



SMILING INTERNATIONAL SCHOOL

11TH GRADE – 4 YEARS HIGH SCHOOL

ENGLISH
ANNUAL PLANNING
S.Y. 2021-2022

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LIST OF SUBJECTS, NUMBER OF HOURS PER WEEK AND TEACHERS

Italian language and literature	5	Barbara Pizzo + Antonella Zanetti (ItaL2)
English Language and literature	3	Ian Browne
Spanish - <i>Lengua y Literatura española</i>	4	Carmen Portaceli Sevillano, Maria Angelica Zangoni
Chinese language and literature - 中文	4	Patrizia Cani Luoluo Chen e Nicoletta Ciota
History	2	Danilo Dondici
Philosophy	2	Cecilia Bucci
History & Thought	1	Manuela Paltrinieri
Natural Sciences	2	Laura Lunghi
Maths	2	Vito Buffa
Physics	2	Vito Buffa
Business	1	Ian Browne
Art History	2	Francesca Marti
Scienze Motorie e Sportive – <i>GYM</i>	2	Luisa Giusti
SEMINARS - ADVANCED ICT	1	Chiara Visentin

ITALIAN LANGUAGE AND LITERATURE

General objectives

The ministerial programme for the second two years of the Linguistic High School includes the study of literary history and texts from the Middle Ages to Romanticism, with an in-depth study of Giacomo Leopardi at the beginning of the final year of High School.

Students will develop skills related to the comprehension and analysis of texts of Italian literature, both under a content and a linguistic level, as well as knowledge related to genres and biographies of the authors of reference.

Specific objectives

Specific attention will be granted to the stylistic and linguistic aspects of Italian poetry.

Aspects of the history of language will be then analysed.

Contents

The program will develop along three main lines:

- ***Italian History of Literature***

This section is the basis of the course. This will help students to get to know the main authors and literary tendencies that have followed along the centuries, through reading and commenting texts depending on the historical context of reference

- ***Dante, Commedia***

We will proceed with the reading of the *Divine Comedy*, specifically a selection of Cantos from the *Purgatory*.

- ***History of Italian literature***

- ***Reading laboratory***

This section will be dedicated to the integral reading of some of the novels of the main voices of Italian contemporary literature, analysed and commented on in a laboratorial form.

Here is a list of the texts and the authors that will be read and commented:

- **Boccaccio** - *Decameron*, 5, VIII (*Nastagio degli Onesti*)
- **Petrarca** - *RVF* 1, 35, 46, 90, 126, 128
- **Burchiello** - *Nominativi fritti e mappamondi*
- **Lorenzo The Magnificent**
- **Pulci**
- **Poliziano** - *Ben venga maggio; I' mi trovai, fanciulle, un bel mattino*
- **Boiardo**
- **Sannazzaro**
- **Machiavelli** - *De principatibus*, Letter to Francesco Vettori, Dedicatory letter to Lorenzo de' Medici il Giovane, capp. 1, 5, 6, 13, 18, 23, 25, 26 - *Mandragola*
- **L. Ariosto** - *Lena*, prologue I and II - *Cassaria*, prologue - *Satire*: I, 1-126 - *Orlando furioso* I 1-71, IX 72-91 (archibugio), X 10-34 (l'orca di Ebuda), XI 21-34 (l'orca di Ebuda), XII 1-37 (il castello di Atlante), XVIII 164-192, XIX 1-16 (Cloridano e Medoro), XXIII 100-136, XXIV 1-14 la follia di Orlando), XXXIV 70-87 (Astolfo sulla luna), XXXIX LII-LVIII (Orlando recupera il senno), XLVI 1-15 congedo
- **Isabella d'Este**
- **Aldo Manuzio**
- **Pietro Bembo** - *Prose della volgar lingua*, I, XVI-XIX - *Rime*, Crin d'oro crespo
- **G.G. Trissino**
- **B. Varchi**
- **Berni** - *Alla sua donna*
- **Veronica Gambara** - *Occhi lucenti e belli*
- **G. Stampa**
- **V. Franco** - *Non so se voi stimiate lieve rischio*
- **B. Castiglione** - *Il Cortegiano*, I, XXVI-XXXIII
- **G. Della Casa**
- **T. Tasso** - *Gerusalemme liberata* I 1-5, III 17-20 (Erminia, l'amore e la guerra), VI 103-105, VII 1-22 (liberazione di Erminia, Erminia tra i pastori), XII 48-70 (duello tra Tancredi e Clorinda e morte di Clorinda), XIII 17-46 (la selva di Saron), XVI 12-26 (il giardino di Arminda)
- **G.B. Marino** - *Adone*, III, 156-160 - *Al pesce spada* - *Amori di pesci*

