Budapesti Nemzetközi Iskola - International School of Budapest és
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TEACHING CURRICULUM

FOR HIGH SCHOOL

INTERNATIONAL SCHOOL OF BUDAPEST
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GRADE 9

IGCSE CURRICULUM

Cambridge IGCSE Mathematics (0580)

An essential subject for all learners, Cambridge IGCSE Mathematics encourages the development of mathematical knowledge as a key life skill, and as a strong basis for more advanced study. The syllabus aims to build learners' confidence by helping them develop competence and fluency with mathematical concepts, methods and skills, as well as a feel for numbers, patterns and relationships. The syllabus also places a strong emphasis on solving problems and presenting and interpreting results. Learners also gain an understanding of how to communicate and reason using mathematical concepts.

TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
UNIT 1 Reviewing number concepts Making sense of algebra Lines, angles and shapes	Collecting, organizing and displaying data UNIT 2 Fractions and standard form Equations and rearranging formulae	Perimeter, area and volume Introduction to probability UNIT 3 Sequences and sets	Straight lines and quadratic equations Pythagoras' theorem and similar shapes Averages and measures of spread

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Cambridge IGCSE English - First Language (0500)

Cambridge IGCSE First Language English is designed for learners whose first language is English. The course enables learners to:

- develop the ability to communicate clearly, accurately and effectively when speaking and writing
- use a wide range of vocabulary, and the correct grammar, spelling and punctuation
- develop a personal style and an awareness of the audience being addressed.

Learners are also encouraged to read widely, both for their own enjoyment and to further their awareness of the ways in which English can be used. Cambridge IGCSE First Language English also develops more general analysis and communication skills such as inference, and the ability to order facts and present opinions effectively.

TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
Unit 1 Reading – paragraphs, summary, skimming, comparing Unit 2 Directed writing – styles, comparing, book review, journal, leaflet, blog, autobiography, advertisement, formal letter	Unit 3 Composition – the language of description, planning, imaginary description Unit 4 Reading – for information, sequencing ideas, key points, sequencing	Unit 5 Directed writing – genres, comparing Unit 6 Composition – describing a process, chronological framework, adding details, memoir, novel, informative account	Unit 7 Reading – expanding notes, comparing style and purpose, understanding writing devices, sentence structure, writers' effect analysis Summary

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Cambridge IGCSE English as a Second Language (Speaking endorsement) (0510)

Cambridge IGCSE English as a Second Language is designed for learners who already have a working knowledge of the language and who want to consolidate their understanding in order to progress in their education or career. Through their studies, learners will improve their ability to understand and use English in a range of situations.

The aim is to achieve a level of practical communication ideal for everyday use, which can also form the basis for further, more in-depth language study. In Syllabus 0510, marks for the speaking component do not contribute to the overall grade candidates receive for the written components. A count-in speaking component is offered in Syllabus 0511.

TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
Unit 1 Content – Science and technology Language and vocabulary – Comparatives and superlatives, present simple Unit 2 Content – Food and fitness Language and vocabulary – skimming and scanning, collocations, adjectives, past simple	Unit 3 Content – Communities Language and vocabulary – Collective nouns, active verbs, suffixes Unit 4 Content – Animals and us Language and vocabulary – Simile and metaphor, the future tense, opinions	Unit 5 Content – Working life Language and vocabulary – getting the gist, jargon Writing a resignation letter Case studies Counselling Creating a scene for a play	Unit 6 Content – Travel and transport Language and vocabulary – Past continuous tense, questions, predicting, relative pronouns Revision

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Cambridge IGCSE Sciences - Co-ordinated (Double) (0654)

Cambridge IGCSE Co-ordinated Sciences gives learners the opportunity to study Biology, Chemistry and Physics within a cross-referenced, scientifically coherent syllabus. It is a double award qualification, earning two grades. Learners gain an understanding of the basic principles of each subject through a mix of theoretical and practical studies, while also developing an understanding of the scientific skills essential for further study.

They learn how science is studied and practised, and become aware that the results of scientific research can have both good and bad effects on individuals, communities and the environment. As well as focusing on the individual sciences, the syllabus helps learners to understand the technological world in which they live, and take an informed interest in science and scientific developments.

TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
BIOLOGY Cells - characteristics of living things - cells and organisms Movement in and out of the cells - diffusion - osmosis	BIOLOGY Biological molecules - carbohydrates - fats - proteins - enzymes	BIOLOGY Plant nutrition - photosynthesis - leaves Animal nutrition - diet - digestion - teeth - the alimentary canal	BIOLOGY Transport in plants - systems - water uptake - transpiration Transport in mammals - the circulatory system - the heart, blood vessels, blood
CHEMISTRY Planet Earth - the atmosphere - water treatment - the crust The nature of matter - states of matter - separating and purifying - atoms and molecules	CHEMISTRY Elements and compounds - The Periodic table - Trends in groups and periods - Chemical bonding - The chemical formulae of elements and compounds - Metals, alloys and crystals	CHEMISTRY Chemical reactions - Chemical reactions and equations - Types of chemical reactions - Redox reactions - Electrolysis	CHEMISTRY Acids, bases and salts - Acid and alkali solutions - Metal oxides and non-metal oxides - Alkalis and bases - Salts - Preparing soluble salts

