Biddenham Science Curriculum Journey

Chemistry 6

What global challenges do we face in terms of reactions, earth and environment? How do we solve these?

Physics 6 What is **CAREER LINK!**

Students look at careers energy resources, eco /earth sciences



Where can my GCSEs in Science take me now?

Apprenticeships Applied Science

Health & Social Care Biology GCSE Animal care

 Science technician Health practitioner

Care Mechanic/engineer

 Biology A-level Level 2 Chemistry A-level courses Physics A-level •Health & Social •Health & Social Care

Psychology

Level 3 courses

Year

Biology 6

How do we tackle global crises like food security, biodiversity loss and population growth?



END OF YEAR 10 PRACTISE EXAM Paper 1 for all

Practise papers 1&2

radioactivity?

What are the

dangers and

uses?

Chemistry 3 What different chemical reactions are there are how can we measure them?



Biology 4

What happens in ecosystems? How do organisms interact?

CAREER LINK!

Students look at careers in engineering and Physics 5 imaging How do waves behave and

Chemistry 5

How can we manipulate chemical reactions speed them up or change them?

Physics 1.3 What is pressure and can we use it to our advantage?

Biology 5

What are genes and how are they inherited? Can this be predicted?

> **CAREER LINK!** Students look at

careers in forensics and material sciences **Chemistry 4**

What happens in a chemical reaction ands can we identify why certain products are made?

Chemistry 2.3

What different structures exist in chemistry? Why do they exist?

Physics 4

What are magnets and magnetic fields? How can we use them?

Biology 2.1

Movement between cells and cell growth and division

What is the importance of

photosynthesis and why is it

Biology 3

What are hormones? How does the nervous system work? Control in the human body.

CAREER LINK!

Students look at

careers in

genetics and

microbiology

What are Newton's law and how can we apply them?

Physics 2.3

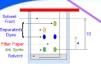
Forces in action!

used in science?

How are forces

Year

interact? Can we measure them?



Biology 1.3

Chemistry 2.1

What are acids and

alkalis? How do they

it differ in different

organisms? What is

anaerobic respiration?

substance? How can an impure substance be separated?

Chemistry 2.2

What is a pure and impure

What is respiration and does

Biology 1.4

Chemistry 1.2 What is an atom and what is it's structure? What are isotopes and ions?

a 2 stage process?

Physics 2.1

How do objects move and how can we explain their motion?

Biology 1.2

Making proteins from DNA, using proteins in the human body.

Physics 1.2

How do substances change state? What changes occur?



HOW SCIENCE WORKS

Extended writing writing methods for practicals

Biology 1.1

Organelles, what structures are found inside prokaryotes and eukaryotes?

Biology

INTERDEPENDENCE How do animals and plants behave with each other?

Chemistry 1.1

What does the particle model tell us about solids, liquids and gases?

Physics SOUND & LIGHT What waves are sound and light? How do they

Physics CONTACT FORCES Can we name some contact

forces? How do they interact

with different objects?

Year

Physics 1.1 What does the particle model tell us about solids, liquids and gases?

Physics ELECTRICITY

Chemistry CHEMICALS

How do they react?

What are acids and alkalis?

What is electricity and how can we investigate it?

Chemistry PERIODIC TABLE

What is it and who invented it? What does

HOW SCIENCE

CAREER LINK! Students look at

apprenticeships

(electrician,

plumber,

construction

Using formulae and

Biology RESPIRATION Where does this reaction happen and what is it's purpose?

How can this be

calculated?

Physics PRESSURE

resources does it hold? What is air pressure?

Chemistry EARTH STRUCTURE

What is the Earth made of? What

CAREER LINK! Students look at careers in food

and plant

sciences

HOW SCIENCE WORKS

Writing word and

symbol equations

Biology PHOTOSYNTHESIS

Where does this reaction happen and what is it's purpose? What organism

can photosynthesise?

Biology VARIATION

Why are anima different? Why does variation exist in populations?

HOW SCIENCE WORKS

Collecting data from observations. Being critical with data

Physics ENERGY & WORK How much does energy cost? How can we calculate the work

> **Biology PLANT** REPRODUCTION

How do plants reproduce? What parts of the plant are involved?

Chemistry HEATING & COOLING What state changes occur during

heating and cooling substances?

Physics ENERGY & WORK How much does energy cost? How can we calculate the work HOW **SCIENCE WORKS**

Plotting graphs and drawing axes. Lines of best fit and anomalies.

Biology **EVOLUTION**

How and why have we changed over time? Which scientists have come up with theories of evolution?



Year

Biology HUMAN BODY

CAREER LINK!

Students look at

careers in

medicine and

healthcare

What systems are in the human body and what are their functions?

Physics SPACE

What is our universe made of? How big is it? What is in our solar system?

HOW SCIENCE WORKS Forming conclusions and evaluations

Biology ANIMAL REPRODUCTION

How do animals reproduce? What parts of the organism are involved?

Chemistry PARTICLES

What are particle and how do they behave? How do they make bigger things?

HOW SCIENCE WORKS Identifying variables

HOW SCIENCE WORKS Identifying risks and

precautions in

investigations

Welcome to Science

at Biddenham - the adventure starts here!

Year 7

HOW SCIENCE WORKS Writing hypotheses and

formulating ideas for observation

Chemistry CHEMICAL REACTIONS How and why do substances react together?

Physics FORCES & ENERGY How can I compare two different

poems? Teacher modelling and class work.

Biology CELLS What are cells, what's insid