



LE ROSEY

PRE-BAC COURSE DESCRIPTIONS  
PROGRAMME PRÉ-BAC

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2019-2020

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# English

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## Classes 3 & 2

### 1. Structure

Everyone has five lessons of English a week. Most of the sets will follow a course that is based on Literature, but students whose English is weaker will be in smaller classes with more emphasis on learning the essential tools of reading, writing, speaking and listening in English. You can expect to have the same teacher for two years.

### 2. Content and skills

- **Reading:** Novels, mainly British and American, and ranging from the 18<sup>th</sup> to the 21<sup>st</sup> centuries; Drama, including two plays by Shakespeare, and two or three more modern works; Non-fiction, such as biographies, travel-writing and journalism; And, of course, a lot of poetry.
- **Writing:** Your creative urges will find plenty of opportunities to express themselves in stories, descriptions and persuasive writing in a variety of forms : class anthologies, blogs and articles to name just a few. You will also learn to write critically about your reading, and to develop your letter- and email-writing.
- **Speaking and Listening:** English lessons usually involve a lot of talking : reading aloud, discussing the texts, debating topical questions, giving presentations to the class, role-playing and acting. Listening has always been rather underrated, but it is obviously an important skill which you can learn to develop.
- **Collaboration:** In school, as in the rest of the world, the very best results often come from working with others. In pairs, in small groups and as a class you will write, do research and give presentations collaboratively.

### 3. Technology and other resources

You will be encouraged to use the Web with care and discretion, learning how to search efficiently for ideas, texts and reliable information, and to be meticulous in acknowledging your sources when using them in a project, essay or presentation.

You will learn more about digital tools such as blogs, file-sharing and electronic books (both reading and writing them) to enhance your study of literature and language.

Le Rosey has a superb print library, and you will experience the pleasures of browsing and discovery. Private reading is a central part of your life-long education.

We will use the various spaces in the PHCH for performing, debating, acting, reading and speaking.

### 4. Assessment

As you learn about what constitutes good, effective and engaging writing and speaking, you will look at your own work and assess its merits for yourself. You will also talk with other students, to help assess each other's work. Obviously your teacher will become involved in this too.

# ■ ■ Français langue maternelle et langue étrangère (FLE)

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## Classes 3 & 2

### 1. Description du cours

Il s'agit d'un cours de langue de niveau débutant à avancé. Il prépare les élèves aux examens du DELF (A1, A2, B1, B2) ainsi qu'au diplôme du IB de langue A (langue et littérature) et B et au diplôme du baccalauréat français scientifique en niveau avancé. L'étude permet d'acquérir une bonne connaissance de la langue en développant quatre compétences : la compréhension et l'expression orale, la compréhension et l'expression écrite. L'accent est mis sur la communication et l'acquisition de la culture de la langue enseignée. Le cours comporte cinq périodes d'enseignement hebdomadaires voire sept périodes pour le niveau débutant, permettant ainsi aux élèves de pouvoir s'exprimer dans leur pays hôte rapidement et leur donnant la possibilité de choisir le niveau B standard au IB.

Pour la langue maternelle, il s'agit d'un cours de littérature suivant les programmes de l'Education nationale française. Il prépare les élèves au diplôme du IB Littérature ou du Baccalauréat français. L'accent est mis sur la culture, la littérature, l'expression écrite et orale ainsi que les techniques d'analyse littéraire. Les programmes parcourent différents genres (poésie, théâtre, romans), un panorama des différents mouvements littéraires, du Moyen Age à nos jours. Le cours comporte six périodes hebdomadaires.

### 2. Contenu

- **Langue maternelle :**

Techniques d'analyse littéraire : poésie, roman. Expression écrite : argumentation, maîtrise des registres.

- **Langue étrangère :**

L'accent est mis sur l'acquisition des compétences nécessaires à la communication. Des méthodes adaptées aux apprenants, variant les supports (auditifs, visuels).

### 3. Compétences

La compréhension des textes est développée à travers une lecture extensive. Différentes approches sont envisagées pour aborder les textes : il s'agit d'exercices de synthèse, d'analyse et d'écriture créative. L'expression écrite est développée à travers l'élaboration de résumés, rédactions, lettres, présentations, dialogues et épreuves d'écriture argumentative. L'expression orale est encouragée à travers la lecture à haute voix des différents textes, à travers des débats et des présentations. Cela permet aux élèves d'élargir leur compréhension et de se forger une opinion personnelle.

### 4. Évaluation

En langue étrangère, tout comme en langue maternelle, l'évaluation est aussi formative. Différents indicateurs sont utilisés : travaux écrits, présentations orales, projets, devoirs et travaux en groupes.

Dans les cours de langue maternelle, les élèves pratiquent régulièrement la rédaction de commentaires littéraires et les présentations orales. Une attention particulière est prêtée aux critères de correction du IB et du Bac français, afin d'encourager les étudiants à réfléchir sur leurs progrès et les familiariser aux méthodes qui seront appliquées les années suivantes.

