THE ENGLISH INTERNATIONAL SCHOOL PRAGUE
A NORD ANGLIA EDUCATION SCHOOL

IGCSE Options 2016

Science & Physical Education

Biology

At EISP we follow the Cambridge IGCSE Syllabus for Biology. The course will be taught over two years, culminating in external examinations. Each student will need to develop a sound understanding of the topics in the syllabus as well as skills in data responseand analysis.

Topics studied:
1. Characteristics & Classification of living Organisms
2. Organisation of the Organism, Biological Molecules, Enzymes, Human Nutrition, Plant Nutrition, Transport in Plants & Animals, Diseases and Immunity, Energetics, Excretion, Coordination and R esponse, Drugs
3. Organisms their environment and Human Influences, Variation, Reproduction in Plants and Humans, Growth & Development, Biotechnology, Inheritance

Course focus and preparation for International Baccalaureate

In teaching this course over two years we will have sufficient time to focus on practical skills, project work and developing skills that will act as a valuable foundation for IB in Years 12 and 13. This will ensure that students develop a thorough understanding of the topics as well as providing an excellent 'stepping stone' to further scientific study.

Chemistry

At EISP we follow the Cambridge IGCSE Syllabus for Chemistry. The course will be taught over two years, culminating in external examinations.

Chemistry is the scientific study of matter and its properties. Chemists investigate the behavior of substances in order to increase our understanding of the Universe and, on a practical level, to develop new materials for our increasingly technological society. From paracetamol to pollution and from batteries to burgers, chemistry and the work of chemists affect our daily lives. Apart from being a stimulating course in its own right, IGCSE chemistry is an excellent introduction to IB level chemistry. Study of chemistry is essential for many university degree courses such as medicine, pharmacology and chemical engineering as well as being important for a host of other science orientated courses. Over the course, students study the following topics: the nature of matter, the classification of matter, the structure of matter, chemical equations, energy & chemistry, the Periodic Table, metals, acids & bases and carbonates, chemical calculations, electricity & chemistry, chemical reactions, air & water, sulphur chemistry and organic chemistry.

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Students are assessed continuously in class by way of topic tests and regular homework. Chemistry is an experimental science and throughout the course, the practical, investigative nature of the subject is emphasized. Students have ample opportunity for hands-on laboratory work and to practice the writing up of laboratory reports, which are important components of the scientific process. IGCSE chemistry is assessed at two levels: a core level for less able students, where grades C to G are available and an extended level for more able students with the opportunity to attain the higher grades A* to C. All students will follow the extended course until a decision is made in the final year as to which level they will be assigned for the final examinations.

Course focus and preparation for International Baccalaureate

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Physics

Over the period of two years, students who take Physics will be studying mechanics, thermal physics, electricity and magnetism and also nuclear physics. Apart from gaining Physics knowledge, which is applicable in their everyday lives, students will work on their experimental skills such as developing hypothesis, planning their own investigations, collecting relevant data, processing it as well as making critical conclusions and evaluating their procedures. They will be encouraged to recognise the usefulness, and limitations, of scientific method. Interest in, and care for the environment is also stimulated during the course. Emphasis will be put on initiative, inventiveness as well as safe approach to practical investigations.

The IGCSE Physics course is not only essential for everyone who wants to be an engineer, car designer, scientist or a computer specialist but it also makes an excellent learning opportunity for anyone who is interested in the way things work or simply enjoys Physics. During the three-year course, students will learn, for example, why the sky is blue, what safety features must be included in modern cars, how heavy objects can be moved with minimum effort, what are the best clothes for various weather conditions, how to make their own electric motor, how energy is obtained from the nucleus and much more.

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Assessment

There are 3 assessment objectives:
AO1 Knowledge with understanding
AO2 Handling Information and Problem solving
AO3 Experimental Skills and Investigations

The award of the final grade is determined by the student's performance externally assessed examination which consists of three papers. The IGCSE course can be taken at a Core level or Extended level.

Core candidates will take Paper 1: Multiple Choice (Core), Paper 3: Theory (Core) and Paper 6: Alternative to Practical, Extended candidates will take Paper 2: Multiple Choice (Extended), Paper 4: Theory (Extended), and Paper 6: Alternative to Practical.
Students taking the Core level will not be expected to do a lot of calculations and the grades are available: C, D, E, F, G. Students taking the Extended level will be expected to have all skills and knowledge as students taking the Core level plus extension and calculations. The grades available are A* - G.

Paper One/Two is a multi-choice paper and tests skill area AO1 of the syllabus, the 45 minute paper is worth 30% of the final mark.
Paper Three/Four consists of short answer questions and will mainly test skill areas AO1 and AO2. The paper lasts 1 hour 15 minutes and is worth 50% of the final mark.
Paper Six a written paper designed to test familiarity with laboratory based procedures and tests AO3. The paper lasts 1 hour and is weighted at 20% of the final mark.

IGCSE PE

IGCSE Physical Education combines aspects of practical performance with theoretical knowledge. The course involves students selecting four sports in which to perform practically; allowing them to demonstrate their physical and skillful capabilities as well as their tactical knowledge and leadership skills. Alongside this practical coursework, students produce written coursework which identifies strengths and weaknesses in the sporting performance of their peers and analyses technical aspects of their work.

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The third aspect of the course in the theory of sport in which students will study a wide variety of topics such as Human Anatomy and Physiology, Sports Psychology, Sport Media and Drugs in Sport.

Assessment

Practical Coursework = 50% (Four sports performances internally assessed, externally moderated)
Analysis of Performance Coursework = 10% (Written coursework internally assessed, externally moderated)
P.E. Theory = 40% (Written exam, externally marked)