Bramhall High School Physics

A level Sciences – Biology, Chemistry and Physics
(Need grade 6 and above and grade 6 in Maths)

BTEC Science
(Need Grade 5 in Science)

Other post 16 options – Apprenticeships, other A level subjects, other BTEC subjects, other training, College.

End of year exams!

YEAR 11

P15
- -Pressure calcs
- -Pressure in fluids
- -Pressure
- -Upthrust
- -Bending materials
- -Stretching springs
- -Elastic & inelastic
- Work done on stretched springs
- -Elastic limit
- -Spring calculations
- Hooke's Law

P14
- -Particles model
- -Density
- -Changing state
- -Specific heat capacity
- -Specific Latent heat
- -Gas temperature & pressures
- -Gas pressures & volume
- -Gas pressure calculations
- -Work & temperature
- -Pressure & particles
- -Absolute zero
- -Kelvin Scale

P13
- -Electromagnetic induction
- -Generators
- -Transformer calculations
- -Microphones
- -Transformers
- -National Grid
- -Transformer calcs
- -Motors
- -Loudspeakers
- -Magnets and fields
- -Electromagnetism
- -Magnetic forces

P12
- -Charges & electrostatics
- -Dangers of electrostatics
- -Electric Fields
- -Uses of electrostatics

P11
- -Energy and heating from a circuit
- -Energy and power in circuits
- -Power in circuits
- -Domestic electricity
- -Electrical Safety
- -Circuit symbols
- -Series circuits
- -Parallel circuits
- -Current & P.D rules in series
- -Current & P.D rules in parallel
- -Energy and charge in circuits
- -Series resistors
- -Parallel resistors
- -Special resistors

P10
- -Moments
- -Levers
- -gears
- -Work
- -Power
- -GPE
- -Energy stores
- -KE
- -efficiency

P8 and 9
- Fields
- Contact forces
- Non-contact forces
- Force vector diagrams

P7
- -Solar System
- -Gravity
- -Orbits
- -Life cycle of stars
- -Redshift
- -CMBR
- -Big-Bang
- -Steady State
- -Heliocentric
- -Geocentric

P5
- -Wave properties
- -Transverse waves
- -Longitudinal waves
- -Wave speed
- -Refraction
- -Waves & boundaries
- -Reflection
- -Refraction
- -EM spectrum
- -EM properties
- -EM uses and dangers
- -Radiation
- -Temperature
- -Climate change
- -History of the atom
- -Atomic structure
- -Working out p,e,n
- -Electron orbits
- Half-life
- Radiation in medicine
- Nuclear fusion
- Nuclear fission
- Dangers of radioactivity

P4
- -Renewable
- -Non-renewable
- -Efficiency
- -Keeping warm
- -Kinetic energy
- -Potential energy

P6
- -Hearing
- -Hearing range
- -Ears
- -Ultrasound
- -Infrasound
- -Uses of these
- -Ray Diagrams
- -Lenses
- -Dispersion
- -Colour
- -TIR and critical angle
- -Radiative decay
- -GM Tubes
- -Background radiation
- Using radioactivity

National Curriculum Compliant

YEAR 10

P3
- -Energy stores
- -Energy transfers
- -Momentum
- -Stopping distances
- -Collisions
- -Crash safety

P2
- -Newton's 2nd & 3rd laws
- -Vectors and scalars
- -Speed and d/t graphs
- -Acceleration
- -Speed/time graphs
- -Resultant forces
- -force diagrams
- -Mass, weight
- -gravity
- -Newton's 1st & 2nd law

Application of Forces
- -Electromagnets
- -Earth's magnetic field
- -Factors & uses
- -Electric field
- -Electrostatics
- -Gravity
- -Mass & weight

Forces and Motion
- -Moments
- -Levers
- -Gears

Force fields & Electromagnets
- -Galaxies
- -Universe

YEAR 9

- -Year
- -Seasons
- -Day
- -Night
- Solar system

Earth in space
- Energy usage
- Paying for energy

Energy
- -Efficiency
- -Sankey diagrams
- Heat transfers
- Insulation

YEAR 8

Fluids
- Using ultrasound
- Density
- Pressure in liquids
- -Drag forces
- -Streamlining
- -Properties
- -Shadows
- -Using light
- -Cameras
- -Eyes
- Hearing range
- -Physical reactions
- -Heating and cooling
- -Floating
- -Sinking
- -Upthrust

Light
- -Reflections
- -Refraction
- Lenses
- -Dispersion
- -Coloured light
- -Coloured surfaces
- -Coloured filters

Sound
- -Vibrations
- -Speed of sound
- -Transverse waves
- -Longitudinal waves

Energy
- -Energy sources
- -Power stations

Science skills

Forces
- Pressure in solids
- -Forces on springs
- -elastic
- -Balanced forces
- -Unbalanced forces
- -Friction
- -Uses of friction
- -Effects of friction
- Types of forces

Electricity
- -Voltage
- -Resistance
- -Electrical dangers
- -Electrical safety
- -electric current
- -Modelling
- -Conductors
- -Insulators
- -Symbols
- -Series circuits
- -Parallel circuits
- -Energy in food
- -Diet requirements
- -Energy stores
- -Energy transfers

YEAR 7

welcome