IMMACULATE CONCEPTION HIGH SCHOOL PHYSICS SYLLABUS SEQUENCE 2024				
GRADE:	**10**			
TERM:	**1**			
WEEK:	**DATE**	**TOPICS**	**OBJECTIVES**	**Major Assignments**
1	**Sept. 02 - 06**	**<u>Welcome and Introduction</u>** **<u>Revision:</u>** **-Fundamental and Derived Quantities;** **-Measurement** **-Graphs**	• Welcome and Introduction to course • <u>Revision of key grade 9 concepts</u> *a. fundamental and derived quantities and units.* *b. Area, volume, density* *c. Measurement: -instruments and errors* *d. significant figures* e. Graphs - plot, interpret and use graphs of experimental data. - draw a line of 'best fit' for a set of plotted values. - determine the gradient and intercept of a straight line graph.	***-Diagnostic Test*** ***-Learning Styles Inventory (Online)*** **-Graphing coursework**
2	**Sept. 09 – 13**	**Density/Writing Lab Reports** **Galileo Galilei The Scientific Approach**	• Review the concept *Density* and formula • Outline the format of a lab report • Discuss the methodology employed by Galileo contributed to the development of Physics	**INTRODUCTORY LAB – Density** **Homework (to be discussed in Week 3)** How did the methodology employed by Galileo contribute to the development of Physics?

3	**Sept. 16 - 20**	**The Simple Pendulum**	• Define the simple pendulum. • State the factors which affect the period of a simple pendulum. • Determine the length of a pendulum. • Define the period and oscillation of a pendulum. • Calculate the period of a pendulum from the time of a given number of oscillations	**Simple Pendulum lab**
4	**Sept. 23 - 27**	**Vectors**	• Distinguish between scalars and vectors and give examples of each; • Calculate the resultant of vectors which are **parallel**, **anti-parallel** and **perpendicular**; • use scalar diagrams to combine two vectors so as to find their resultant; • explain common situations using the fact that a single vector may be regarded as equivalent to two other vectors at right angles.	**Vectors – Graded Worksheet**
5	**Sept. 30-Oct . 4**	**Revision week**		
6	**Oct.7-11**		**Standardized Test**	**Standardized Test**
7	**Oct. 14-16**	**-Test Review**		

	Oct. 17-21 **Mid-term Break**			
8	**Oct. 22-25**	**Forces**	Force, F ● recall that a force can cause a change in the size, shape or motion of a body; ● identify situations in which electric, magnetic, nuclear or gravitational forces act; ● determine the weight of objects using the relationship: weight = mass x gravitational field strength that is, W = mg	**Forces quiz-Google forms**
9	**Oct. 28-Nov. 1**	**Deformation**	Deformation ● State Hooke's Law ● Investigate the relationship between extension and force, for springs and elastic bands. ● Solve problems involving the proportional relationship between a force and the extension it causes. (using Hooke's Law)	**Hooke's law lab**
10	**Nov.04 -08**	**Centre of Gravity**	● determine the location of the centre of gravity of a body: *-Finding the centre of gravity of a variety of regular and irregular shaped solids, including lamina*	**Lamina Lab**

			• relate the stability of an object to the position of its centre of gravity and its weight;	
11	**Nov. 11-15**	**Statics**	Moment of Force, T • define the moment of a force • state the principle of moments and use it to solve problems on equilibrium;	**Moments Lab** **Moments Worksheet-Paired Activity**
12	**Nov. 18-22**		• Moments problems cont'd *-Extended practice* • Explain the action of common tools and devices as levers	
13	**Nov.25 -29**		Revision	
14	**Dec. 02-06**		**Standardized Test**	**Standardized Test**
15	**Dec. 09-13**	**Test Review**		