- **G. Galilei** - *Dialogo sopra i due massimi sistemi del mondo*, lettera prefatoria e finale della prima giornata
- **P. Metastasio**
- **C. Goldoni** - *Prefazione dell'autore alla prima raccolta delle Commedie* (passi scelti) - *Le baruffe chiozzotte*, I, 1-3
- **P. Verri**
- **C. Beccaria** - *Da Dei delitti e delle pene*: capitolo contro la pena di morte
- **G. Parini** - *Dialogo sopra la nobiltà* (selected parts) - *Discorso sopra la poesia* (selected)
- **U. Foscolo** - *Sonetti: Alla sera (Forse perché della fatal quiete); Né mai più toccherò le sacre sponde (A Zacinto); Un dì, s'io non andrò sempre fuggendo, Pur tu copia versavi alma di canto - Odi, All'amica risanata*
- **Dante, *The Divine Comedy***
Reading and commenting on the *Inferno*, canto XXXIV and a selection of cantos from the *Purgatory*: I-III, V-VI, IX, XI, XXIV, XXVI, XXX.

Reading laboratory

The laboratory will be a periodic confrontation space with some of the classics of Italian literature of the XXth century and of contemporary literature, that will be read integrally and analysed as well as commented on during lab sessions. The books will be defined throughout the school year.

It is possible to modify the program according to the classroom general performance.

Methodology

The teaching of the subject intends to privilege the circular and dialogic dynamic and the co-construction of contents with discussions among students, also in the event of mixed online and in person teaching.

All the texts of the course will be found in the textbook and/or will be given to students in a .pdf format, before classes or through Classroom/Course works, together with other materials or studying materials.

To support or enrich the teaching and learning, visual, audio or audiovisual documentation will be also shared.

History of literature will be studied on these textbooks:

- *Il palazzo di Atlante. Le meraviglie della letteratura. Ediz. blu. Per il triennio delle Scuole superiori vol.1 Dalle origini alla Controriforma e Antologia della Commedia, ISBN 8857790762*
- *Il palazzo di Atlante. Le meraviglie della letteratura. Ediz. blu. Per il triennio delle Scuole superiori vol.2 Dal Barocco al Romanticismo, ISBN 8857791688*

Novels to be read fully may be bought in any bookstore or borrowed in any library.

Evaluation method

Evaluation will be based on scheduled exercises and tests both oral and written, individually or in groups, thanks to circular ways of sharing and co-construction of contents.

ENGLISH LANGUAGE, CULTURE AND LITERATURE

General objectives

The minimum learning objective to be reached by the Advanced English Group by the completion of high school is the attainment of the level C1/C2 of the Common European Framework of Reference for languages. Intermediate and/or DSA students' objective will be the attainment of level B2. For this purpose, students will practice reading and listening – for gist, detail and specific information – oral and written texts related to a variety of topics and in an interdisciplinary perspective. Students will also be asked to practice writing, in various formats, and speaking about current events, topics of general interest, literature and art. Given the international context of the school and that English is the language in which all subjects are taught, many didactic activities will have the aim of practicing communication skills which are appropriate to the interlocutors and to the context; and to develop the knowledge of subject-related lexis, in collaboration with the other teachers, and a correct pronunciation. The other fundamental objective, alongside the knowledge of the language, is the acquisition of the culture of English-speaking countries, focusing on analogies and differences with the culture of the students.

Specific objectives

Each of the following four test components contributes to a profile which defines the students' overall communicative language ability at this level.

Reading and use of English

Assessment of students' ability to understand the meaning of written English at word, phrase, sentence, paragraph and whole-text level, and demonstrate knowledge and control of the language system. Students need to be able to understand texts from publications such as fiction and non-fiction books, journals, newspapers and magazines. Candidates' use of English is tested by tasks which show how well they can control their grammar and vocabulary.

Writing

Assessment of students' ability to write specified text types with a range of functions. (cont....)
Students must show that they can produce two different pieces of writing: a compulsory essay in Part 1, and one from a choice of four tasks in Part 2.

