Secondary School

Grade 12

Curriculum Handbook

2018-2019

Table of Contents

Our Educational Philosophy

The mission of TLC International School is to plant seeds of knowledge that can grow to equip students academically, socially, physically, and spiritually for temporal and eternal success.

Our vision is to provide the best in education, partnering with parents to prepare students for life with academic tools, character training, development of social skills and spiritual mentoring.

Education is more than intellectual development. True education develops the mind, body, spirit and social skills of the child. Children at TLC learn cooperation, integrity, respect, creativity, and self-discipline. Positive values and behavior are rewarded in an environment that provides a safe haven for children to attempt new challenges without fear of failure.

An Introduction to Grade 12

Grade 12 is a transition year for students. They are leaving the world of adolescents and becoming young adults. The senior year of high school is marked by preparation for the next part of life's journey. Their coursework is academically rigorous as they take classes such as physics and pre-calculus. An ethics class asks students to examine their values and to be prepared to defend why they believe what they believe. Grade 12 marks final preparations for post-secondary learning. Students begin their year by meeting with the guidance counselor to make sure the student is on track to graduate. In first semester grade, students may be retaking standardized tests. Many are completing college applications, exploring interests in possible career options, and creating a college savings plan. In the second semester, seniors anxiously await their acceptance letters from the institutions that they applied to the fall. Students in grade 12 have scheduling options, a senior can attend school all day but have the option to be dismissed early, after lunch, if they are on track for the accrual of 27 college preparatory credits. The year culminates with a graduation ceremony to celebrate the completion of this educational milestone.

Understanding by Design

"Our lessons, units, and courses should be logically inferred from the results sought, not derived from the methods, books, and activities with which we are most comfortable. Curriculum should lay out the most effective ways of achieving specific results… in short, the best designs derive backward from the learnings sought."

- Grant Wiggins and Jay McTighe in their book Understanding by Design

UBD (Understanding by Design) is a technique of delivering content introduced by Grant Wiggins and Jay McTighe. The methods laid out in this educational technique offer a way of designing courses and delivering content through "Backward Design". Students at TLC participate in units of study that cover standard driven topics determined by the AERO standards. TLC uses the UBD methods of teaching to ensure courses taught at TLC cover a series of standard based units. These units are designed in a way that ensures quality understanding is provided to all students enrolled in courses at TLC. Content delivery then includes a variety of quality teaching strategies and assessment techniques while keeping a standard based focus in every classroom. This unit based planning approach follows a 3-stage process of Backward Design.

Stage 1 - Identify Desired Results
In order to determine if our students are achieving our desired results we must determine the what the desired end result is. If we teach with this in mind we make sure that everything that occurs in each course is bringing students closer to that goal.

Stage 2 – Determine Acceptable Evidence
It is very important that before we teach we determine what assessments and indicators we will use to determine if students are progressing to an understanding of each standard covered in the courses taught. Evidence may be gathered through projects, questioning, quizzes, papers, group projects, lab projects, written tests, discussions and more.

Stage 3 – Plan Learning experiences and Instruction
After determining the end goal and identifying the evidence that will determine student achievement the daily lessons are determined. Daily lessons are carefully planned and carried out by teachers to support and reach those desired results. Each day students are given a clear objective that lines up and supports the mastery of the goals determined and indicated by the standards covered in each unit.

This approach ensures there are no gaps in the curriculum and all standards are covered in TLC International School's courses. The aim is to ensure the best possible method of content delivery is given to all TLC students. The students' learning and understanding is the focus in UBD's 'Backwards Design.' Through this method of 'Backwards Design' we can ensure that the indicators of student learning are achieved in every single course offered at TLC.

The Gradual Release Model

The Gradual Release model, developed by Doug Fisher and Nancy Frey, is a broadly recognized approach for moving classroom instruction from teacher-centered to student-centered. This model includes 4 steps: "I do it", "We do it", "You do it together", and "You do it independently".

During the "I do it" step, the teacher plays an important role in the delivery of the content. Explicit teaching, modelling, and 'think aloud' are common strategies used by the teacher during this step.

As the students begin to acquire the new skill or information, the responsibility of learning begins to shift from teacher-directed instruction to student-centered activities. During the "We do it" stage, the teacher uses strategic questions, prompts, and cues to guide students towards mastery of an objective.

