

# Courses



# **Exploring Physical** and Life Science

For Grades 7 - 8



#### Course Objectives:

- Enable students to find out about different areas of science
- Learn topics in Chemistry, Biology, Physics and Earth science
- Topics give a breadth of ideas that are environmentally and the universe around us
- Using various teaching techniques to make topics interactive and work in groups
- Tailored to help engage students from grade 7 to grade 8

#### **Course Description:**

A course designed to cover topics in four of the major science subjects; 1) Chemistry, 2) Biology, 3) Physics and 4) Earth Science. The topics range across ideas such as pollution, alternative energy, living things, endangered species, space and universe, and structure of the Earth. The course is 20hours, five lessons per subject, each 1hr long. The student will have a self-review questions at end of day, covering the topics covered in the lessons. After the end of the course, there will be a 30minute debate for each subject. After which the student can get a certificate for completion of the course. The course would be taken across 10 days, with two lessons per day. The subjects would be alternated each day to provide variety for the students. The lessons will have aspects of differentiation to cover the different levels of students and including additional work for students that want more. Various interactive teaching techniques will be employed to break up lecture sections, these include Learning Centres, Jigsaw method, and Think-Pair-Share. It could be sold as a whole course or per subject if needed. The following are the topics covered in each subject.

#### Chemistry (5 x 1hr Lessons) Green Chemistry

- 1. Air Pollution Smog, Acid Rain and Ozone Depletion
- 2. Water Pollution Plastics, Oil spills, and BOD
- 3. Fossil Fuels Sources, Carbon Footprint and Effective use of resources
- 4. Alternative Energy Solar Energy, Wind Energy, and Hydroelectric Energy
- 5. Nuclear Chemistry Nuclear Fission, Nuclear Fusion, and Therapeutic uses

#### Biology (5 x 1hr Lessons)

#### **Living Things and Environment**

- 1. What is a living thing? Cell Theory, Life processes, Cells, and Viruses
- 2. Classification Hierarchy of Taxa, Domains, Plant Phylum and Animal Phylum
- 3. Endangered Species Examples of Species, Loss of Habitat, Human Impact
- 4. Trophic Levels Nutrient Cycle, Energy Flow, Carbon Cycle and Greenhouse Effect
- 5. Immune System and Medicines Immune System, Antibiotics, Vaccines, and Antiviral Medicines







#### **Space and the Universe**

- 1. The Solar System The Planets, Gravity, Dwarf Planets and Types of Planet
- 2. A Star is Born The Life Cycles of Stars, Nebulas, Pulsars, and Black Holes
- 3. Satellites Satellites, Moons, Orbits and Telescopes (Hubble)
- 4. Space Travel Rocket Science, Shuttles, Future Travel and Mission to Mars
- 5. Empty Universe Comets, Asteroids, Constellations, and Galaxies

#### Earth Science (5 x 1hr Lessons) Structure of The Earth

- 1. Structure of Earth Structure of the Planet, Tectonic Plates, and Atmosphere
- 2. When Plates Collide Plate Boundaries, Earthquakes, Volcanoes and Tsunamis
- 3. Axis of Spin The Rotation of Earth, Seasons, Tides, Longitude and Latitude
- 4. Weather Patterns Winds, Coriolis Effect, Ocean Currents, El Nino, and La Nina
- 5. Rock and Soil Rock Cycle, Soil Structure, Phosphorous Cycle, and

#### **Course Lessons:**

Day	Lesson	Duration	Analysis	
1	Chemistry 1	1 hour	Self-Review Questions	
	Biology 1	1 hour		
2	Physics 1	1 hour	Self-Review Questions	
	Earth Science 1	1 hour		
3	Physics 2	1 hour	Self-Review Questions	
	Biology 2	1 hour		
4	Earth Science 2	1 hour	Self-Review Questions	
	Chemistry 2	1 hour		
5	Chemistry 3	1 hour	Self-Review Questions	
	Physics 3	1 hour		
6	Biology 3	1 hour	Self-Review Questions	
	Earth Science 3	1 hour		
7	Biology 4	1 hour	Self-Review Questions	
	Chemistry 4	1 hour		
8	Earth Science 4	1 hour	Self-Review Questions	
	Physics 4	1 hour		
9	Physics 5	1 hour	Self-Review Questions	
	Biology 5	1 hour	Biology Debate & Physics Debate	
10	Chemistry 5	1 hour	Self-Review Questions	
	Earth Science 5	1 hour	Chemistry Debate & Earth Debate	