# Foreign languages and mother tongue

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## Classes 3 & 2

### 1. Course information

Foreign language classes are language-learning courses for intermediate students, preparing for the IB language B exams and the study of foreign languages in the French Baccalaureate. The study entails acquiring a language system and applying it in four ways: through listening, speaking, reading and writing. These four skills involve exchanging ideas and effective communication. The emphasis is on practical utility and culture. The course is taught four periods per week, at different levels, if necessary.

Mother tongue classes aim to prepare the students to IB language 'A' examinations or to the French Baccalaureate language exams. These classes focus on culture, literature and literary skills. During the two years, key elements of literary analysis are studied in different genres (poetry, essays, theatre, short stories, novels). The course is taught four periods per week in class 2 and three periods per week in class 3.

### 2. Course Content (general examples)

#### • Class 3

- Mother tongue: narrative techniques, short stories, novels, literary periods and authors.
- Foreign languages: the main focus of the course is on the acquisition of language required for social interaction.

#### • Class 2

- Mother tongue: theatre, poetry, literary devices, literary periods and authors.
- Foreign languages: the lessons aim to develop a variety of linguistic skills and awareness of the culture, through the study of core themes and a language-specific syllabus.

### 3. Skills developed

Writing skills are developed through extensive reading and text comprehension. Different approaches to the texts allow the students to work on a wide variety of tasks: exercises, synthesis, creative writing, letters, blogs, articles, dialogues, commentaries, essays, interviews. Oral skills are encouraged through oral comprehension, class discussions, interpretative reading, debates and presentations.

### 4. Assessment

In foreign language and mother tongue classes, assessment is both summative and formative. Varied indicators are used, including tests, assignments, group projects and presentations.

In mother tongue classes, students develop and practise essay writing and oral commentaries. Particular attention is paid to baccalaureate assessment criteria and students are also encouraged to evaluate their own learning and progress.

# Geography

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## Classes 3 & 2

### 1. Course information

The course draws on a wide variety of human, physical, economic and environmental geography issues. Geography is an option taught for three lessons a week. Many choose Geography either in English or in French.

### 2. Course content

#### • Class 3

- Settlements, historical origins to modern day challenges and solutions
- Weather and weather related hazards
- Glaciers, landforms and processes
- Agriculture and increasing food production
- Industry and location factors
- River landforms, processes and management
- Fieldwork covering two parts of the course using hypothesis testing

#### • Classe 2

- Population change around the world including migration
- Volcano and earthquake activity and effects
- Geology helping to explain coastal landforms, processes and management
- Tourism and the challenge for it to be sustainable
- Resources and their uses
- Disparities in world development
- Fieldwork covering three parts of the course using hypothesis testing

### 3. Skills developed

Geography is an interesting inter-disciplinary subject. Students studying Geography develop a range of skills ranging from mathematical and scientific, (gathering and analysing data and graphs) to language based, (using languages in fieldwork as well as essay writing and evaluating). In addition, Geography cultivates practical life skills; debate and problem solving as well as empathy and understanding in attempting to manage complex issues in the real world. Studying Geography can help to consolidate learning in other parts of the curriculum. As a subject in its own right Geography has become increasingly important due to pressing global issues such as migration, climate change, resource depletion and population pressure in today's rapidly changing world.

### 4. Assessment

Students are assessed using a wide variety of assignments ranging from presentations, to essays, to reports to posters to enquiry work to comprehension assignments to hypothesis testing coursework. This variation of assignments allows all students to display their strengths. Students practise how to answer test questions effectively, IGCSE Cambridge exams are used for this purpose. Assessment is both summative and formative.

# Géographie

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## Classes 3 & 2

### 1. Informations sur le cours

Le programme de la classe de 3<sup>ème</sup> permet d'expliquer avec quelques cartes des constats simples sur le monde et son organisation actuelle. Il a l'ambition de démontrer les principaux mécanismes de son organisation actuelle et d'expliquer la place de la France. Il privilégie les études de cas pour étudier les échanges, la mobilité des hommes et les puissances économiques majeures.

Le programme de géographie de la classe de 2<sup>nde</sup> privilégie les études de cas conduites de préférence à grande échelle ; celles-ci sont mises en perspective par des comparaisons et des approches aux autres échelles spatiales en particulier à l'échelle planétaire. Il prend en compte la diversité des situations des sociétés sur l'ensemble de la planète, celles des pays riches où les politiques de développement durable progressent selon des modalités diverses, et celles des pays émergents ou en développement confrontés au double défi du développement et de la durabilité.

### 2. Le programme des cours

#### • Classe 3

- Géopolitique du monde actuel
- Les mobilités humaines
- Les lieux de commandement
- Les entreprises transnationales
- Les Etats-Unis
- Le Japon
- L'Union européenne

#### • Classe 2

- Du développement au développement durable
- Nourrir les hommes
- L'eau, ressource essentielle
- Ville et développement durable
- Les mondes arctiques, une « nouvelle frontière » sur la planète

### 3. Compétences développées

Les élèves apprennent à exploiter et à confronter des informations en utilisant un éventail de sources de différents types (cartes, texte, photographies, graphique, tableau statistique, images satellites..). Ils apprennent à réaliser des croquis, à rédiger une composition et à faire des présentations orales. Ils développent leur sens critique et apprennent à travailler de manière autonome.