"You do it together" is where students collaborate, and depend on other classmates to meet objectives. During this time of instruction, the teacher will move among groups to clarify any misconceptions.

Finally, the full responsibility of learning shifts to the student during the "You do it alone" step. During this independent practice, students rely on their notes and classroom activities to work alone. This is a great opportunity for teachers to evaluate student work and provide further feedback.

Subject Specific Information

English Language Arts

English 4 Syllabus

Course Overview

The goal of **English 4** is to familiarize you with important British and World Literature. You should *gain vital vocabulary*, *fine-tune your grammar and writing skills*, *understand the social, political, religious, and economic ties between literature and the real world,* and *solidify reading and speaking skills and habits*. You should use and strengthen your English knowledge and skills, and begin preparing for your future, whether it is work or university. Throughout the course of the year, you will work with several forms of writing, speaking, and presenting knowledge. Some specifics are as follows:

Vocabulary: learn vocabulary from our texts, use tools to understand new vocabulary, learn academic terms

Grammar & Writing: form strong editing skills; use verbs correctly for different types of writing; logical text structure; write strong informational/persuasive pieces; write creative narratives; use rhetoric and ACES (Grammar Fridays; writing units and projects)

Reading & Literature: listen and visualize literature; respond to literature; identify style; evaluate; learn and analyze elements of literature (Read-Aloud Monday; Silent Reading Wednesday; reading model literature)
Speaking and Listening: participate in group and class discussions, present and teach, debate

Quarter	Unit Name	Literature	Final Project (Writing/Speaking)
1 (Brit.)	Change Through Humor: Creating Social Satire Facing Loss: British Poetry Pride Before the Fall	"A Modest Proposal" Poetry! *Paradise Lost* (excerpt) *Frankenstein*	Satire Creation Literary Response
2 (Brit.)	Death and Blood in Britain The Danger of Ambition	Virginia Woolf; Dylan Thomas *Macbeth*	Literary Nonfiction Analysis Evaluating Poetry and Drama
3 (World)	Journeys	*The Odyssey* *Metamorphosis* Poetry	Synthesizing Informational Text Research
4 (World)	A World United Leave a Legacy!	Short stories/excerpts; speeches Student choice novel	Evaluating Arguments Presentation My Senior Footprint project

Mathematics: Precalculus

Precalculus combines concepts of trigonometry, geometry, and algebra that are needed to prepare students for the study of calculus. The course strengthens students' conceptual understanding of problems and mathematical reasoning in solving problems. Facility with these topics is especially important for students who intend to study calculus, physics, other sciences, and engineering in college. The main topics in the Precalculus course are complex numbers, rational functions, trigonometric functions and their inverses, inverse functions, vectors and matrices, and parametric and polar curves.

Curriculum Overview

Grading Period	Chapter	Sections Numbers	Time to Spend on It
First	Introduction to Precalculus	Syllabus, Math Philosophy and a Reasonable Universe	½ week
	Ch 1: Trigonometry – Part I	1, 2, 3 Quiz only	1 weeks
	Ch1: Trigonometry – Part II	4, 5, 6, 7, Test	2 ½ weeks
	Ch 2: Polynomials	2*, 3*, 4*, 5, 6, 7*, Test	2½ week
	Ch 3: Functions	2, 3*, 5, 3.6*, 7*, 8*, Test	3 weeks
Second	Ch 4: Inverse Functions –Part I	2, 3, 4, 5 Quiz only	2 weeks
	Ch 4: Inverse Functions –Past II	6, 7, 8, Test	2 weeks
	Ch 5: Equations –Part I	1*, 2, 3, 4, Test	2 weeks
	Ch 5: Equations –Part II	5, 6 Quiz only	1 ½ weeks
	Ch 8: Matrix Algebra – Part I	1*, 2* Quiz only	1 weeks
	Mid Term		½ week
Third	Ch 8: Matrix Algebra – Part II	4*, 5*, 6*, 7* Test	2 weeks
	Ch 10: Sequences	1*, 5* Quiz only	2 weeks
	Ch 9: Statistics –Part I	1, 2, 3, 4 Test	½ week
	Ch 9: Statistics –Part II	5, 6, 7* Test	1 week
	Biography/ Apologetics	Pascal and Leibniz on God	½ week
Fourth	Ch 11: Limits and Calculus	Web references	1 ½ weeks
	Ch 12: Differential Calculus	Web references	3 weeks
	Differential Calculus Application	Web references	2 weeks
	Integral Calculus	Web references	2 weeks