Listening

Assessment of students' ability to understand the meaning of spoken English, to extract information from a text and to understand speakers' attitudes and opinions.

Students need to show they can understand the meaning of a range of spoken material, including conversations, lectures, seminars, broadcasts and talks.

Speaking

Assessment of students' ability to produce spoken English using a range of functions in a variety of tasks. Students take the Speaking test with another candidate or in a group of three and are tested on their ability to take part in different types of interaction: with the examiner, with the other candidate and by themselves.

Content

Overall, the content will focus on the four disciplines required for successfully passing the Cambridge exams, Reading and Use of English, Writing, Listening, Speaking using a variety

of media and support material to develop to required C1/C2 level: Communicative functions, Grammatical structures, Vocabulary including idiomatic expressions and Pronunciation.

Cambridge International Baccalaureate English Language and Literature will be the primary textbook and Map of lesson programme will be structured around Topic, Lesson Focus, Exam Skills, Grammar and Vocabulary, Units 1-5. The supporting textbook for grammar and vocabulary practise will be Longman Advanced/Proficiency Grammar and Vocabulary, Units 1-5.

Culture and Literature skills will be supported by the coursebook; International Baccalaureate: English A. Language and Literature. Brad Philpot, Cambridge University Press.

Evaluation methods

In order to avoid a teacher-centred approach, students will be asked to work in pairs, small groups and as a whole class, interacting with each other and with native speakers in role-taking and role-playing activities. To make students the active participants of their learning, inductive-exploratory activities will be preferred, as well as the assignment of “authentic” tasks.

Following the four-fold structure of the Cambridge English language examinations, right from the start students will be evaluated in the four key skills: writing, reading, listening and speaking. Writing skills will be assessed through linguistic compositions (essays, mini-essays, etc.) and simulations of real-life communications (emails, messages, blog posts); oral skills will be evaluated both through “classic” interrogations and oral presentations with multimedia supports on linguistic-cultural topics and on topics related to the students’ interests, as well as through role plays, role-taking activities, debates; oral and written comprehension skills will be assessed through oral, audio-visual and written structured and authentic Cambridge Proficiency Exams texts, to comprehend globally and in detail, related general interest or artistic and literary topics. Cambridge Assessment methods will be used for all Exam practise tests and EFL classwork.

ENGLISH LITERATURE AND CULTURE

<i>FIRST TERM</i>		
William Shakespeare	Merchant of Venice	Love/Prejudice/Hatred as a cyclical phenomenon
John Milton	Paradise Lost	The nature of individualism in Society
*Ian McEwan	The Burning Plane	The individual in Modern Society post Sept 11
Daniel Defoe	Robinson Crusoe	Ambivalence of Social Dominance/The importance of self-awareness
*J.M. Coetzee	Foe	Giving voice to marginalised people
<i>SECOND TERM</i>		
William Blake	Songs of Innocence	Humanity/Love/Evil
Mary Shelley	Frankenstein	Ambition/Pursuit of Knowledge/Alienation
Edgar Allen Poe	Tell Tale heart/Pit and pendulum	Gothic Horror/Psychological
Jane Austen	Pride and Prejudice	Women in Society
* <i>Monica Ali</i>	<i>Brick Lane</i>	<i>Marriage/ multicultural society</i>

*Links: * Consider introduction to the analysis and investigation of thematic links between period literature and contemporary versions of historical “classics”.*

SPANISH LANGUAGE AND CULTURE

The programming of the subject includes the grammatical contents, functions and vocabulary listed below, which correspond to level A2/B1 (European framework of reference for languages). This programming, however, may vary according to the needs of the class.

Linguistic functions

- Talk about plans, projects and intentions
- Make predictions
- Talk about the moment in which a future action will take place
- Express probabilities and formulate hypothesis
- Express conditions that may be possible
- Book a room
- Ask for help or for a specific service
- Protest ed express complaints
- Ask for and give advice
- Formulate hypothesis in the past
- Ask for and express an opinion
- Take a stand in favour or against something
- Express agreement, disagreement or skepticism
- Reply to, reinforce or contest a specific subject
- Build an argument
- Comment on a painting
- Describe a monument
- Talk about art and styles
- Express impersonality
- Express desires and wishes
- Express one cause and justify it
- Express the goal
- Talk about changes or radical transformations
- Talk about changes that came after a prolonged effort

