

- DEFINE** phage
- DEFINE** introns
- DEFINE** plasmids
- DEFINE** polypeptides
- DEFINE** recombinant DNA and recombinant cells
- DEFINE** provirus
- DEFINE** histones
- DEFINE** centromeres
- DEFINE** cyclins
- DEFINE** kinetochores
- DEFINE** centrioles
- DEFINE** G₀
- DEFINE** spores
- DEFINE** haploid and diploid
- STATE** that some cells can exist the cell cycle; give 2 examples
- STATE** the molecules that transmit genetic information from generation to generation
- STATE** the purpose or role of RNA and DNA
- STATE** the global flow of information within cells
- STATE** that mitosis is continuous process composed of three steps: replication, alignment and separation (in that order)
- STATE** the chronological order of the scientists that contributed to the understanding of the structure and function of DNA
- LIST** nitrogenous bases found in RNA and DNA
- LIST** sequence of steps of each cycle of polymerase chain reactions (PCR)
- LIST** the three phases of interphase
- LIST** the most logical sequence of steps for splicing foreign DNA into a plasmid and inserting the plasmid into a bacterial cell
- LIST** the general cells types that might contain plasmids
- OUTLINE** the role or importance of mitosis
- OUTLINE** the role or importance of meiosis
- OUTLINE** alternation of generations
- OUTLINE** base “wobble” in the genetic code
- OUTLINE** the importance of plasmids in genetic engineering
- OUTLINE** the importance of restriction enzymes in genetic engineering
- OUTLINE** the structure and function of ribosomes
- OUTLINE** the structure of a nucleotide
- OUTLINE** the role of RNAi
- OUTLINE** the role of telomeres
- OUTLINE** the steps and events in the cell cycle
- OUTLINE** how DNA can carry vast amounts of information
- OUTLINE** the experiment and contribution of: Griffith, Hershey & Chase, Avery, McCarty & MacLeod, Chargaff, Messelson & Stahl, and Franklin
- DESCRIBE** Okazaki fragments
- DESCRIBE** an internal and an external example of cell cycle control/regulation
- DESCRIBE** the universal nature of the genetic code
- DESCRIBE** the regulation of the cell cycle, include in your discussion the enzymes and

molecules discussed in the powerpoint

IDENTIFY an exception to the rule with respect to the “global flow of information”

COMPARE the structure of RNA molecules and DNA molecules

COMPARE protein synthesis in eukaryotes and prokaryotes

COMPARE DNA replication in eukaryotes and prokaryotes

COMPARE chromosomes in eukaryotes and prokaryotes

COMPARE asexual and sexual reproduction

COMPARE the three sexual life cycles found in eukaryotes

COMPARE mitosis and meiosis

COMPARE purines and pyrimidines

EXPLAIN DNA replication include in your answer only the enzymes in the powerpoint

EXPLAIN leading and lagging strands

EXPLAIN mRNA processing in eukaryotes

EXPLAIN how phenotypes are determined through protein activities

EXPLAIN how a pair of homologous chromosomes differ from one another

EXPLAIN how RNA molecules get their specific shapes

PREDICT template strand DNA, coding strand DNA, mRNA codons, tRNA anticodons and amino acid sequences (you will be given a “known sequence of one of these in order to find the others and genetic code look up table)

PREDICT a possible effect(s) from a defective aminoacyl synthetase

PREDICT the number of cells in an embryo given the number of subsequent cell divisions after fertilization

PREDICT the outcome in cell division should cytokinesis fail

PREDICT the diploid number of an organism when given the number of chromosomes in its gametes or vice versa