TASIS PORTUGAL

CURRICULAR PROGRESSION · GRADES 6–12

Sciences

Co-ordinated Sciences · Biology · Chemistry · Physics

GRADES 6–8

Amplify Science

Grade 6

- Microbiome
- Traits and Reproduction
- Plate Motion
- Rock Formations
- Ocean, Atmosphere and Climate
- Weather Patterns
- Earth's Changing Climate
- Phase Change

Grade 7

- Harnessing Human Energy
- Waves (Light and Sound)
- Metabolism and Organ Systems
- Populations and Resources
- Elements, Compounds and Mixtures
- Acids and Bases

Grade 8

- Reactions of Metals
- Chemical Reactions
- Thermal Energy
- Force and Motion
- Magnetic Fields
- Earth, Moon, and Sun
- Natural Selection
- Evolutionary History

GRADES 9–10

Cambridge IGCSE

Biology (0610) · Chemistry (0620) · Physics (0625) · Co-ordinated Sciences (0654)

Biology

- Characteristics, classification and organization of living organisms
- Movement into and out of cells
- Biological molecules
- Enzymes
- Plant and human nutrition
- Transport in plants and animals
- Diseases and immunity
- Gas exchange in humans
- Respiration
- Excretion in humans
- Coordination and response
- Drugs
- Reproduction
- Inheritance
- Variation and selection
- Human influences on ecosystems
- Biotechnology and genetic modification

Chemistry

- States of matter
- Atoms, elements and compounds
- Stoichiometry
- Electrochemistry
- Chemical energetics
- Chemical reactions
- Acids, bases and salts
- The Periodic Table
- Metals
- Chemistry of the environment
- Organic chemistry
- Experimental techniques and chemical analysis

Physics

- Motion, forces and energy
- Thermal physics
- Waves
- Electricity and magnetism
- Nuclear physics
- Space physics

Co-ordinated Sciences covers the same topics in less detail. Students learn around two-thirds of the material in the individual science courses and still attend lessons in biology, chemistry and physics.

GRADES 11–12

IB Diploma Programme

Sciences · Candidate School

Biology

Core: Cell biology; Molecular biology; Genetics; Ecology; Evolution and biodiversity; Human physiology

HL depth study: Nucleic acids; Metabolism, cell respiration and photosynthesis; Plant biology; Genetics and evolution; Animal physiology

Chemistry

Core: Stoichiometric relationships; Atomic structure; Periodicity; Chemical bonding and structure; Energetics/thermochemistry; Chemical kinetics; Equilibrium; Acids and bases; Redox processes; Organic chemistry; Measurement and data processing

HL depth study: Deeper study of all chemistry core content

Physics

Core: Measurements and uncertainties; Mechanics; Thermal physics; Waves; Electricity and magnetism; Circular motion and gravitation; Atomic, nuclear and particle physics; Energy production

HL depth study: Wave phenomena; Fields; Electromagnetic induction; Quantum and nuclear physics

20% internal assessment

80% external assessment

Grades 9–10 IGCSE curricula build on Amplify Science topics covered in grades 6, 7 and 8.