Grammatical Structures

- Revision of the tenses of the indicative and the subjunctive
- Future simple and compound
- The temporal subordinates
- The Ist type conditional
- Entre / Dentro de; Siempre / Cada vez; Más / Ya
- Subjunctive simple and compound

- The neutral
- The relative pronouns
- The substantive subordinates I and II
- Conjunctive conjunctions and locutions
- Además / Después
- O sea / Es decir / Que son / A saber
- En fin / Finalmente / Por último
- Imperfect and Pluscuamperfecto of the subjunctive
- The passive sentence and the reflexive passive
- Presence/absence of the “de” preposition
- Periphrasis with infinitive
- Causal and final subordinate clauses
- Verbs of change

Glossary related to

- Volunteering
- The environment
- Travels: hotels and the reception in the hotel
- Print
- Mobile phones and new technologies
- Internet and social networks
- Painting, architecture and monuments, art and styles
- Poetry
- Cinema and literature
- Films and short films

All the functions, topics and glossary just listed aim at developing and consolidating the following skills for students:

Listening (oral comprehension)

- Understand information, expressions and sentences regarding current events, lexicon, culture and society analysed in class, interacting with the teacher, the classmates and through audiovisual material

Speaking (production and oral interaction)

- Interact both with a classmate or with an adult to talk about topics related to the subjects treated in class: specific vocabulary, current event themes, society and culture

Reading (written comprehension)

- Understand short texts regarding current events

Writing (written production)

- Write texts related to the topics already described using grammatical and lexical competencies already listed, as well as the knowledge already acquired about current events, society and culture

These abilities will be developed and consolidated also thinking about possible exams to obtain the DELE certificate. For this purpose, during the year some exercise sessions will focus on the preparation of the DELE A2/B1 exam.

LITERATURE

Contents

The origins and the Middle Age

Historical framework: from the Pre-Roman times to the discovery of America

Social framework:

- Coexistence of Muslims, Jews and Christians on the peninsula
- Religious, ethnic and economic differences in society
- The importance of the Camino de Santiago

Artistic framework

- Iberian art
- Roman art
- Pre-Roman art: Visigoth art and Asturian art
- Hispano-Islamic art
- Roman art
- Gothic art

Literary framework

General features:

- Origins and development of the Spanish language

La lírica: jarchas, cantigas y villancicos

Narrative poems

- Minstrelsy: *Cantar del Mio Cid* and *el Romancero*
- Clerical minstrelsy
 - o Gonzalo de Berceo, *Milagros de Nuestra Señora*
 - o Arcipreste de Hita, *Libro del Buen Amor*
 - o Jorge Manrique, *Coplas por la muerte de su padre*

Prose: Alfonso X The wise, the *exempla* y the *sententiae* and the chivalric novels

- Don Juan manuel, *El Conde Lucanor*

Theater: tropes, liturgical drama, religious drama and cultured secular theater

- Fernando de Rojas, *La Celestina*

THE GOLDEN AGE: THE RENAISSANCE

Historical framework: Charles I and Philip II of Spain

Social framework: Society in the XVI Century

Artistic framework:

- Architecture: Plateresque and Escorialense style
- Painting: El Greco

Literary framework:

- Literature in the Renaissance period
- *El Lazarillo de Tormes*
- Life and artworks of/by:
 - o Miguel de Cervantes
 - o Garcilaso de la Vega

THE GOLDEN AGE: THE BAROQUE

Historical framework: From Philip III to Charles II of Spain

Social Framework: Society in the XVII Century

Artistic Framework: Baroque architecture and sculpture; Velázquez: *Las Meninas*

Literary framework

- Baroque poetry, theater and prose
- Life and artworks of/by:

- o Luis de Góngora
- o Francisco de Quevedo
- o Lope de Vega
- o Pedro Calderón de la Barca

The student, studying all the contents listed above, will develop and strengthen the following abilities:

Reading (written comprehension):

- Understand prose or poetry selected passages,

Speaking (oral production and interaction):

- Describe the main historical and literary events using appropriate and specific terminology
- Explain the main links between a text and contemporary events
- Give appropriate information on a literary genre or a literary artwork
- Create links between a text and other subjects

Writing (written production):

- Reply to questions and questionnaires
- Complete a timeline with all necessary information
- complete schemes
- write short commentary texts to literary pieces
- write texts to express personal opinions and comments

Listening (oral comprehension):

- identify and understand specific pieces of information in oral messages
- understand informations and contents after watching a film, a documentary or a short piece of both

Civic education

- Forms of Government in Spain
- Colonialism in Latin America
- Human rights: dictatorships and women rights in the hispanoamerican world
- Environmental sustainability

Method of learning assessment

- Oral tests
- Written tests
- Active participation in class
- Homework: adequacy and punctuality in delivering assignments.

