Life Science

Study Guide for Exam 2

* Review all Chapters and Powerpoints
* Complete all activities on the website
* Cancer:
  + What is malignant?
  + What is benign?
  + What is metastisis?
  + What is angiogenesis?
  + What are carcinogens?
  + Can viruses cause cancer?
  + Remember that the uncontrolled growth will result in numerous mutations leading to malignant cancer
* Cell cycle – interphase, mitosis, cytokinesis
  + What are the stages of interphase? (G1, S, G2)
  + What are the stages of mitosis? What happens at each stage?
  + Remember that mitosis is for growth and repair
  + Why is it important for the cell cycle to be regulated?
* What are sister chromatids? What is a centromere?
* What is homologous? What is an allele?
* Meiosis – what is meiosis used for?
  + What are the stages of meiosis?
  + Remember: crossing over occurs in Prophase I, homologous chromosomes separate during Meiosis I, sister chromatids separate during Meiosis II
  + What is nondisjunction?
  + What are gametes? What is a somatic cell?
* What is genotype? Phenotype? What is homozygous? Heterozygous?
* Remember that we have 22 pairs of autosomes an 1 pair of sex chromosomes
* What is the SRY gene on the Y chromosome?
* What are monozygotic twins?
* Know how to read a pedigree
* Know how to figure out what offspring will look like using a Punnett square
* What is dominant? Recessive? What is a carrier? What is polygenic? What is pleiotropy? What is codominance?
* What process do we use to create DNA fingerprints? What are VNTRs? What is PCR? What is electrophoresis?