### 4. Évaluation

Les élèves développent l'écriture pratique de la dissertation et la source d'analyse pour les devoirs et dans des conditions chronométrées. Une attention particulière est accordée aux critères d'évaluation du baccalauréat et les étudiants sont habilités par l'étude de afin d'évaluer leur propre apprentissage et de progrès. L'évaluation est à la fois sommative et formative; elle utilise une variété d'indicateurs, comme des tests, des devoirs, des projets de groupes et des présentations.

# Economics & Political Science

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## Class 2

### 1. Course information

This is an optional one-year course open to all class 2 students. It consists of four lessons per week. The aim of the course is to give Pre-Bac students an insight into the world of Economics and Global Politics.

### 2. Course content

- **Microeconomics**
- **Macroeconomics**
- **Democracy in Action**
- **Political Ideologies**
- **Global Politics**

### 3. Skills developed

The Economics course is designed to increase students' understanding of economic events and to give students an insight into how economics impacts upon their own lives. Students will be introduced to economic concepts, theories and debates. Economics at school level involves lots of economic diagrams, so students will learn to illustrate economic concepts. Students will also learn to select, organise and interpret economic data through the use of data response questions. Students will have the opportunity to distinguish between evidence and opinion, think creatively, make reasoned judgements and communicate them in a logical manner.

The Politics course develops international mindedness in students through an examination of fundamental political concepts and debates which have global significance, and through an exploration of key contemporary global challenges. The course considers contemporary examples and case studies at a variety of levels, from local to global, as well as encouraging comparison between such examples and case studies.

### 4. Assessment

Students are generally assessed in many different ways, including:

- Written homework assignments
- Research assignments
- In-class debates
- Group projects
- Presentations
- Formal class tests



# Economie & Science Politique

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## Classe 2

### 1. Informations générales

Ce cours dispensé en classe 2 est optionnel. Il représente un volume horaire de 4 périodes par semaine. Il s'agira essentiellement d'introduire les notions fondamentales d'économie, de géopolitique et de philosophie politique.

### 2. Contenu du cours

- Classe 2

- Microéconomie
- Macroéconomie
- Philosophie politique : éloges et critiques de la démocratie
- Les idéologies politiques
- Problèmes contemporains de géopolitique

### 3. Les compétences visées

Ce cours d'introduction a pour objectifs de donner aux élèves les outils nécessaires pour comprendre le monde actuel. En économie, les enseignements se focaliseront sur les fondements de la théorie économique ainsi que sur les politiques dites conjoncturelles et structurelles mises en œuvre par les gouvernements pour assurer et stabiliser la croissance. En philosophie politique, la notion de démocratie sera discutée dans une perspective historique, des grecs jusqu'à aujourd'hui, afin que les élèves en saisissent les fondements et les enjeux. Cela permettra par la suite d'aborder successivement l'étude des idéologies politiques et les problèmes géopolitiques qu'elles engagent.

### 4. Evaluation

- Présentation
- Travail de recherches
- Débat
- Projet de groupes
- Test en classe

# History

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## Classes 3 & 2

### 1. Course information

The course gives an overview of the 20<sup>th</sup> century, developing the ability to evaluate and interpret source material, and compose cogent and analytical written work. Students learn to construct and maintain arguments orally and on paper. Throughout the course students are encouraged to think critically about historical events and to consider different interpretations of history.

History is an option. Many choose History either in English or in French, or as a bilingual option. History is taught in three periods per week.

### 2. Course content

- **Class 3**

- The origins, course and consequences of World War One
- Boom and Bust in interwar USA. Bilingual History focuses on the Belle Époque
- The origins, course and consequences of World War Two

- **Class 2**

- The origins, course and consequences of Cold War – a global history
- The course ends with an independent coursework-style investigation on Cold War

### 3. Skills developed

In relation to the historical context, to comprehend, analyse and evaluate representations and interpretations of historical events. Also, to comprehend, interpret, evaluate and use a range of sources of information of different types and in different languages, especially English and French.

Students are taught to describe and analyse relationships between features of periods and societies. Students consider the significance of events, people and changes, to select and use chronological conventions and historical vocabulary, and to communicate knowledge and understanding using a variety of techniques and to understand a range of perspectives.

### 4. Assessment

Students develop and practise essay writing and source analysis for homework and under timed conditions. Particular attention is paid to baccalaureate assessment criteria and students are empowered by studying assessment criteria in order to evaluate their own learning and progress.

Assessment is both summative and formative using a variety of indicators including tests, assignments, group projects and presentations.

## Classes 3 & 2

### 1. Informations sur le cours

Le cours donne un aperçu du XIX<sup>e</sup> et du XX<sup>e</sup> siècle. Il développe la capacité d'évaluer, d'interpréter les sources et de composer un travail écrit convaincant et analytique. Les élèves apprennent à construire et entretenir des arguments oralement et sur papier. Tout au long du cours, les étudiants sont encouragés à penser de façon critique sur les événements historiques et d'envisager différentes interprétations de l'histoire.

