KS5 PHYSICS
SUBJECT MAP

Post-16 Immanuel College

Immanuel SCIENCE — Sparking imagination to ignite discoveries

Y12

3.2.1 – PARTICLES
3.4.1 – FORCE, ENERGY AND MOMENTUM

- ATOMS
- PARTICLES, ANTIPARTICLES & PHOTONS
- STABLE & UNSTABLE NUCLEI
- MOMENTS
- MOTION & LINES

3.2.2 – ELECTROMAGNETIC RADIATION AND QUANTUM PHENOMENA
3.4.2 – BULK PROPERTIES OF SOLIDS

- PHOTOELECTRIC EFFECT
- DENSITY
- HOOKE'S LAW
- STRESS /STRAIN
- ELECTRONS & ATOMS
- ENERGY LEVELS & EMISSION
- YOUNG MODULUS

3.3.2 – REFRACTION, DIFFRACTION AND INTERFERENCE
YEAR 1 REVISION

- DIFFRACTION PATTERN
- FRINGE SPACING
- INTERFERENCE PATTERN
- REVISION
- REFRACTIVE INDEX
- YOUNG'S DOUBLE-SLIT EXPERIMENT

3.3.1 – PROGRESSIVE AND STATIONARY WAVES
3.5 – ELECTRICITY

- DIVIDERS
- CURRENT, VOLTAGE & CIRCUITS
- SUPERPOSITION
- ELECTROMOTIVE FORCE
- OHM'S LAW
- RESISTANCE
- LONGITUDINAL & TRANSVERSE

ASSESSMENT PREPARATION

- WALKTHROUGH OF AQA ASSESMENT SCRIPTS
- REVISION SKILLS
- PRACTICAL SKILLS

ASSESSMENTS

Y13

3.7.4 – CAPACITORS
3.6.2 – THERMAL PHYSICS

- PRACTICAL SKILLS
- KINETIC THEORY MODEL
- IDEAL GASES
- THERMAL ENERGY TRANSFERS
- CALCULATIONS USING LOGARITHMS
- TEMPORARY STORES OF CHARGE

3.7 - GRAVITATIONAL AND ELECTRIC FIELDS
3.6.1 - CIRCULAR AND SIMPLE HARMONIC MOTION

- GRAPHS & FORCE DIAGRAMS
- PROBLEM SOLVING
- PRACTICAL SKILLS
- OSCILATING SYSTEMS

3.7.5 – MAGNETIC FIELDS
3.8 – NUCLEAR PHYSICS

- CHARGES
- CALCULATIONS USING LOGARITHMS
- PRACTICAL SKILLS
- ELECTROMAGNETIC INDUCTION
- RADIOACTIVE DECAY
- ENERGY
- FISSION

3.12 – TURNING POINTS IN PHYSICS
YEAR 1 AND 2 REVISION

- ELECTRONS
- SPECIAL RELATIVITY
- WAVE PARTICLES
- REVISION

ASSESSMENT PREPARATION

- WALKTHROUGH OF AQA ASSESSMENT SCRIPTS
- PRACTICAL SKILLS
- REVISION SKILLS

ASSESMENT