CHINESE LANGUAGE AND LITERATURE - 中文

Linguistic contents and communicative functions

- Review of the contents addressed during the previous years
- Talking about your daily routine by expressing feelings, sensations and preferences.
- Talking about the weather and the seasons by comparing the climate of different places.
Express plans for the future.
- Talking about holidays and traditions, expressing sequences of actions, progressive actions and contemporary actions.
- Talking about your home and describing an apartment.
- Talking about travel, transportation, distances and directions.

Textbooks: New Practical Chinese Reader 1. Discover China 2

Historical, cultural and literary contents

- The three schools: Confucianism, Taoism and Buddhism
- Song Dynasty, neo Confucianism
- Yuan Dynasty, the Mongol Empire and Marco Polo's Million
- The classic novel
- Qing dynasty, splendour and decay, the opium wars

The listed linguistic and historical-literary knowledge represent a knowledge base from which the teacher and students will draw inspiration to develop the program in a flexible and personalized way.

HISTORY

From the early Age of Exploration 15th-16th century to the 19th century.

Power and identity will be the key themes interweaving the various topics covered in this course.

Assessment can include essays, knowledge tests, presentations, independent research or group work according to the topics. The course content may be adapted to meet the learners' needs.

The Age of Exploration and Colonialism

- Introduction to historiography: *History: a very short introduction* (John H. Arnold)
- The Age of Exploration: Columbus in historical context
- Consequences of colonialism
- Colonial legacy, historiography and identity

Wealth and empire building

- Population growth and economic change in sixteenth-century Europe
- Origins of the European financial markets
- The Dutch and English East India Companies
- The beginnings of empire

The Modern State, religion and conflict

- Modern state building (16th-17th cen.)
- Religion and conflict

Reform and religious division

- Luther and Protestant reformation
- Catholic counter-reformation
- Religious division in Europe: Historiography and identity

Enlightenment, Revolution and Nationalism

- Enlightenment, French Revolution and Napoleon
- The rise of nationalism
- The Age of Revolution (19th cen.)

PHILOSOPHY

This school year will be dedicated to the study of philosophy from antiquity to the modern age. The main features of the development of thought in each period will be outlined,

focusing on some authors and fundamental currents for the understanding of Western philosophy. The main topics covered will be the following:

- Greek philosophy: ethics, politics and philosophical practice in Socrates, Plato, Aristotle
- Hellenism and the Middle Ages: philosophical currents and fundamental questions
- Humanism and the Risorgimento
- Philosophy in the Modern Age: Scientific Revolution and Rationalism, new political thought, Enlightenment and hints to 19th Century thought

The program can be modified or integrated during the school year if the needs of the class so require.

Assessment will be based on the quality of class participation, oral and written test and projects assigned during the school year.

HISTORY & THOUGHT

Constitutionalism and the inviolable rights of human beings

In the weekly History and Thought lesson we will follow the path taken by individual and collective rights to impose themselves and translate into legal norms and practices of living together, studying the birth and development of the rule of law and constitutionalism.

We will do this by combining the knowledge of history (understood as knowledge of historical facts, their causes and consequences), the knowledge of the history of thought (focusing on the contribution that philosophical and philosophical-political speculations have made to social transformations and to the awareness of citizens) and the knowledge of artistic expression (literary, figurative, cinematographic expression) that has supported, incentivized and spread citizenship as an active and critical condition.

After analyzing the progressive development of constitutionalism (from Magna Charta to the Declaration of the Rights of Man and of the Citizen, to the American Constitution, to the Code Napoleon, to the Statuto Albertino), we will move on to the analysis of the Italian Constitution, in particular, of its first 12 articles, the Fundamental Principles.

In the second part of the school year, the theoretical knowledge acquired in the first months will be used to analyze the difference between formal and substantial equality, deepening the concept of difference.

We will examine, then, the history of the claims made since the eighteenth century by different social groups:

- people of Jewish origin,
- women,
- colored people.

The language used in these lessons will be Italian.