#### **Course Overview:**

- 20 x 1hr lessons
- 5 lessons per subject
- Self-Review Questions for each day
- 30-minute Debate for each subject



## **Descriptive Writing**

For Grades 7 - 10

#### **Course Objectives:**

- To develop effective writing skills through a variety of creative modelling tasks.
- To identify and apply various language devices and techniques.
- To use a range of descriptive vocabulary, creative sentence structures and dramatic punctuation.
- To compose a well-structured essay with well-chosen details and effective language.

#### **Course Description:**

The Descriptive Writing course is precursory to the Narrative Writing course and is designed for grades 7-10 students in ISEB/DSE/MYP/IGCSE. The course focuses on strengthening students' creative writing skills to prepare them for success in their assignments and exams. Each lesson is designed with specific focus on one area of descriptive writing to give students ample practice with specific language, devices, language and techniques. Importantly, all skill areas learned are transferable to other assessment components, notably narrative writing and academic writing. By the end of this course, students will have gained confidence using effective language, well-chosen details, and well-structured essay to write for a specific purpose and audience

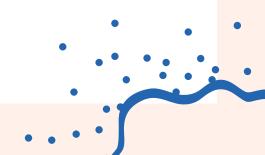




#### **Course Lessons:**

Lesson	Duration	Unit	Tasks	Material
Lesson 1	2 hrs	Visual imagery Auditory imagery		
Lesson 2	2 hrs	Tactile imagery Organic imagery		
Lesson 3	2 hrs	Gustatory imagery Olfactory imagery  Kinaesthetic imagery Synaesthetic imagery  - Warm-up writing tasks - Modelling descriptive		
Lesson 4	2 hrs			
Lesson 5	2 hrs	Sensory Language	passages Identifying elements Matching tasks Short writing tasks Writing challenges Descriptive essay home practice	The Edge coursebook, "Descriptive Writing"
Lesson 6	2 hrs	Figurative language		
Lesson 7	2 hrs	Sentence variety		
Lesson 8	2 hrs	Vivid adverbs Strong verbs		
Lesson 9	2 hrs	Punctuation and dramatic effect		
Lesson 10	2 hrs	Reading images		





### **Journalism**

For Grades 9 - 12

#### **Course Objectives:**

- To foster critical, creative and independent thinking skills through exploring the writer's intentions
- To recognise and apply structural features and stylistic devices used in journalistic writing
- To produce and evaluate writing that is accurate, faire, has clarity, appropriate style and grammatical correctness

#### **Course Description:**

The Journalism course is designed specifically for students who have a strong grasp of the English Language but little exposure to journalistic writing. The course focuses on structural features and stylistic devices that bring students beyond classroom writing tasks and into the world of online articles, including blogs, vlogs and other modern forms of journalism. Each lesson targets a particular aspect of journalistic writing. We begin with exigence, the context that sparked the idea for the article, and how this determines audience, purpose, structure and style of a given article. We then move on to writing effective leads, crafting creative headlines, choosing powerful images, planning and organising ideas, applying rhetorical devices, quoting sources, correcting common grammar mistakes, editing for clarity, and culminating in each student having planned, written, and edited an online article ready to upload. To ensure students are equipped with the skills required to complete tasks, lessons begin with teacher-led guided practice wherein samples articles are explored, decoded and analysed. This is followed by pair work, informal presentations, peer review, and group discussion wherein students work together to craft examples and present their work for peer review and discussion. Following this is individual practice wherein students work independently to create their own texts with the option of receiving one-on-one guidance from the teacher.

N.B. This course is not intended as an ESL resource.





