**Physics – Backend sheet**

Topics:

* Fundamentals
  + Projectile Motion
    - Distance
    - Velocity
  + Force
    - Free-body Diagrams
    - Laws
      * Newton (1-3)
    - Friction
      * Static
      * Kinetic
    - Spring
      * Weight
      * Mass
  + Uniform Circular Motion
    - Angular Variables
  + Energy
    - Kinetic
    - Gravitational Potential
    - Elastic Potential
    - Conservation of Energy
  + Torque
  + Constants
    - Gravity, noted as: g
      * -9.81 m/s2
    - Spring, noted as: k
      * No finite value (varies based on each spring)
* Optics
  + Geometrical Optics
    - Reflection
    - Refraction
    - Snell’s Law
    - Law of Reflection
    - Diagrams
  + Optical Instrumentation
    - Stops
    - Prims
  + Waves
  + Light
  + Coherence
  + Diffraction
  + Polarization
* Classical Mechanics
* Electricity and Magnetism
  + Magnets
    - Polarity
    - Attraction
    - Repulsion
    - Field Lines
  + Electrostatics
    - Electric Force
    - Uniform Electric Fields
    - Gauss’ Law
    - Coulomb’s Law
  + Electromagnets
    - Magnetic Fields
    - Ampere’s Law
    - Faraday’s Law
    - Lorentz Force
  + Constants
* Quantum Mechanics
* Statistical Mechanics
  + Laws of Thermodynamics
    - 0-2 laws
  + Temperature
  + Gases (kinetic)
  + Heat
    - Units
    - Specific Heat
    - Latent Heat
    - Phase Change
    - Work
    - Heat Engine
    - Carnot Engine
  + Entropy
    - Change in Entropy
    - Reversible and Irreversible Process
    - Statistical View
    - Boltzmann
  + Macroscopic behavior of ideal gases
    - Pressure
    - Avogadro’s Number
    - Ideal Gases

**Questions:**

Objects for equations?