### 2. Le programme des cours

#### • Classe 3

- La France depuis 1848 : III<sup>ème</sup> République et la colonisation.
- Les régimes totalitaires : URSS, Allemagne nazie
- La Seconde Guerre mondiale : origines et les phases du conflit

#### • Classe 2

- Fin de la Seconde Guerre mondiale et la Guerre froide
- Le conflit israélo-arabe
- La République et les évolutions de la société française
- La décolonisation
- Un travail de recherche sur la Guerre froide

### 3. Compétences développées

Comprendre le contexte historique, identifier, analyser et évaluer les représentations et interprétations d'événements historiques en utilisant un éventail de sources d'informations de différents types. Les élèves apprennent à décrire et à analyser les relations entre les périodes et les sociétés.

Ils acquièrent le vocabulaire historique, communiquent leurs connaissances et leur compréhension en utilisant une variété de techniques et de perspectives. Ils développent leur sens critique et apprennent à travailler de manière autonome.

### 4. Évaluation

Les élèves développent l'écriture pratique de la dissertation et la source d'analyse pour les devoirs et dans des conditions chronométrées. Une attention particulière est accordée aux critères d'évaluation du baccalauréat. L'évaluation est à la fois sommative et formative ; elle utilise une variété d'indicateurs, comme des tests, des devoirs, des projets de groupes et des présentations.

# ■ ■ Actualités

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## Classes 3 & 2

### 1. Description du cours

Il s'agit d'un cours de langue de niveau débutant, qui permet aux élèves de pratiquer et de renforcer les bases de la langue française. L'étude de documents authentiques et de mises en situation permet d'acquérir une bonne connaissance de la langue en développant quatre compétences: l'écoute, l'expression orale, la lecture et l'expression écrite. L'accent est mis sur la communication et l'acquisition de la culture de la langue enseignée. Le cours comporte trois périodes d'enseignement hebdomadaires.

### 2. Contenu du cours

- L'accent est mis sur l'acquisition des compétences nécessaires à la communication et à la compréhension de thèmes d'actualité.
  
- L'accent est mis sur le développement de compétences variées et l'acquisition de la culture de la langue enseignée, à travers l'étude de différents thèmes et lexiques.

### 3. Compétences

La compréhension des textes est développée à travers des lectures de documents authentiques. Différentes approches sont envisagées pour aborder les textes : il s'agit d'exercices d'analyse et d'écriture créative. L'expression écrite est développée à travers l'élaboration de lettres, présentations, dialogues. L'expression orale est encouragée à travers la lecture à haute voix des différents textes et des présentations. Cela permet aux élèves d'élargir leur compréhension, d'acquérir des connaissances culturelles et de se forger une opinion personnelle.

### 4. Evaluation

En classe d'actualités, les progrès ne sont pas notés lors d'une évaluation sommative mais plutôt lors de projets : travaux écrits, présentations orales, projets, devoirs et travaux en groupes.

# Combined Science

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## Class 3

### 1. Course information

Science is the discipline that records rigorous and methodical observations of the phenomena of the natural world, and suggests hypotheses that explain and predict those observations. These are tested under experimental conditions. As students in Class 3 have generally not yet chosen a career path, we keep their options open and provide a combined science course for all students, maintaining exposure to all three central sciences.

A central theme to all the science will be to provide opportunities for students to understand how scientists work using the scientific method and how they communicate with each other. Biologists attempt to understand the living world at all levels using many different approaches and techniques, whether in the cell, in organisms, or in whole ecosystems. Chemists study materials and their behaviour in the physical and the living world. Physicists explore the nature and properties of matter and energy, including moving objects, heat, light and other radiation, sound, electricity, magnetism, and the structure of atoms.

This course has been designed to allow students to learn, explore and understand some of the key concepts of each Science and the impact that advances in Science can have on society and on the environment.

### 2. Course content

- The Scientific Method, how to conduct a simple investigation
- Humans as living organisms: What do all living things have in common?
- What is the source of variation in living organisms?
- Humans and their interaction with other living things and the Environment.
- Particles, elements, metals, non-metals, Periodic Table, the model of the atom
- Bonding – atoms combining, making compounds
- Rates of reaction, Acids and alkalis, balanced equations
- Measurement and units
- Forces and motion, Forces and pressure, Forces and energy

### 3. Skills developed

In relation to the scientific context, students will develop experimental and investigative scientific skills that will allow students to:

- Think creatively and critically
- Develop skills of reasoning to provide explanations and evaluations supported by evidence and justifications
- Make predictions, generalisations and deductions
- Draw conclusions based on reliable scientific evidence

### 4. Assessment

Students will be assessed on the following three areas:

- Knowledge and understanding,
- Scientific Inquiry skills
- Reflection on the impact of science

Assessment is carried out through evaluation of classwork and homework, which will include laboratory reports, and end of unit tests and twice yearly examinations.