HISTORY OF ART

Teaching of history of art aims to an active and participative learning with the use of interactive teaching methods, like IBW interactive and multimedia instruments, frontal lessons with active discussions and comparative links, together with instructional visits to museums, exhibitions or architectural building, in order to promote a direct dialogue with works of art.

The teaching aims at developing students' analysis and synthesis skills, for them to make logic-deductive and analytical-inductive skills.

In view of the long time span and the number of hours available, the programme will be articulated with the contents considered essential (artists, works, movements) within the different historical contexts.

The study materials proposed include, in addition to the textbook, supplements provided by the teacher and in-depth studies on significant aspects linked to the local artistic tradition and the international context, emphasising the interdisciplinary vocation of the subject.

Contents

During the third year of the four-year experimental course, students will learn about 18th century artistic production, up to the artistic currents of the late 19th century.

The teaching of the artistic movements between the 17th and 18th centuries will start from the Classicism-Mannerism dialectic to get to the innovations proposed by Baroque art in the context of the Counter-Reformation.

The development of the Baroque movement in the context of Flemish and Spanish art and the golden age of Dutch art will also be analysed.

The study of the differences between Baroque and Rococo and the development of a new artistic style in France will conclude this unit.

The artistic movements of the 19th and 20th centuries will be analysed starting from the Neoclassical and Romantic ones: the rediscovery of the antique as a civil and aesthetic ideal in Neoclassical art and the break with tradition made by the Romantic movement as the cultural atmosphere of the time suggested.

The focus on social reality and the political climate of the mid-19th century, as a reaction to neoclassical academicism and Romantic theatricality, will be analysed in Realist painting.

History of photography will be also treated with an overview, from the invention of the camera obscura to 'photography as art'; the technological development of photography will be studied through the work of some of the most important photographers on the international scene. The influence of photography and studies on light and colour, and the pictorial rendering of atmospheric effects, contemporary to the birth of the impressionist movement, will be analysed through the work of some of the major painters of this movement. At the end of the course, the post-impressionist movement will be introduced, with reference to the different figurative experiences that characterise it.

Evaluation methods

The evaluation of knowledge and abilities acquired during the course will keep into consideration, together with the average of test marks, the effective effort of each student in their schoolwork and in participating in an educational dialogue, the progress shown in learning and studying all the contents and the use of specific terminology. They will also be evaluated on their abilities of critical re-expression of themselves, their punctuality and precision in delivering their assignments.

The evaluation instruments for the teacher will be oral tests (interrogations, discussion, active participation in class, etc.) and written tests (test, questionnaires, reading sheet cards, compared analysis of works, relations, worksheets, etc.) and inter-disciplinary projects.

MATHS

Contents

Functions and their properties

- Revision of functions and their classification
- Domain, codomain, zeros and sign of a function
- Injective, surjective and dual functions
- Increasing and decreasing functions
- Even and odd functions
- Periodic functions
- Properties of the main transcendental functions
- Inverse function
- Compound function

Derivatives (introduction)

- Derivative of a function
- Derivability
- Left and right derivative
- Fundamental derivatives
- Higher-order derivatives

Conics

- Introduction to conics
- Parabola and equation
- Parabola and geometric transformations
- Straight lines and parabolas
- Circumferences: characteristics and equations
- Ellipse: characteristics and equation

Exponentials

- Exponential functions
- Exponential equations

Logarithms

- Definition
- Properties
- Equations

Goniometric functions

- Definition of the main trigonometric functions
- Associated angles
- Formulas
- Equations

Evaluation methodology

In addition to the knowledge acquired, the teacher will assess the following abilities: use of the concepts learned in new contexts, the quality of participation in and out of class, problem solving and independent thinking, the ability to self-manage the organisation of study and the ability to study independently.

Assessment will be both in the form of oral and written tests. Written assessments will include classroom tests (also not planned in advance) or more complex assignments. Oral assessments will only occasionally include traditional interrogation in class, because they will be mainly based on active participation during class. Continuous study will also be important as well as individual preparation and active participation.

PHYSICS

Contents

Work and Energy

- Work done by a force
- Power
- Kinetic energy
- Conservative forces and potential energy
- Conservation of mechanical energy

Momentum and angular momentum

- Momentum
- Impulse
- Conservation of momentum
- Impacts

- Angular momentum
- Angular momentum conservation

Gravitation

- Kepler's Laws
- Universal gravitation
- Satellites
- Gravitational field
- Gravitational potential energy
- Black holes

Fluid mechanics

- Pressure in fluids
- Archimedes' law
- Current
- Bernoulli
- Venturi

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Written assessments will include classroom tests (also not planned in advance) or more complex assignments.

