AP Biology
Exam Study Guide; Ch 14-17

Understand the different inheritance patterns: complete/incomplete dominance; multiple alleles; sex-linked, multiple alleles, polygenic inheritance; knowing the common examples of each is helpful

How to figure out the number of possible gametes from a given genotype

Know how to determine phenotype ratios for offspring (F1 and F2 generations)

What is epistatis? Example?

Know how to read/analyze a pedigree diagram for inheritance patterns.

What's the difference between having the sickle cell trait versus having sickle cell disease?

How is gender determined in the offspring of mammals? Birds? Ants? Bees?

What is the SRY gene? What does it control?

What is a Barr body and where would you find them?

If two genes are linked, how are new combinations created in the offspring?

What does the crossing over percentage indicate? (for linked genes)

What processes lead to genetic recombinants?

Know how to assemble a chromosome map from given data (map units/crossing over %)

What would be the outcomes of the games if nondisjunction occurs? (various stages)

Know about these scientists and their work (chronologically): Griffith; Avery, McCarty, MacLeod; Watson & Crick; Hershey & Chase; Meselson & Stahl

Know DNA structure; know how to determine the % of A, C, T, and G; purines & pyrimidines; the complimentary base pairing system for DNA/RNA/codons/anticodons

Prokaryotic vs Eukaryotic DNA replication

Know the enzymes and their functions; Okazaki fragments (structure)

Why is it helpful to use RNA instead of DNA for protein synthesis?

Know how to use the codon table to determine an amino acid sequence.

Compare/contrast RNA poly and DNA poly.

Explain what is meant by RNA processing.

Know the structure of tRNA and how it is able to carry specific amino acids.

Explain how wobble affects translation