#### **Course Lessons:**

Lesson	Duration	Topic	Material	
Lesson 1	2 hrs	Journalism Overview	<ul> <li>Examples of</li> <li>different types of journalism articles</li> <li>inverted pyramid and narrative news articles</li> <li>journalistic techniques</li> <li>context, audience and purpose</li> </ul>	
Lesson 2	2 hrs	Writing Leads • standard/hard leads • creative/soft leads • bad leads	Examples of • hard: summary lead, topic lead, blind lead • soft: list lead, scenic lead, storytelling lead, startling lead, opposite lead, wordplay lead • bad: beginning with a date, question, quote, topical, stating the obvious, wordiness, dictionary definition	
Lesson 3	2 hrs	Crafting headlines and sub-headlines • 4 elements, do's and don'ts • choosing verbs • setting the tone and mood: word choice and bias	Examples of headlines that show • the 4 elements • do's and don'ts • tone, mood, bias through diction	
Lesson 4	2 hrs	Choosing a lead photo: Images: what makes a photo (in) effective? Captions: elements of a good caption	Examples of • Various lead images and their captions	
Lesson 5	2 hrs	Writing the body I • Structure: inverted pyramid, first five paragraphs, tail/kicker	Examples of Inverted pyramid articles First five paragraph articles Tails/kickers	
Lesson 6	2 hrs	Writing the body II • Nut Graf (story in a nutshell)	Examples of • Nut Grafs	
Lesson 7	2 hrs	Writing the body III • Style: show, don't tell; story elements (setting, conflict, etc.), lively language; avoiding jargon and clichés	Examples of • Show, don't tell • Story elements • Lively language • Jargon and clichés	
Lesson 8	2 hrs	Quoting sources     direct quoting     indirect quoting     attributive verbs	Examples of     Direct quoting     Indirect quoting     Attributive verbs	
Lesson 9	2 hrs	Editing copy I  Top grammar mistakes in Journalism	Examples of     punctuation, vague pronouns, wrong word, comma splice, run-ons, fragments, dangling modifiers, apostrophe errors, shift in tense or person, agreement errors	
Lesson 10	2 hrs	Editing copy II • Editing for clarity	Examples of concision, precision, and succinctness	



# **Financial Literacy**

For Grades 10 - 12



#### **Course Objectives:**

- · Increase financial literacy of students
- Prepare students to navigate and manage real-life personal finances
- Designed to provide added substance to GCSE/AP/IB Economics/Business Studies 'top up' syllabus [students who do not take those subjects should still be able to comfortably attend and learn from this material]
- Comfortable with basic spreadsheets in Excel/Google spreadsheets [probably require each student to have a device with access to Microsoft Excel or google spreadsheets]

Conclusion of the course: Students should be basically financially literate and able to take responsibility for their personal savings and expenses using a simple Excel/Google Spreadsheet to keep track of their finances.

#### **Course Description:**

The course is designed to make students financially literate i.e. be able to understand and manage savings, debt and basic investments. The topics include, money, savings, debt and investments etc.

The course is a total of 20 hours across 10 days, with two lessons per day on each topic; every topic covered is meant to serve as a brief introduction to each area of finance.

At the end of each topic the students will be familiar with new concepts, learn how to calculate (if applicable) and input the factor into their personal spreadsheet so their reading comprehension, mathematical skills and computer literacy are exercised.

The aim of the course is that students are exposed to the world of finance and will be be comfortable discussing the topics, reading and understanding newspaper articles as well as having their own mini portfolio of their basic finances.

The following are the topics covered in each subject.









#### **Course Lessons:**

Day	Lesson	Duration
1	Financial Literacy: Managing Money	1 hour
	Value of Money: Interest Rates & Inflation	1 hour
2	Income & Expenditure	1 hour
	Basic Banking [savings, current accounts, fixed deposits]	1 hour
3	Debt 1: Personal Borrowing Credit cards & overdrafts	1 hour
	Debt 2: Loans and Mortgages 1	1 hour
4	Real Estate 1: What is the value of property?	1 hour
	Real Estate 2: Rent or Buy [Mortgages 2]	1 hour
5	Taxes 1: What are taxes?	1 hour
	Taxes 2: How to manage/pay taxes	1 hour
6	Insurance 1: What is insurance?	1 hour
	Insurance 2: Buying medical and/or Life insurance	1 hour
7	Corporations 1: What are Companies?	1 hour
	Corporations 2: Companies & Shareholders	1 hour
8	Investments 1: Returns on Investments Risk vs Reward	1 hour
	Investments 2: Government Bonds	1 hour
9	Investments 3: Stock Exchanges/Shares	1 hour
	Investments 4: Funds	1 hour
10	Retirements 1: What is retirement?	1 hour
	Retirements 2: How do you prepare for retirement?	1 hour

#### **Course Overview:**

- 20 x 1hr lessons
- 2 lessons per subject Take home assignment







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