# Biology

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## Class 2

### 1. Course information

Biologists attempt to understand the living world at all levels using many different approaches and techniques. At one end of the scale is the cell, and metabolic reactions. At the other end of the scale biologists investigate the interactions that make whole ecosystems function. This course has been designed to allow students to learn, explore and understand some of the key concepts of Biology and the impacts that advances in Biology can have on Society. It also looks at the interdependence of living things and Human impact on the environment.

All students in Class 3 will study Biology modules along with Chemistry and Physics. Students may then choose to continue with Biology in Class 2. A central theme to all the science will be to provide opportunities for students to understand how scientists work using the scientific method and how they communicate with each other.

### 2. Course content

- **Class 2**

- Human Physiology
- Further study of DNA, Inheritance and Genetics
- Ecological relationships and field studies

### 3. Skills developed

In relation to the scientific context, students will develop experimental and investigative scientific skills that will allow students to:

- Think creatively and critically
- Develop skills of reasoning to provide explanations and evaluations supported by evidence or justifications
- Make predictions, generalisations and deductions
- Draw conclusions based on reliable scientific evidence

### 4. Assessment

- Assessment is both summative and formative using a variety of indicators including tests, assignments, projects and presentations
- Students will be assessed on the following three areas:
  - Knowledge and understanding, Scientific Inquiry skills and their ability to reflect on the impact of science

## Classe 2

### 1. Informations sur le cours

Les Biologistes tentent de comprendre le monde qui les entoure à toutes les échelles du vivant en utilisant des méthodes et des techniques variées. Au début, la cellule et ses réactions métaboliques, à la fin de l'échelle, l'organisme vivant entier et ses interactions au sein d'un écosystème naturel. Les élèves évalueront les multiples interactions et échanges qui ont lieu au sein d'un écosystème. Ce cours a été conçu pour apprendre, explorer et comprendre quelques concepts clés de la Biologie et de l'impact des connaissances en biologie sur nos sociétés humaines. Il regarde ainsi l'interdépendance entre l'Homme et son Environnement. Un thème central sur la recherche et la méthode scientifique sera proposé en commun aux trois sciences au début du module pour comprendre et adopter les outils principaux de communication en sciences.

Tous les élèves de classe 3 prennent les modules de Biologie, ainsi que de Chimie et de Physiques. Ils pourront alors en classe 2 mieux orienter leur choix vers toute ou partie de ces sciences offertes en français et en anglais et menant vers 2 examens, le bac français section scientifique et le bac IB avec seule la biologie offerte en français.

### 2. Programme

- Classe 2

- Physiologie Humaine
- Etudes plus poussées de l'ADN, de la génétique
- Ecologie et étude de terrain

### 3. Compétences développées

Dans un contexte scientifique, les élèves vont développer des compétences pour la conception, la réalisation et la présentation de recherches scientifiques expérimentales, ce qui leur permettra de :

- Penser de manière créative et critique
- Développer des compétences de raisonnement et fournir des explications et des preuves qui soutiennent leurs conclusions, avec des justifications claires et précises
- Proposer des tendances, des déductions et faire des généralisations ou des prédictions au sujet de phénomène biologique, scientifique en général

### 4. Evaluation

- Evaluation sommative et formative avec des indicateurs variés :
  - tests, devoirs, projets, présentation
- Les étudiants seront évalués sur 3 critères :
  - connaissances et compréhension de la Biologie, Compétences expérimentales, Réflexion sur l'impact de la science sur nos sociétés

# Chemistry

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## Class 2

### 1. Course information

Chemistry is the study of materials and their behaviour, and this course will give a rapid introduction into the essential and most relevant elements of the subject. Emphasis is placed at the beginning on the tools and skills that a student needs in any science – we start with a simple practical investigation designed to teach the awareness of variables and fair testing, of data, graphs and their meaning, of the evaluation and validity of results.

Chemistry is part of the obligatory Science course for Class 3. At the end of Class 3, students may opt to continue in Chemistry, with one or two other sciences, destined either for the Bac Français or the IB.

### 2. Course content

- **Class 2**

- Counting atoms, calculating yields
- Electrochemistry, electrolysis, batteries

### 3. Skills developed

Students are made aware of the importance of science in industry and in everyday life, through a series of examples and case studies that illustrate techniques and relevant contexts. Students will also understand the fragility of our environment, and the ubiquitous nature of technology as a force for good.

Students are taught to design and conduct an investigation using the correct scientific attitudes such as objectivity, enquiry, reproducibility, and to analyse their data using an appropriate range of tools, e.g. graphs, calculations, and assessment of validity.

### 4. Assessment

Students develop and practise questions on content and data manipulation for homework and are formally assessed under timed conditions. Attention is paid to baccalaureate assessment criteria and students are empowered by studying assessment criteria in order to evaluate their own learning and progress.

Assessment is both summative and formative using a variety of indicators including tests, assignments, group projects and presentations.



# Physics

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## Class 2

### 1. Course information

Physics is a compulsory part of science in class 3. Students will study Physics for 6 periods a week for a third of the academic year. In class 2 Physics is an optional subject studied for 4 periods a week.

