**DNA Structure, DNA Replication, The Cell Cycle, Mitosis and Cancer Review Sheet**

**CLASS COPY**

**DNA Structure:** Noteblanks page

Vocabulary:

Nucleotide, Deoxyribonucleic Acid, Phosphate, Deoxyribose, Nitrogenous Base, Hydrogen Bonds, Adenine, Guanine, Cytosine, Thymine, Purine, Pyrimidine, Double Helix

I will be able to:

 Draw and recognize a nucleotide

 Know all the parts of a nucleotide, and how they are put together. Eg, what bonds to what?

 Understand complementary base pairing

 Create a complementary strand from a string of bases (e.g. AAATGACTTA)

Know what base bonds with what

Understand how the structure of the bases define how they can bond together

Know the difference between a Purine and a Pyrimidine, and know which base (A,G,C,T) is which

Draw and recognize both types of Nitrogenous base

Understand how nucleotides stick together to form a single strand of DNA

Draw and recognize all the parts of the DNA molecule

**DNA Replication:** Noteblanks page 76-77

Vocabulary:

Helicase, DNA Polymerase, Complementary Base Pairing, Enzyme, Free-Floating Nucleotide, Sugar Phosphate Backbone

I will be able to:

 Describe, draw, and recognize a diagram of DNA replication

 Know and describe what the enzymes Helicase and DNA Polymerase do

 Understand and describe all 4 steps in the process of replication

 Create a complementary strand from a string of bases (e.g. AAATGACTTA)

**The Cell Cycle:** Noteblanks page 78-79

Vocabulary**:**

Binary Fission, The Cell Cycle, G1, S, G2, Chromosome, Chromatin, Chromatid

I will be able to:

Describe and recognize a diagram of Binary Fission

 Explain the difference between binary fission and Mitosis

 Identify which for of cell duplication a eukaryote and a prokaryote go through

 Name and describe all the phases of the cell cycle

 Describe and recognize a diagram of the cell cycle

 Know and be able to describe the difference between chromosomes, chromatin, and chromatids

**Mitosis:** Noteblanks page 80-81

Vocabulary**:**

Interphase, Prophase, Metaphase, Anaphase, Telophase, Cytokinesis, Spindle Fibers, Centromere, Centrioles, Metaphase Plate, Cell Plate, Cleavage Furrow

I will be able to:

 Identify and describe all the phase of Mitosis

 Draw and recognize a diagram of Mitosis

 Draw and describe the movement of chromosomes and other cell structures during each stage

 Identify what form of DNA is present in any given stage of mitosis (eg chromatin, chromosomes)

 Recognize a cell in any stage of mitosis from a real picture or diagram

 Draw a diagram based on a real picture of each stage of mitosis

 Understand what part and percentage of the cell cycle is spent in mitosis

**Cancer:** Noteblanks page 82

Vocabulary:

 Carcinogen, Mutagens, Tumor, Cancer, Oncogenes, Benign, Malignant, Metastasis

I will be able to:

 Understand how cancer relates to the cell cycle

 Describe what part of the cell cycle is effect by cancer

 Understand and describe how carcinogens cause cancer

 State the 3 main causes of cancer

 Describe the stages of cancer, and evaluate the danger at each stage

Describe and understand the three main cancer treatments, and how they work

**This is not a perfect list.** Please use your notes, and ask me any questions, about what you should be able to understand for the test!