THE INDEPENDENT GRAMMAR SCHOOL: DURHAM

Physics Curriculum Overview

Leading to Edexcel GCSE (9–1) Physics (1PH0)

Year Group	Michaelmas 1	Michaelmas 2	Lent 1	Lent 2	Trinity 1	Trinity 2
Year 7	7I Energy	7I Energy 7J Current	7J Current	7K Forces	7K Forces 7L Sound	7L Sound Revision and end of year assessments
Year 8	8I Fluids	8I Fluids 8J Light	8J Light	8K Energy transfers	8K Energy transfers 8L Earth and space	8L Earth and space Revision and end of year assessments
Year 9	9I Forces and motion	9I Forces and motion 9J Force fields and electromagnets	9J Force fields and electromagnets	9K Physics revision and projects	9K Physics revision and projects 9L Physics transition to GCSE	9L Physics transition to GCSE Revision and end of year assessments
Year 10	Topic 1: Key concepts in physics Topic 2: Motion and forces	Topic 3: Conservation of energy Topic 4: Waves	Topic 4: Waves Topic 5: Electromagnetic spectrum	Topic 6: Radioactivity	Topic 7: Astronomy (Triple only)	Revision End of year exams
Year 11	Topic 8: Energy and forces doing work Topic 9: Forces and their effects	Topic 10: Electricity and circuits Topic 11: Static electricity (Triple only)	Topic 12: Magnetism and the motor effect Topic 13: Electromagnetic induction	Topic 14: Particle model Topic 15: Forces and matter	Revision and consolidation	Examinations

Curriculum Intent

Develop deep understanding of key physics concepts, build practical and analytical skills, and foster problem-solving abilities, prepare students for success in Edexcel GCSE Physics.

Document Owner: Science Lead

Implementation

- Physics is taught through high-quality schemes of work aligned to the Edexcel GCSE specification.
- Lessons are knowledge-rich and skills-focused.
- Retrieval practice and spaced repetition strengthen long-term retention.
- Pupils develop essay writing, source analysis and exam technique.
- Regular assessment informs teaching and supports progress.

Review Cycle: Annual

Impact

- Pupils know and understand more about key physics concepts.
- Think critically and form their own judgements about physics.
- Analyse, evaluate and use numerical data effectively.
- Communicate their knowledge clearly and confidently.
- Achieve their potential in GCSE Physics and beyond.

Date: _____

THE INDEPENDENT GRAMMAR SCHOOL: DURHAM

Biology Curriculum Overview

KS3 - Pearson Exploring Science Working Scientifically

Pearson Edexcel GCSE (9–1) Biology (1BIO)

Whole School Curriculum Map (Years 7–11)

Year Group	Michaelmas 1	Michaelmas 2	Lent 1	Lent 2	Trinity 1	Trinity 2
Year 7	7A Cells, tissues and systems	7A Cells, tissues and systems 7B Sexual Reproduction in animals	7B Sexual Reproduction in animals	7C Muscles and bones	7C Muscles and bones 7D Ecosystem	7D Ecosystem Revision End of year assessment
Year 8	8A Food and nutrition	8A Food and nutrition 8B Plants and their reproduction	8B Plants and their reproduction	8C Breathing and respiration	8C Breathing and respiration 8D Unicellular organisms	8D Unicellular organisms Revision End of year assessment
Year 9	9A Genetics and evolution	9A Genetics and evolution 9B Plant Growth	9B Plant growth	9C Biology revision and projects	9C Biology revision and projects 9D Biology transition to GCSE	9D Biology transition to GCSE Revision End of year assessment
Year 10	Topic 1: Key concepts of biology	Topic 2: Cells and control	Topic 3: Genetics	Topic 4: Natural selection and genetic modification	Topic 5: Health, disease and the development of medicine	Revision End of year exams
Year 11	Topic 6: Plant structures and function	Topic 7: Animal coordination, control and homeostasis	Topic 8: Exchange and transport	Topic 9: Ecosystem	Revision and consolidation	GCSE Exams

Curriculum Intent

- Develop deep scientific knowledge and understanding
- Build practical skills and scientific enquiry
- Encourage curiosity and a love of biology
- Prepare students for success in Edexcel GCSE Biology (1BIO) and beyond

Implementation

- Biology is taught in line with Edexcel GCSE (9–1) Biology
- Topics are sequenced to build knowledge progressively
- Practical investigations are embedded throughout the curriculum
- Retrieval practice and formative assessment support long-term retention
- Students are supported to develop exam technique and application of knowledge

Impact

Students will:

- Demonstrate strong knowledge and understanding across all areas of the Edexcel specification
- Apply biology concepts to unfamiliar contexts
- Confidently design, evaluate and interpret scientific investigations
- Achieve their potential in GCSE Biology and be prepared for further study and future careers

Document Owner: Science Lead

Review Cycle: Annual

Date: _____

THE INDEPENDENT GRAMMAR SCHOOL: DURHAM

Chemistry Curriculum Overview

Pearson Edexcel GCSE (9–1) Chemistry (1CH0)

Whole School Curriculum Map (Years 7–11)

Year Group	Michaelmas 1	Michaelmas 2	Lent 1	Lent 2	Trinity 1	Trinity 2
Year 7	7E Mixtures and separation PE Mixtures and separation	7E Mixtures and separation 7F Acids and alkalis	7F Acids and alkalis	7G The particle model	7G The particle model 7H Atoms, elements and molecules	7H Atoms, elements and molecules Revision and end of year assessments
Year 8	8E Combustion	8E Combustion 8F The periodic table	8F The periodic table	8G Metals and their uses	8G Metals and their uses 8H Rocks	8H Rocks Revision and end of year assessments
Year 9	9E Making materials	9E Making materials 9F Reactivity	9F Reactivity	9G Chemistry revision and projects	9G Chemistry revision and projects 9H Chemistry transition to GCSE	9H Chemistry transition to GCSE Revision and end of year assessments
Year 10	Topic 1: Key concepts in chemistry	Topic 2: States of matter and mixtures	Topic 3: Chemical Change	Topic 4: Extracting metals and equilibria	Topic 5: Separate chemistry (Triple only)	Revision End of year exams.
Year 11	Topic 6: Groups of the periodic table	Topic 7: Rates of reaction and energy changes	Topic 8: Fuels and earth science	Topic 9: Separate chemistry 2 (Triple only)	Revision and consolidation	Examinations

Curriculum Intent

Develop deep understanding of key chemical concepts; build practical, analytical and problem-solving skills; prepare students for success in Edexcel GCSE Chemistry.

Implementation

- Chemistry is taught in line with Edexcel GCSE (9–1) Chemistry (1CH0)
- Topics are sequenced to build knowledge and understanding progressively
- Practical investigations are embedded throughout the curriculum
- Retrieval practice and regular formative assessment support long-term retention
- Students are supported to develop exam technique and application of knowledge
- Careers and real-world contexts are used to enhance engagement

Impact

Students will:

- Demonstrate strong knowledge and understanding across all areas of the Edexcel specification
- Apply chemistry concepts to unfamiliar contexts
- Confidently design, evaluate and interpret scientific investigations
- Achieve their potential in GCSE Chemistry and be prepared for further study and future careers

Document Owner: Science Lead

Review Cycle: Annual

Date: _____