HIGHAM LANE
NORTH ACADEMY

YOUR BIOLOGY JOURNEY

Exploring. Discovering. Understanding life around us.

WHERE CAN BIOLOGY TAKE YOU?

Medicine
Engineering
Environmental Science
Space Science
Technology
Research
...and so many more!

YEAR 9

A BRIDGE TO GCSE BIOLOGY

Year 9 builds on everything you've learned in Years 7 and 8, preparing you for GCSE Biology.

- Stronger knowledge of cells and organisms
- More practical investigations and data skills
- Deeper thinking and applying knowledge

WHAT'S NEXT? GCSE BIOLOGY

KEY

- = Big ideas
- = Investigate
- = Think
- = Keep moving forward!

WHAT THE COLOURS MEAN

- Year 7 Topics
- Year 8 Topics
- Year 9 – Bridge to GCSE
- Skills You Will Build

REMEMBER...

Mistakes help you learn.
Questions help you grow.
Biology is all around you!

Be curious.
Be brave.
Have fun with biology!

YEAR 8

1 B1: ORGANISMS

- Breathing
- Drugs, alcohol and smoking
- Nutrients from the digestive system
- Food tests and unhealthy diets
- Enzymes involved in digestion

2 B2: GENES

- Natural selection
- Charles Darwin
- Extinction and preserving biodiversity
- Inheritance
- DNA, genetics and genetic modification

3 B3: ECOSYSTEMS

- Ecosystems and succession
- Carbon cycle
- Human impact on ecosystems

CO_2

SKILLS YOU WILL BUILD IN YEAR 8

Planning investigations
Identifying patterns in data
Explaining ideas
Evaluating evidence

YEAR 7

1 B1: ORGANISMS

- Levels of organisation
- The skeleton
- Joints and muscles
- Observing cells
- Animal and plant cells
- Unicellular organisms

2 B2: GENES

- Variation
- Adapting to change
- Adolescence
- Reproductive systems
- Development of a foetus
- Menstrual cycle

3 B3: ECOSYSTEMS

- Food chains and food webs
- Ecosystems and competition
- Flowers and seed dispersal

SKILLS YOU WILL BUILD IN YEAR 7

Asking questions
Using equipment safely
Recording observations
Drawing conclusions

START

Welcome to Biology!

Get curious. Ask questions. Find answers.

Keep exploring, keep asking questions, and enjoy your biology journey!

HIGHAM LANE
NORTH ACADEMY

YOUR CHEMISTRY JOURNEY

Exploring. Discovering. Understanding the world around us.

YEAR 9

WHERE CAN CHEMISTRY TAKE YOU?

A BRIDGE TO GCSE CHEMISTRY

Year 9 builds on everything you've learned in Years 7 and 8, preparing you for GCSE Chemistry.

- Stronger knowledge of particles and reactions
- More practical investigations and data skills
- Deeper thinking and applying knowledge

WHAT'S NEXT?

GCSE CHEMISTRY

Medicine · Engineering · Environmental Science · Space Science · Technology · Research · ...and so many more!

KEY

- = Big ideas
- = Investigate
- = Think
- = Keep moving forward!

WHAT THE COLOURS MEAN

- Year 9 – Bridge to GCSE
- Year 8 Topics
- Year 7 Topics
- Skills You Will Build

REMEMBER...

Mistakes help you learn.

Questions help you grow.

Chemistry is all around you!

Be curious.
Be brave.
Have fun with chemistry!

YEAR 8

1 ATOMS AND THE PERIODIC TABLE

- Atoms and elements
- Compounds
- The Periodic Table
- Atomic structure

2 CHEMICAL REACTIONS

- Conservation of mass
- Combustion
- Metals and acids
- Temperature changes

3 CLIMATE AND EARTH'S RESOURCES

- Greenhouse gases
- Climate change
- Air pollution
- Recycling
- Sustainability

SKILLS YOU WILL BUILD IN YEAR 8

Planning investigations · Identifying patterns in data · Explaining ideas

YEAR 7

1 PARTICLES AND SEPARATING MIXTURES

- Solids, liquids and gases
- The particle model
- Changes of state
- Separating mixtures (filtration, evaporation, distillation, chromatography)

2 ACIDS, ALKALIS AND METALS

- Acids and alkalis
- The pH scale
- Indicators
- Metal reactions
- Neutralisation

3 EARTH AND SPACE

- The Solar System
- Day and night
- Seasons
- Rocks
- The Earth

START

Welcome to Chemistry!

Get curious.
Ask questions.
Find answers.

SKILLS YOU WILL BUILD IN YEAR 7

Asking questions · Using equipment safely · Recording observations · Drawing conclusions

HIGHAM LANE
NORTH ACADEMY

YOUR PHYSICS JOURNEY

Exploring. Discovering. Understanding the world around us.

YEAR 9

WHERE CAN PHYSICS TAKE YOU?

A BRIDGE TO GCSE PHYSICS

Year 9 builds on everything you've learned in Years 7 and 8, preparing you for GCSE Physics.

- Stronger understanding of the physical world and how things work
- Better problem solving and practical skills
- Deeper thinking and applying knowledge

WHAT'S NEXT? GCSE PHYSICS

- Engineering
- Aerospace
- Medicine
- Technology
- Environmental Science
- Research
- ...and so many more!

KEY

- Big ideas
- Investigate
- Think
- Keep moving forward!

WHAT THE COLOURS MEAN

- Year 9 – Bridge to GCSE
- Year 8 Topics
- Year 7 Topics
- Skills You Will Build

REMEMBER...

Mistakes help you learn.

Questions help you grow.

Physics is all around you!

Be curious.
Be brave.
Have fun with physics!

YEAR 8

1 FORCES & ELECTROMAGNETS

- Forces and drag
- Squashing and squishing
- Turning forces
- Pressure in solids, liquids and gases
- Magnets and electromagnets and their uses

2 ENERGY

- Work, energy, machines
- Temperature
- Energy transfer by conduction, convection and radiation

3 WAVES

- Sound waves
- Water waves
- Electromagnetic spectrum
- Modelling waves

SKILLS YOU WILL BUILD IN YEAR 8

- Planning investigations
- Analysing and interpreting data
- Explaining ideas
- Using equipment safely
- Evaluating and improving

YEAR 7

1 FORCES & ELECTROMAGNETS

- Introduction to forces
- Balance and unbalanced
- Speed
- Distance time graphs
- Gravity
- Potential difference
- Resistance
- Current
- Charging up

2 ENERGY

- Food and fuels
- Energy resources
- Energy and power
- Energy adding up
- Energy dissipation

3 WAVES

- Sound waves and speed
- Loudness and amplitude
- Frequency
- Pitch
- Ear
- Light
- Reflection
- Refraction
- The eye and colour

START

Welcome to Physics!

Get curious.
Ask questions.
Find answers.

SKILLS YOU WILL BUILD IN YEAR 7

- Asking questions
- Using equipment safely
- Recording observations
- Drawing conclusions
- Communicating ideas