### 2. Course content

- **Class 2**

**Thermal effects:**

- Waves and sounds
- Rays and optics
- Electricity
- Magnets and currents
- Electrons and electronics
- Atoms and radioactivity
- An independent coursework-style investigation

### 3. Skills developed

The students develop an understanding of the main concepts and develop the appropriate intellectual and practical skills relevant to the study of Physics at pre-diploma level.

Students are taught to design and conduct an investigation using the correct scientific attitudes such as objectivity, enquiry, reproducibility, and to analyse their data using an appropriate range of tools, e.g. graphs, calculations, and assessment of validity.

### 4. Assessment

Assessment is carried out through evaluation of classwork and homework, which will include laboratory reports, and end of unit tests and twice yearly examinations.

# ■ ■ Physique-Chimie

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## Classe 2

### 1. Informations sur le cours

Le but de ce cours est une approche scientifique du monde qui nous entoure. Les élèves sont encouragés à développer leur esprit scientifique pour résoudre un problème sur la base du lien entre l'expérimentation, les connaissances et le raisonnement.

### 2. Contenu

#### • Classe 2

##### Le sport

- Le temps
- Les nouveaux matériaux
- L'alimentation

##### La santé

- Le diagnostique : l'imagerie médicale, l'analyse de sang
- Le traitement : Les molécules organiques, les solutions ioniques

##### L'univers

- Son organisation
- Les atomes
- Les dimensions
- Les informations que l'on tire de la lumière

### 3. Les méthodes

L'élève découvre un phénomène grâce à l'expérimentation. Puis sur la base de ses observations, ses résultats, ses conclusions, on construit le cours. Ce cours est ensuite appliqué sous forme d'exercices. Certaines notions peuvent être appréhendées grâce à l'étude de documents scientifiques.

### 4. Évaluation

Elle possède 3 composantes :

- Le test des connaissances et des méthodes sur papier, avec un coefficient 2
- L'analyse de documents scientifiques avec des questions, coefficient 1
- Les travaux pratiques

Les élèves travaillent en groupe de 2 ou 3. Ils ont des expériences à mener et un compte-rendu à rédiger en 1 semaine. Ils sont évalués sur la qualité de leur expression, leurs schémas, les analyses de graphiques et de résultats. Coefficient 1.

# Computer Science

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## Class 2

### 1. Course information

Computer Science is the study of principles, applications, and technologies of computing and computers. In the current information age, computer science is increasing in popularity as an understanding of software and hardware is essential across all areas of industry. Computer scientists must be adept at modeling and analyzing problems. The art of problem solving requires precision, creativity, and careful reasoning.

This course will introduce you to high level programming as well as giving you an understanding of how computers display images and text, hold information in binary, transmit data over networks and how the hardware components work together in a standard computer or mobile phone.

### 2. Course content

- **Class 2**

**Thermal effects:**

- Programming in Python
- 2D game design
- Encryption
- Searching and sorting algorithms
- Binary and Hexadecimal
- Image processing (Instagram style applications)
- Hardware
- Networks
- Data compression

### 3. Skills developed

As well as the Computer Science skills such as learning how to program, students who take this course will also develop better problem solving skills. The majority of the course content encourages students to be patient, creative and not afraid to fail on the path to success. In a generation where instant gratification is desired, the skills learnt on this course will benefit all areas of study.

### 4. Assessment

Assessment is both summative and formative using a variety of indicators including tests, assignments, and group projects.

# Mathematics

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## Classes 3 & 2

### 1. Course information

The course gives an overview of the prior-learning mathematics required to succeed at the International Baccalaureate Diploma level. It is broadly based upon the English National Curriculum and the I.B. Middle Years Programme, with elements taken from other curricula, as is deemed appropriate. Mathematics is a compulsory subject and taken for five periods each week. Students should not have the impression that all of the answers to mathematics can be found in a book but, rather, that they can be active participants in the search for concepts and relationships.

### 2. Course content

Mathematics relies on a progression in the complexity of the level of topics throughout the programme. For this reason, the topics covered are quite similar; however, the complexity of the mathematics being assessed is increasing. Throughout the programme, students are expected engage with the curriculum and demonstrate their understanding at increasing levels of sophistication. The curriculum is divided into a number of interlinked topics. These come under the broad headings of number, algebra, geometry and trigonometry, statistics and probability.

#### • Class 3

The aim of the Mathematics programme is to give the students a grounding in some of the more advanced concepts that they will meet at the Diploma level. These include functional analysis, higher algebra, logarithms and exponentials, statistical analysis and probability theory. A coursework task is undertaken, over a period of a couple of weeks, to tie together some of the topics that have been studied.

#### • Class 2

At this level the course becomes specialised into two separate streams. One stream is prepared for Mathematics SL and Mathematical Studies SL and the second stream is prepared for Mathematics SL and Mathematics HL. The topics covered are broadly similar across the streams, but differ in the depth of coverage and the complexity of the material that the students are exposed to. The topics covered will fall under the same headings as those in Class 3, but will encompass a greater range of material.