Oral assessments will only occasionally include traditional interrogation in class, because they will be mainly based on active participation during class. Continuous study will also be important as well as individual preparation and active participation.

NATURAL SCIENCES

Content

In the Chemistry course the compound classification and the correspondent nomenclature (IUPAC) will be studied.

- Classification of the compounds: hydrides, oxides, hydroxides, acids, salts.

From the observation of everyday life substances, pH notion will be introduced and it will be used to describe acid-base reactions and redox reactions.

- pH: definition and measurements
- Acid-base reactions
- Oxidation number and redox reactions

The Biology course will be focused on the understanding of the cell structure, composition and function.

- Prokaryotic and eukaryotic cells
- Animal and plant cells: structure (peculiar and shared organelles) and functions (cell membrane as a semi-permeable barrier).
- Moreover, the structure-activity relationship between DNA and RNA will be analyzed together with the genetics basic laws.
- Structure of the nucleic acids: DNA and RNA
- The dogma of biology: DNA-RNA-protein
- The cell cycle and the cell division (mitosis and meiosis)
- Mendel and the laws of genetics

Evaluation methods

The acquired knowledge will be evaluated through both written and oral tests.

In the team work, contents, interest and sympathy will be part of the evaluation.

Student participation and curiosity will be fundamental elements taken into account by the teacher in the evaluation method.

BUSINESS

General objectives

The aims of the Business Studies programme, which are not listed in order of priority, are to enable candidates to: 1) make effective use of relevant terminology, concepts and methods, and recognise the strengths and limitations of the ideas used in business; 2) apply their knowledge and critical understanding to current issues and problems in a wide range of business contexts; 3) distinguish between facts and opinions, and evaluate qualitative and quantitative data in order to help build arguments and make informed judgements; 4) appreciate the perspectives of a range of stakeholders in relation to the business environment, individuals, society, government and enterprise; 5) develop knowledge and understanding of the major groups and organisations within and outside business, and consider ways in which they are able to influence objectives, decisions and activities; 6) develop knowledge and understanding of how the main types of businesses are organised financed and operated and how the relations with other organisations consumers employees, owners and society are regulate. 7) develop skills of numeracy, literacy, enquiry, selection and use of relevant sources of information, presentation and interpretation. 8) Develop an awareness of the nature and significance of innovation and change within the context of business activities.

First Term; Understanding Financial Information and decisions focusing on the following concepts: (i) Business Finance: needs and resources, (ii) cash flow forecasting and working capital, (iii) Income statements, (iv) Balance sheets, (v) Analysis of accounts.

Second Term; Case Study Project: Investment Analysis and Investment simulation game.

Content

5 Financial information and decisions

5.1 Business finance: needs and sources

5.1.1 The need for business finance:

- The main reasons why businesses need finance, e.g., start-up capital, capital for expansion and additional working capital
- Understand the difference between short-term and long-term finance needs

5.1.2 The main sources of capital:

- Internal sources and external sources with examples

- Short-term and long-term sources with examples, e.g., debt or equity for long-term Finance.
- Importance of micro-finance in developing economies
- The main factors considered in making the financial choice, e.g., size and legal form of business, amount required, length of time, existing loans
- Recommend and justify appropriate source(s) of finance in given circumstances

5.2 Cash-flow forecasting and working capital

5.2.1 The importance of cash and of cash-flow forecasting:

- Why cash is important to a business
- What a cash-flow forecast is, how a simple one is constructed and the importance of it
- Amend or complete a simple cash-flow forecast
- How to interpret a simple cash-flow forecast
- How a short-term cash-flow problem might be overcome, e.g., increasing loans, delaying payments, asking debtors to pay more quickly

5.2.2 Working capital:

- The concept and importance of working capital

5.3 Income statements

5.3.1 What profit is and why it is important:

- How a profit is made
- Importance of profit to private sector businesses, e.g., reward for risk taking/enterprise, source of finance
- Difference between profit and cash

5.3.2 Income statements:

- Main features of an income statement, e.g., revenue, cost of sales, gross profit, profit ('profit' was known as 'net profit' in the 2014 and previous syllabuses) and retained profit
- Use simple income statements in decision making based on profit calculations. (Constructing income statements will not be examined)