* only partial material covered

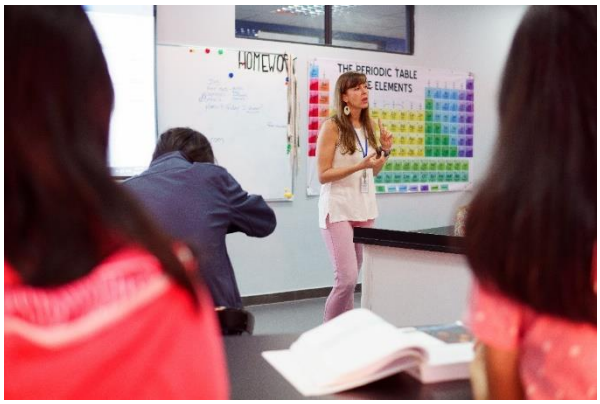
Science: Physics

Physics unites every discipline the student has accumulated in high school. It is a course applying mathematics to observation and demonstrating those relationships through the rigor of experiment. Physics requires scientific literacy for research and scientific inquiry in following the front lines of such a dynamic field. These frontiers explore boundaries of physical knowledge deeper than the atom and as vast as the universe itself. Every facet challenges everyday perception as the history of testing ideas is used for testing the ideas of the future.

Curriculum Overview

CONCEPTS COVERED	EXPERIMENTS	FILM
Foundations of Physics		Flatland
Geocentrism/ Heliocentrism*		Cosmos: Kepler
Motion in One Dimension	Galilean Ramp	
Vectors		
Kinematics in Two Dimensions	Shoot the Monkey/Catapult	
Relativity		
Frame of Reference*		PBS Genius: Time Travel
Dynamics	Equilibrant	
Fundamental Forces*		Hawking
Circular Motion	G Forces	
Space Race*	Gravity assist magnets	October Sky
Work and Energy		
Momentum	Eggceleration!/ Gyroscopes	
Teleological Physics *	Let Them Eat…Cake?	Contact
Waves	Light/ Sound Phenomenon	
Thermodynamic laws		
Electromagnetism		
Optics	Lenses and lasers	
Quantum Reality*		What the *Bleep* Do We Know
$E = mC^2$		$E = mC^2$

*Uses resources beyond the textbook



Social Studies, Economics and Government

Grade 12 students take two courses in social studies. Each course counts a half credit toward graduation.

Government: The government course provides students with a background in the philosophy, functions, and structure of the United States government. Students examine the philosophical foundations of the United States government and how that philosophy developed. Students also examine the structure and function of the United States government and its relationship to states and citizens. After developing a basic understanding of how U.S. government functions, students will compare and contrast how their own home countries are organized and what the relationship of their respective governments to the its citizens is.

Unit 1: The Role of the Citizen on Various Forms of Government

- Why do we have government?
- How are world government systems different?
- How is the American system of government unique?

Unit 2: The Role of the Citizen in a shared form of government

- How are laws made?
- How are laws interpreted?
- How are laws and policies enforced?
- How are leaders selected?

Unit 3: How do Non-Governmental systems influence the world?

- What are Non-governmental organizations?
- How are they similar to and different from governments?

Economics

Economics is the study of choices people make to satisfy their wants and needs; this concept of scarcity is the driving force behind economics. This course will help students analyse how individuals, societies, and countries make economic decisions and the repercussions from those decisions. The course is divided into **five** units: Fundamental Concepts, Microeconomics, Macroeconomics, International Concepts, and Personal Finance.

Electives

High school students will be given the opportunity to participate in elective classes. Electives are designed by the teachers and chosen by the students and will allow students to experience a range of interesting academic courses. Students will receive 1 credit hour per year for electives. Elective choices will change each semester. Some options for electives may include the following*: Journalism/Newspaper Publishing, Fashion Marketing, Public Speaking, Mock Trial, Student Government Association, Chinese Cooking, and Model United Nations (*options will vary).

Beginning in 2018-2019 Virtual High School classes were offered to Seniors and Juniors. Virtual High School, based in the United States, offers a wide variety of Advanced Placement classes, as well as regular classes that can serve as elective classes that TLC is unable to offer due the school's size. These classes require additional payments and access to a VPN (if the student would like to work at home). Students who need AP testing will need to plan through the College Board for testing.