### 3. Skills developed

Students should:

- Develop fluent knowledge, skills and understanding of mathematical methods and concepts
- Acquire, select and apply mathematical techniques to solve problems
- Reason mathematically, make deductions and inferences and draw conclusions
- Comprehend, interpret and communicate mathematical information in a variety of forms appropriate to the information and context.

### 4. Assessment

Mathematics objectives of the curriculum provide continuity and outline a progression of learning. These objectives guide teachers in making decisions about developmentally-appropriate learning experiences, including formative and summative assessments. Formative assessments provide important feedback for developing discrete skills, and many Approaches to Learning skills support students as they demonstrate their achievements in summative assessments of subject objectives.

# ■ ■ Mathématiques

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## Classes 3 & 2

### 1. Informations sur le cours

- Les objectifs de la classe 3 mettent en pratique cinq principes :
  - Cultiver le plaisir de faire des mathématiques à travers la résolution de problèmes. Ce plaisir suppose l'acquisition de compétences, de connaissances et d'automatismes
  - Gérer l'hétérogénéité des élèves dans leurs prérequis et dans leur vitesse d'acquisition de nouveaux savoirs
  - Permettre aux élèves de dépasser les erreurs classiques
  - Favoriser l'autonomie des élèves en leur permettant de s'approprier les objectifs d'apprentissage et de s'auto-évaluer
  - Aider les élèves à acquérir le socle commun de connaissances et compétences

### 2. Contenu

#### • Classe 3

Le programme aborde trois grands thèmes :

- Nombres et calculs
- Organisation et gestion de données
- Fonctions
- Géométrie. Grandeurs et mesures

Tout au long de l'année, l'élève apprend aussi à manipuler une calculatrice graphique et établit des simulations sur Excel.

#### • Classe 2

Le programme reprend tous les thèmes du collège et les approfondit :

- Algèbre
- Géométrie
- Trigonométrie
- Statistiques et Probabilités

### 3. Préparation

L'acquisition des compétences, de connaissances et d'automatismes est possible grâce à de nombreux exercices gradués pour chaque objectif visé. Des activités d'introduction apportent aux élèves les éléments nécessaires à la compréhension des nouveaux outils étudiés. Des exercices quotidiens permettent de pouvoir s'auto-évaluer sur la progression des acquis et des savoir-faire.

### 4. Évaluation

Les élèves sont évalués sur chaque chapitre étudié au travers d'un test écrit où l'étudiant retrouve le type d'exercices abordés, expliqués et résolus en classe.

Chaque semaine, l'élève résout en classe une série d'exercices où un autre professeur de mathématiques, différent de celui qui enseigne le cours, lui apporte une aide et un éclairage différent.

# Art

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## Classes 3 & 2

### 1. Course information

Students who opt for Art will follow a two-year Pre-bac course. Students are exposed to a variety of themes and techniques over the duration of the course. Early in the course students are taught thinking skills and how to plan responses to projects. A variety of methods are employed: mind-mapping, 'Six Thinking Hats' (Edward de Bono), 'Dream Diaries, etc.

Students develop a portfolio that shows the development of ideas and the research and evaluation that has taken place during the course. Art is taught in three periods per week.

### 2. Course content

In the graphic below you will see some of the project titles that students attempt over the two-year course. They are structured so that students experience a number of materials and techniques covering 2-D, 3-D and lens-based media.

### 3. Skills developed

- Good drawing and painting skills
- Using digital cameras and editing photos on the computer
- How to use a sketchbook and develop ideas
- Working with cutting-edge technology such as a 3-D printer and laser cutter

### 4. Assessment

All projects are assessed in the same way. Students must:

- Record observations, experiences and ideas that are appropriate to intentions
- Analyse and evaluate images, objects and artefacts, making informed connections with the work of others

# Theatre Arts

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## Classes 3 & 2

### 1. Course information

In this course students develop both performance and design skills, while practically exploring the theatre arts from different eras and traditions. Students work on dramatic techniques in individual and collaborative in-class exercises, in workshops with visiting professional theatre practitioners, and in informal, small group presentations. They also attend and critically evaluate live performances, apply research and analysis of text to characterisation, and to set, costume, poster and mask design. Theatre Arts classes meet three lessons a week.

### 2. Course content

During both years, students critically evaluate live performances:

- **Naturalism: in performance and scenography:**

- Stanislavski's System & Method Acting
- Costume and set design, and scale drawing
- Theatre terminology

- **Theatre of the Absurd and Surrealism on stage:**

- Director's Concept
- Poster design

- **Brechtian Epic Theatre**

- Performance & scripting techniques to provoke thought
- Beyond the proscenium arch: exploring different staging styles
- Collaborating to devise a multi-media performance

- **Units on two additional presentational theatre styles** such as Verbatim Theatre, West African Storytelling, Commedia dell' Arte

- **Including** work on

- Mask-making and masked movement
- Improvisation and street theatre performance styles

### 3. Skills developed

Theatre Arts class is a laboratory in which students may safely explore, experiment and take risks. This course builds skills in physical, vocal, emotional, and aesthetic interpretation of character and text, and in how to conduct and apply research; students are offered a range of opportunities for self-expression which develop their confidence, and performance and production skills.