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- electron arrangements in atoms			
PHYSICS <u>1 General physics</u> 1.1 Length and time 1.2 Motion 1.3 Mass and weight 1.4 Density 1.5 Forces 1.5.1 Effects of forces 1.5.2 Turning effect 1.5.3 Conditions for equilibrium 1.5.4 Centre of mass 1.6 Momentum	PHYSICS 1.7 Energy, work and power 1.7.1 Energy 1.7.2 Energy resource 1.7.3 Work 1.7.4 Power 1.8 Pressure	PHYSICS <u>2 Thermal physics</u> 2.1 Simple kinetic molecular model of matter 2.1.1 States of matter 2.1.2 Molecular model 2.1.3 Evaporation 2.1.4 Pressure changes 2.2 Thermal properties and temperature 2.2.1 Thermal expansion of solids, liquids and gases 2.2.2 Measurement of temperature 2.2.3 Thermal capacity (heat capacity) 2.2.4 Melting and boiling	PHYSICS 2.3 Thermal processes 2.3.1 Conduction 2.3.2 Convection 2.3.3 Radiation 2.3.4 Consequences of energy transfer <u>3 Properties of waves, including light and sound</u> 3.1 General wave properties 3.2 Light 3.2.1 Reflection of light 3.2.2 Refraction of light 3.2.3 Thin converging lens 3.2.4 Dispersion of light 3.3 Electromagnetic spectrum

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GRADE 10

IGCSE CURRICULUM

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TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
UNIT 4 Understanding measurement Further solving of equations and inequalities Scale drawings bearings and trigonometry Scatter diagrams and correlation	UNIT 5 Managing money Curved graphs Symmetry	Histograms and frequency distribution diagrams UNIT 6 Ration, rate and proportion More equations, formulae and functions	Vectors and transformation Probability using tree diagrams and Venn diagrams REVISION

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TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
Unit 8 Directed writing – Emotive vocabulary choices, persuasive devices, evoking sympathy, complaint letter, appeal letter Unit 9 Composition – engaging the reader, adapting a text, planning narratives, mini-saga, narrative composition	Unit 10 Reading – Looking at style, summary practice, vocabulary range Unit 11 Directed writing – writing non-fiction, adopting a position, spelling, punctuation, rhetoric, discourse markers, analysing and refuting an argument	Unit 12 Composition – Narrative dialogue, viewpoint and character, fairy tale, short story, narrative composition Unit 13 Giving a talk and engaging in dialogue	Unit 14 Group discussion and making a speech, distinguishing facts and opinions, public speaking evaluating Revision

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TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
Unit 7 Content – Leisure and entertainment Language and vocabulary – prefixes, conjunctions, adverbs Unit 8 Content – Hobbies and interests Language and vocabulary – Persuasive writing, jargon	Unit 9 Content – Customs and cultures Language and vocabulary – Synonyms and antonyms, punctuation Writing a web page Delivering a short speech Organizing a campaign	Unit 10 Content – The past and the future Language and vocabulary – Homophones, past and present tenses Unit 11 Content – Communication Language and vocabulary – Anecdotes, Register and purpose, continuous tense	Unit 12 Content – Global issues Language and vocabulary – Concise language, conjunct phrases, comparing and contrasting, reposted speech Writing a review product Delivering a talk Review

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Cambridge IGCSE Sciences - Co-ordinated (Double) (0654)

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TERM 1 Autumn	TERM 1 Winter	TERM 2 Spring	Term 2 Summer
BIOLOGY Respiration and gas exchange - tobacco smoking Coordination and homeostasis - The human nervous system - The eye - Hormones - Coordination and response in plants - Homeostasis	BIOLOGY Reproduction in plants - Asexual and sexual reproduction - Flowers Reproduction in humans - Human reproductive organs - Fertilization and development - The menstrual cycle - HIV/AIDS	BIOLOGY Inheritance - Chromosomes - Cell division Variation and selection - Variation - Selection	BIOLOGY Organisms and their environment - Ecology - Energy flow - The carbon cycle - Human influences
CHEMISTRY Quantitative chemistry - Chemical analysis and formulae - The mole and chemical formulae - Calculations involving gases	CHEMISTRY Patterns and properties of metals - The alkali metals - Aluminum - The transition elements - The reactivity of metals Industrial inorganic chemistry	CHEMISTRY Organic chemistry - Carbon - Alkanes - Alkenes - Hydrocarbon structure - Alcohols - Ethanol	CHEMISTRY Chemical analysis and investigation - Chemical analysis - Inorganic analysis - Organic analysis - Experimental design and investigation - Practical skills

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- Moles and solution chemistry How far, how fast -Energy changes in chemical reactions - Rates of reaction - Catalysts - Reversible reaction	- The extraction of metals by carbon reduction and electrolysis - Ammonia and fertilizers - Sulfur and sulfuric acid - The chlor-alkali industry - Limestone - Recycling metals	Petrochemicals and polymers - Petroleum - Alternative fuels and energy sources - Addition polymerization - Condensation polymerization	Revision
PHYSICS 3.4 Sound <u>4 Electricity and magnetism</u> 4.1 Simple phenomena of magnetism 4.2 Electrical quantities 4.2.1 Electric charge 4.2.2 Current 4.2.3 Electromotive force 4.2.4 Potential difference 4.2.5 Resistance 4.2.6 Electrical working	PHYSICS 4.3 Electric circuits 4.3.1 Circuit diagrams 4.3.2 Series and parallel circuits 4.3.3 Action and use of circuit components 4.5 Dangers of electricity 4.6 Electromagnetic effects 4.6.1 Electromagnetic induction 4.6.2 a.c. generator 4.6.3 Transformers	PHYSICS 4.6.4 The magnetic effect of a current 4.6.5 Force on a current-carrying conductor 4.6.6 d.c. motor <u>5 Atomic physics</u> 5.1 The nuclear atom 5.1.1 Atomic model 5.1.2 Nucleus 5.2 Radioactivity 5.2.1 Detection of radioactivity 5.2.2 Characteristics of the three kinds of emission 5.2.3 Radioactive decay 5.2.4 Half-life 5.2.5 Safety precautions	PHYSICS <u>Exam preparation</u>