

# Study Guide for Midterm 2

## Cell Energy

- ATPs produced after respiration
- chloroplast
- fermentation (alcoholic and lactic acid)
- grana
- light and dark reactions
- mitochondrion
- photosynthesis – raw materials/products
- pigments/colors
- thylakoids

## Cell Cycle

- cell cycle
- centromere
- gamete
- haploid/diploid
- interphase, prophase etc. all phases!
- meiosis
- mitosis
- photographs of phases of mitosis
- signal sequence
- sperm/egg

## Genetics

- allele
- blood types and genetics
- dominant
- Down Syndrome
- heterozygous
- homozygous
- incomplete dominance
- Mendel
- non-disjunction
- P<sub>1</sub>, F<sub>1</sub>, F<sub>2</sub>
- phenotype/genotype
- Punnett squares
- recessive
- roan cows
- sex-linked trait
- test cross

## Central Dogma of Molecular Biology

- 3' to 5' vs 5' to 3'
- anticodon
- antiparallel
- base pairing
- codon
- DNA
- DNA ladder components
- gene
- Hershey/Chase
- intron/exon
- Okazaki fragments
- polysomes
- protein
- radioactive elements used in DNA research such as <sup>14</sup>N / <sup>15</sup>N and <sup>35</sup>S / <sup>32</sup>P
- replication
- restriction endonucleases
- RNA
- stop codon
- transcription
- translation
- types of RNA-mRNA, tRNA, rRNA
- using a chart to find amino acids