### 4. Assessment

Students are assessed on their written responses to texts, workshops and performances, but also on their practical application of research, involvement in and leadership of in-class exercises, and on their practical work in stagecraft.

# ■ ■ Art dramatique

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## Classes 3 & 2

### 1. Informations sur le cours

Dans ce cours les élèves développent de nouvelles compétences dans les domaines tels que le jeu théâtral, le design des décors et des costumes, et l'histoire de l'art théâtral. Le programme inclut :

- l'apprentissage des techniques théâtrales
- les exercices créatifs, les jeux de rôle et les improvisations
- la découverte de l'espace scénique professionnel
- la découverte des auteurs et des pièces de théâtre qui ont marqué leur époque
- recherche et analyse de textes dans leur ensemble et le travail sur les personnages
- le défi des représentations sur scène devant le public

### 2. Contenu détaillé

Pendant les deux ans, en classe 3 et 2, les étudiants découvrent et explorent :

- **Le Naturalisme : la scénographie et la représentation**

La méthode Stanislavski ; Le design des décors et des costumes ; La terminologie théâtrale

- **Théâtre de l'absurde et le surréalisme :**

Les thèmes principaux La conception de la mise en scène; La conception de la mise en scène

- **Le théâtre de Bertolt Brecht :**

Les techniques d'écriture ; Les différents styles de conception de l'espace scénique ; La notion "multimédia" dans le théâtre et son importance

- **La présentation d'autres styles d'art théâtral** comme le théâtre de rue, le théâtre d'improvisation, le théâtre documentaire (verbatim), Commedia dell' Arte.

Cela inclut également des ateliers suivants : La création des masques et le travail théâtral sur les masques ; Les matchs d'improvisation ; Le langage corporel

- **L'initiation aux techniques cinématographiques :**

Le lien entre le théâtre et le cinéma ; L'interprétation d'une oeuvre théâtrale au cinéma ; Le travail de comédien et d'acteur.

Cela inclut également des ateliers suivants : L'initiation au doublage professionnel.

### 3. Compétences développées

L'art dramatique renforce la confiance en soi et l'esprit d'équipe, aide à vous découvrir mieux, à affirmer votre personnalité et à prendre des risques, fait travailler votre imagination, améliore vos capacités de vous exprimer en public, favorise fortement vos compétences linguistique, élargit la connaissance du monde et de différentes cultures.

### 4. Évaluation

Les élèves sont évalués sur la base des réponses aux tests écrits, sur leur engagement pendant les cours et les ateliers de théâtre mais également sur la qualité de leur recherche et analyse personnelles en préparation aux cours.



# Music

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## Classes 3 & 2

### 1. Course information

This is a creative course based on the acquisition and interpretation of the vocabulary of sounds that we commonly call music. Students learn that music they hear has both geographical and historical context and they gather information about the world of music, its instruments and traditions. They explore the universally shared elements of music and learn to create and compose music for themselves.

### 2. Course content

Course content is broadly similar in both class 3 and class 2. For students who attend both years of the course there is considerable progression in the depth of inquiry into the content and in their achievement in terms of self-expression.

- Musical elements: Pulse, duration, accent, pitch, dynamic, articulation, timbre.
- Notation of pitch and duration
- Harmony
- European, World and American music
- Improvisation – composition

Occasionally, the school hosts visiting musicians and other artists so that students can benefit from a workshop-style learning situation. These are invaluable opportunities for students to progress and for teachers to bring students together for a unified project. Concert visits, and concerts in the Carnal Hall are an integral part of the students' learning programme.

### 3. Skills developed

Students bring their own particular musical skillset to the class, and this will influence the shape of the course because ensemble performance is a course highlight. A class which includes three sax players, a pianist, bass player and drummer is almost certain to spend more time investigating Jazz than one which comprises a classical guitarist, cellist, two violinists, and an oboist, who might spend more time studying music in the baroque period. Generally speaking, students will take a private instrumental lesson alongside the course, and exchanges with their instructor are highly valued. Students will often be involved in activities such as orchestra, choir, rock groups and jazz ensemble.

### 4. Technology

In every age, music has been in the vanguard of technology, and different software and hardware skills are fostered over the duration of the course. Music technology is enormously time-consuming! Students work on their own computers and devices: Garage Band is used as an introduction to Logic X while students are encouraged to explore online options for notation such as Noteflight and Musescore before investing in more sophisticated software such as Sibelius.

### 5. Assessment

The composition and execution of a piece of music involves a creative process and also an evaluative cycle where choices are made according to aesthetic and intention. Students learn to assess and develop the possibilities of their musical ideas and material rather than simply judging them as good or bad. Indicators for summative and formative assessment of students include musical performances, presentation of compositions and written assignments. It is important that students' views are heard, and class discussions and conversations contribute to the development of their own creative process.







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