# **Combined Science GCSE@ Wootton Academy Trust**



#### Term 2

**Hormonal Control** 

Diabetes and contraception

#### Reproduction

ypes of reproduction DNA structure and protein synthesis

Senetics and inherited disorders

#### Wave properies

Reflectiona nd refraction Sound and ultrasound

#### Seismic waves

Chemicall analysis Mixtures

Chromatograms

Tests for gases

Tests for ions

nstrumental analysis

# **GCSE Exams**

#### Term 5 Review, consolidation, ntervention and GCSE exam

practice

#### Electric circuits

Current, charge, potential difference and resistance Series and parallel circuits

Term 3

## Preventing and treating disease

Vaccination and developing drugs

#### **Chemical changes**

Reactivity and displacement

Making salts

**Neutralisation** Strong and weak acids

Term 2

#### Structure and bonding

lonic and covalent bonding Fullerenes and graphene Bonding in metals

Nanoparticles

#### Cell division

Differentiation and stem cells

### Communicable diseases

Including human defence

#### Term 1 The Periodic Table

Electronic structure

Group 1 and group 7

Organisation and the

digestive system Food and enzymes

Energy transfer by heating

onduction, infrared

#### Term 6

Review, consolidate and intervention. CREST Award

#### **Competition and Ecosystems**

Adaptation, feeding relationships, materials cycling and factors affecting biodiversity

#### The human nervous system

Homeostasis and reflex actions

#### orces in balance

ectors, scalars, Moments, Centre of mass, Resolution of forces

#### he Earth's resources

inite and renewable, Water reatment

fe cycle assessments

#### Term 3

# Variation and evolution

Natural selection, selective breeding and genetic engineering

#### **Genetics and evolution**

The theory of evolution and speciation

Evidence, fossils and extinction Antibiotic resistant bacteria

### Classification

Electromagnetism Magnetic fields

The motor effect

Crude oil and fuels

**Hydrocarbons** 

ractional distillation

#### Term 1 orce and motion

#### acceleration

erminal velocity

Momentum

#### mpact forces and safety

Motion

Year

11

Motion graphs

#### Rates and equilibrium

Collision theory

Reversible reactions Dynamic equilibrium

# Term 6

# Radioactivity

Atoms and radiation

Alpha, beta, gamma Activity and half life

Nuclear radiation in medicine

Nuclear fission and fusion

Nuclear issues

## Non communicable diseases

Cancer, risk factors and lifestyle Electrolysis

Splitting ionic substances with

lectricity.

# Term 4

#### **Electricity in the home** Alternating current

Cables and plugs

Photosynthesis

Rate and limiting factors

Molecules and matter

Density

States of matter Internal energy and specific

atent heat

# Term 5

#### Respiration Aerobic and anaerobic

#### **Chemical calculations**

Masses and moles

Balancing equations

Yield

Concentrations **Energy changes** 

# Exothermic and endothermic

Reaction profiles

Bond energy calculations

#### Term 4

# Periodic Table

Development and electronic structure

Group 7 and group1

#### Term 2

# Electricity

Current, resistance and potential difference

**Atomic Structure** 

Atoms, elements, compounds Atomic theories over time

toms and Isotopes

Year

9

## Term 5

# Organising animals and plants

The circulatory system and transiration system

Conservation and dissipation

of energy

Year

10

Calculating energy stores and ransfers.

#### Term 3

# Cell Strucutre and Transport

Microcopes

Classification of cells

Specialised cells Energy resources

Demands and the environment

#### Term 1

#### Practical Skills

Energy in food and Exercise Testing metals and Rate of

reaction Electromagnets and Friction

Acids and Alkalis

pH scale and neutralisation Making salts

Metal displacement Ecosystems

Classification

Adaptations nterdependence