

**Thematic Overview / Year 10 / Spring Term**

**2016-2017**

Dear Parent / Guardian

Please find attached our Thematic Overview for Year 10 Spring Term.

We hope that this will give you a clear picture of the work being carried out by your child in school and enable you to facilitate their learning at home.

The activities being carried out encourage your child to review past learning, access and retain new knowledge, as well as develop and practise a variety of key skills to prepare them for ambitious goals.

Yours sincerely

Ms L. Gonzalès

Head of Secondary

**English** --------------------------------------------------------------------------------------------------------------------------

**First Language**

This term, the students will be continuing to prepare for the IGCSE First Language paper with a focus on question two and three. The students will also complete their second assignment for coursework.

*Key objectives covered:*

* Demonstrate understanding of explicit meanings.
* Demonstrate understanding of implicit meanings and attitudes.
* Analyse, evaluate and develop facts, ideas and opinions.
* Demonstrate understanding of how writers achieve effects.
* Articulate experience and express what is thought, felt and imagined.
* Sequence facts, ideas and opinions.
* Use a range of appropriate vocabulary.
* Use register appropriate to audience and context.
* Make accurate use of spelling, punctuation and grammar.

**Second Language**

This term, the students will be continuing to prepare for their IGCSE listening, reading and writing exams. They will be working on building their vocabulary, and their spoken and written English skills.

*Key objectives covered:*

* Identity and retrieve facts and details.
* Understand and select information.
* Recognise and understand, opinions and attitudes and the connections between related ideas.
* Understand what is implied but not actually written e.g. gist, relationships, writer's purpose/intention, writer's feelings, situation or place.
* Communicate clearly, accurately, and appropriately.
* Convey information and express opinions effectively.
* Employ and control a variety of grammatical structures.
* Demonstrate knowledge and understanding of a range of appropriate vocabulary.
* Observe conventions of paragraphing, punctuation and spellings.
* Employ appropriate register/style.

**English Literature** -------------------------------------------------------------------------------------------------------

This term, the students will begin independent reading of the set text ‘Spies’ by Michael Frayn in preparation for their literature exam. Full studies of their exam will begin during the Summer Term.

**Mathematics** ----------------------------------------------------------------------------------------------------------------

This term, the students will need to continue to revise past objectives. Their end of term assessments may cover the following topics:

* Ratio, Proportion and rate.
* Speed, distance, time.
* Angle properties.
* Bearings.
* Similar shapes.
* Re arranging formula.
* Multiplying two brackets.
* Quadratic factorization.
* Solving quadratic equations.
* Algebraic fractions.
* Solving inequalities.

**Science / Biology, Chemistry, Physics** ---------------------------------------------------------------------

This spring term, the learning objectives for each unit to be taught in Biology/Chemistry/Physics will give an overview of Year 10 expectations. This will help parents to facilitate and support Home Learning and revision of the topics. It is vital that the students do their homework.

# Chemistry

*Atoms combining:*

* Electronic structure.
* Differences between elements, mixtures and compounds, and between metals and non-metals.
* Formation of ionic bonds and formation of single covalent bonds and metallic bonding.
* Describe the formation of ionic bonds between metallic and non-metallic elements.

*Stoichiometry:*

* Use the symbols of the elements and write the formulae of simple compounds.
* Deduce the formula of a simple compound from the relative numbers of atoms present.
* Construct word equations and simple balanced chemical equations.
* The mole concept: Define the mole and the Avogadro constant.
* Calculate empirical formulae and molecular formulae.

# Biology

*Movement in and out of cells:*

* Define diffusion and osmosis.
* Investigate the factors that influence diffusion, limited to surface area, temperature, concentration gradients and distance.
* Use the terms turgid, turgor pressure, plasmolysis and flaccid.
* Define active transport.

*Biology molecules:*

* List the chemical elements that make up carbohydrates, fats, and proteins.
* State that large molecules are made from smaller molecules.
* Describing the use of Iodine solution to test for starch.
* Understanding Benedict’s solution to test for reducing sugars.
* Describing the use of the Biuret test for proteins.
* Understanding Ethanol emulsion tests for fats and oils.

*Enzymes:*

* Define the term catalyst.
* Define enzymes as proteins that function as biological catalysts.
* Investigate and describe the effect of changes in temperature and pH on enzyme activity.

# Physics

*Energy, work and power:*

* Kinetic, gravitational potential, chemical, elastic (strain), nuclear and internal.
* Conservation of energy.
* Use W = Fd = ΔE, P = ΔE / t.
* Efficiency = Useful energy output/energy input × 100%.

*Pressure:*

* Use the equation p = F / A
* Simple mercury barometer and its use in measuring atmospheric pressure.
* Use the equation p = hρg.

*Energy resources:*

- Renewable and nonrenewable energy sources

- The sun is the source of energy for all our energy resources except geothermal, nuclear and tidal.

*Thermal Physics:*

* Describe qualitatively the molecular structure of solids, liquids and gases.
* Describe evaporation, conduction, convection.
* Describe qualitatively the thermal expansion of solids, liquids, and gases at constant pressure.
* Show an understanding of what is meant by the thermal capacity of a body.

**Global Perspectives** ----------------------------------------------------------------------------------------------------

This term, the students will study two units. The first is Fuel and Energy and the second is Transport Systems.

The first unit on Fuel and Energy contains:

* Population increase
* Renewable and non-renewable
* Conservation
* Nuclear power
* Power versus environment
* Technology
* Energy use

The second unit on Transport Systems contains:

* Development
* Links around the world
* Problems
* Solutions

**French** ---------------------------------------------------------------------------------------------------------------------------

This term, the students will:

* Talk about themselves and ask questions.
* Memorise new vocabulary relating to shopping, high schools, jobs and money.
* Write a short paragraph using accurate grammar and spelling.
* Listen to a short conversation and answer simple questions.
* Read a short text and answer various questions.

**Performing Arts** -----------------------------------------------------------------------------------------------------------

In this unit, the students will be able to:

* Tune a guitar.
* Give the names of the strings and name the types of their parts.
* Accompany a tune with the three basic chords on guitar.
* Identify and understand the different time signatures.

**Creative Design** -----------------------------------------------------------------------------------------------------------

Through exploring a selected Design topic of the student’s choice, the students will learn to:

* Create mind maps that would explain how they would explore their selected topics.
* Observe and record accurately.
* Analyse their own artworks critically.
* Create works inspired by various artists of their own choice.
* Experiment with various media, such as lino printing, sculpture making etc.
* Take high quality photographs for their selected topic to use as their primary sources.

**Physical Education** -----------------------------------------------------------------------------------------------------

This term, the students will develop a deeper and more complex understanding of aspects of health and fitness in a variety of activities, and the skills required for a variety of different team games in preparation for Sports Day.

The students will learn to:

* Perform movements requiring agility, balance and co-ordination with success and precision.
* Successfully apply correct running, jumping, throwing, catching, and striking techniques within a variety of structures competitive games.
* Improve accuracy, consistency and technique in a variety of skills whilst in isolation and within structured competitive games.
* Develop the ability to make effective decisions within a game situation in order to outwit their opponents.
* Work collaboratively as a team to plan strategies and tactics in a variety of Games.