fig 5.25 cAMP as second messenger p 113
Fig 5.26 Nuclear responses to signaling p 113
Ch 5 Review p 114
Fig 6.12 Exergonic reactions p 125
Fig 6.15 Enzyme-substrate complex p 127
Fig 6.17 Enzyme Inhibition p 130
Fig 6.18 Allosteric activators/inhibitors p 131
Ch 6 Review p 137
Fig 7.2 Energy flow p 135
Fig 7.6 Cellular respiration p 139
Fig 7.8 Glycolysis p 141
Fig 7.10 Citric Acid Cycle p 142
Fig 7.13 ATP Synthase p 145
Fig 7.15 ATP Yield in respiration p 147
Fig 7.17 Pyruvate p 151
Ch 7 Review p 153
Fig 8.5 Overview of Photosynthesis p 159
Fig 8.6 Electromagnetic Spectrum p 160

Fig 8.16 Light Reactions p 167

Fig 8.17 Calvin Cycle p 168

Fig 8.18 c4 and CAM Plants p 169

Fig 8.19 Photosynthesis Summary p 171

Ch 8 Review p 172

I would focus on being able to understand major concepts like STRUCTURE AND FUNCTION, EVOLUTIONARY SIGNIFICANCE, MOVEMENT of ENERGY, INFORMATION, and MOLECULES- especially across MEMBRANES

SUGGESTIONS:

If it were me and I wanted a 4(10 out of 27 students last year) or a 5(6 out of 27 students last year), I would **allocate a minimum of 20 HOURS this weekend** for study(not including the 2 hour review session Sat 5-7 pm in Room 34). That would be roughly 4 hours on Friday afternoon/evening, and 8 hours each on Saturday and Sunday.

Remember--- the improved performance in intro college courses that AP students in that subject experience is not linked to their AP Test scores, only whether they took the AP Test or not. This means that the process and experience of preparing for a rigorous, comprehensive exam in Biology gives you an advantage over your future college classmates who have not had that experience.

POSSIBLE STRATEGIES:

Complete the review/survey I have outlined for the first 8 chapters.

Construct a similar strategy for the more recent material(Chapters 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 28(minimal), 32, 35, 36, 37, 38.1, 40, 41, 42, and 43

Review all of the **POGIL Activities**, paying special attention to the items marked “Read This”

Skim the **Chapter Summary Packets**, especially major diagrams

Review the **Princeton Review AP Biology Book**(fully digesting it is recommended for a 5!)

In the Princeton Review, review Ch 13(Quantitative Skills and Biostatistics) and Ch 15(Laboratory).

Skim(!) the Princeton Review supplementary material on Plants which you were given.

Get a good night sleep, wake up on time, and eat a good breakfast!