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5.4 Balance sheets

5.4.1 The main elements of a balance sheet:

- The main classifications of assets and liabilities
- Examples to illustrate these classifications

5.4.2 Interpret a simple balance sheet and make deductions from it, e.g., how a business is financing its activities and what assets it owns, sale of inventories to raise finance (Constructing balance sheets will not be examined)

5.5 Analysis of accounts

5.5.1 How to interpret financial statements by calculating and analysing accounting ratios:

- Gross profit margin
- Profit margin ('profit margin' was known as 'net profit margin' in the 2014 and previous syllabuses)
- Return on Capital Employed
- Current ratio
- Acid test ratio

5.5.2 Liquidity: The concept and importance of liquidity

5.5.3 Why and how accounts are used:

- Needs of different users of accounts and ratio analysis
- How users of accounts and ratio results might use information to help make decisions,

Evaluation methods

In order to avoid a teacher-centred approach, students will be asked to work in pairs, small groups and as a whole class, interacting with each other and with native speakers in role-taking and role-playing activities.

To make students the active participants of their learning, inductive-exploratory activities will be preferred, as well as the assignment of "authentic" tasks. Authentic and modern world case study analysis will be constantly referenced, and written work will be based on Cambridge IGCSE Business Studies.

Technology platform stockmarket.org will be utilised for Investment Analysis and Stock share investment simulation.

Written assessment will include Exam Practise questions and completion of exam style case studies which will be graded according to Cambridge IGCSE marking criteria.

Oral assessment and presentation assessment will be marked according to content, delivery, organisation, visual and quality of interrogation questions, observation and feedback.

ADVANCED ICT

General objectives

- (i) understand the theoretical principles of the information and communication science;
- (ii) reach a good level of competence in the information tools;
- (i) use the ICT tools to solve real-world problems or problems specifically related to other disciplines of the students' curriculum

Specific objectives

Develop and apply fundamental spreadsheet skills. Demonstrate proficiency in using moderate to complex spreadsheet tools (tables, functions, pivot tables).

Understand how to use a spreadsheet software for data analysis. Being confident and implementing the methods used in the field of applied statistics.

Being confident with information tools for the creation of conceptual maps. Apply the acquired skills to design and develop original maps (transversal project with the course of Italian literature).

Demonstrate fundamental knowledge of programming languages. Demonstrate the use of logic and problem-solving, and relate these concepts to computer programming. Demonstrate knowledge of fundamental structured programming concepts.

Methodology

Seminars and frontal lectures, using audio-video and technological supports. Practice exercises in small groups, aiming at increasing the students' involvement during the lessons and make them independent in solving the proposed problems.

Contents

1. Introduction to Sheets (Microsoft Excel): basics, formulas and functions, graphs, pivot tables.
2. Working with data: creation and management of a database, data visualization, data analysis, story-telling of the results.

3. Essentials of statistics: descriptive statistics, statistical models.
4. Conceptual maps: introduction to information tools; creation of original maps.
5. Programming and logic essentials: introduction to programming languages, problem-solving, algorithms, programming control structures (sequential, selection, loops)

Evaluation methods

Learning will be evaluated by means of written tests (questionnaires, reports), practical tests (computer lab exercises) and oral tests. Informal and guided discussions will be used too. The final evaluation will be also based on the observation of the student behavior during lessons (participation, collaboration during group work, engagement) and his/her curiosity about the discipline.

GYM

- Knowledge of the basics rules of basketball, volleyball, soccer, handball, baseball. Introduction to American football.
- How to play and the the importance of fair play
- Introduction the aerobic and anaerobic metabolism and the main differences
- Brief description of the physiology and the mechanics of the muscles

The knowledge will be evaluated through practical and theory (oral/written) tests.

The active participation of the students during the lessons (practical lessons, group theory works, essays, etc.) will be a fundamental element for their positive evaluation.

CIVIC EDUCATION

The teaching of Civic Education is cross-subject, and it is assigned to all the teachers: each of

them will use the specific contents of their subject in order to make students acquire knowledge and awareness.

The plan has identified some fundamental conceptual cores, to which each teacher will link the different themes they decide to address:

- ITALIAN CONSTITUTION and CONSTITUTIONALISM
- SUSTAINABLE DEVELOPMENT
- DIGITAL CITIZENSHIP
- AGENDA 2030