



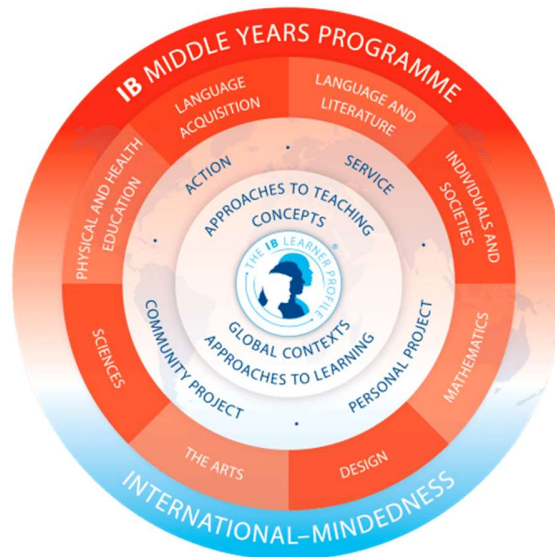
INTERNATIONAL SCHOOL
LUXEMBOURG

IB mission statement

The International Baccalaureate aims to develop **inquiring, knowledgeable and caring** young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become **active, compassionate and lifelong learners** who understand that other people, with their differences, can also be right.



The MYP:

- addresses holistically students' **intellectual, social, emotional and physical well-being**
- provides students opportunities to develop the **knowledge, attitudes and skills** they need in order to manage complexity, and take responsible action for the future
- ensures breadth and depth of understanding through study in **eight subject groups**
- requires the study of at least **two languages** to support students in understanding their own cultures and those of others
- empowers students to participate in **service with the community**
- helps to prepare students **for further education, the workplace and a lifetime of learning.**

This curriculum is subject to change and may be adapted to suit the needs and interests of the students and adapted to fit appropriately in accordance with best practice and circumstances.

SUBJECT GROUP 4 **SCIENCE**

Integrated Sciences, Biology, Chemistry, Physics

With inquiry at the core, the MYP sciences framework aims to guide students to independently and collaboratively investigate issues through research, observation and experimentation. The MYP sciences curriculum explores the connections between science and everyday life. As they investigate real examples of science applications, students discover the tensions and dependencies between science and morality, ethics, culture, economics, politics, and the environment.

The MYP sciences group aims to encourage and enable students to:

- understand and appreciate science and its implications
- consider science as a human endeavour with benefits and limitations
- cultivate analytical, inquiring and flexible minds that pose questions, solve problems, construct explanations and judge arguments
- develop skills to design and perform investigations, evaluate evidence and reach conclusions
- build an awareness of the need to effectively collaborate and communicate
- apply language skills and knowledge in a variety of real-life contexts
- develop sensitivity towards the living and non-living environments
- reflect on learning experiences and make informed choices.

Skills and Understanding / Goals :

- Students will be able to complete a scientific investigation using the scientific method.
- Students will be able to ask and answer scientific questions.
- Students will be able to make observations, and interpret data in various modes.

<p>Year 1 Integrated Sciences</p>	<p>Scientists and Solutions</p> <ul style="list-style-type: none"> - What do scientists do? - Physical and chemical processes <p>Change!</p> <ul style="list-style-type: none"> - Energy - Earth's physical form <p>How do living things work?</p> <ul style="list-style-type: none"> - Characteristics of life - Environmental interactions
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<p>Year 2 Integrated Sciences</p>	<p>Modelling Motion - Motion - Waves Chemical Change - Elements, mixtures, compounds - Reactions Human Body - Organs and Systems - Body Functions Who are we? - Relationships, genes, DNA - Stimulus and response</p>
<p>Year 3 Integrated Sciences</p>	<p>Human Impact - Environmental issues - Climate change Energy Power Machines - Measuring energy - Development of machines Electricity and Magnetism - Forces, fields - Units, circuits Chemical Reactions - Acids and Bases - Reactions and processes</p>
<p>Year 4 Biology</p>	<p>Balanced Systems - Sustainability within the global environment is dependent upon maintaining balance while interacting with ecosystems. All living things have genes - Genetic factors determine the identity of a species, influence relationships with other species and drive change over time through interactions with the environment.</p>
<p>Year 4 Chemistry</p>	<p>- Matter - Pure substances, Solutions and mixtures. - Classification of elements-The periodic table - Chemical Bonding - Chemical nomenclature-Chemical equations-Acids and Bases reactions - Food chemistry</p>
<p>Year 4 Physics</p>	<p>- Forces and force fields.Forces and force systems - Kinematics - Energy, Work ,Power and Thermal Energy and effects - Waves: Sound-Light-Communication - Environmental physics</p>

Year 5 Biology	<i>How life is organized</i> - We share patterns and functions with all living things on Earth, consequently we are all related. <i>Health and Lifestyle</i> - Each component of a system must work at the right time and space in order for living organisms to function well.
Year 5 Chemistry	<ul style="list-style-type: none">- Periodic table and trends (Review and extension)- Stoichiometry- Redox reactions- Thermochemistry- Acids and Bases in water (revision and extension)- Kinetics and equilibrium- Organic chemistry
Year 5 Physics	<ul style="list-style-type: none">- Dynamics- Electricity- Electromagnetism- Atomic and Nuclear Physics- Astrophysics