Physics 30 with Mr. Standring
Course Outline 2011 - 2012 Semester I

Text: Pearson, *Physics* (Replacement Cost $130.^{00}$)
Physics 30 Workbook (recommended)
Supplies: Binder, paper, graph paper, pen, pencil and data sheet
Equipment: Scientific calculator, ruler and protractor.
(It is expected that all of the above be brought to class each day.)
***Graphing calculators must be cleared before and after exams.
➔ If it is possible to accelerate the pace of this course in order to increase review time we will do so.

Unit	Approximate Unit Value (% of Final Grade)	Relevant Text Sections	Tentative Test Dates
Unit A: Momentum & Impulse Momentum Momentum and its conservation - 1D Momentum and its conservation - 2D	7.5	Chapter 9	Sept. 20
Unit B: Forces & Fields Static Electricity Electric Fields, Millikan Magnetic Fields and Hand Rules	14	Chapter 10 - 12	Oct. 25
Unit C: Electromagnetic Radiation EMR Reflection, Refraction, Diffraction Photoelectric Effect	13	Chapter 13 & 14	Nov. 28
Unit D: Atomic Physics Models of the Atom & Quantum Theory Mass Spectrometers Radioactivity, Nuclear Applications	11.5	Chapter 15 - 17	Jan. 9
Course Review/Field Test	4	All of the above	Jan. 16
Diploma Exam	50	All of the above	Jan. 27

Students are responsible for all material covered in class and in the text book (Exceptions in the text will be noted).

Late Write Schedule – Students that are away during regularly scheduled examinations may write these examinations according to the following schedule. Students MUST get permission to write these examinations PRIOR to the examination from their teacher.

Date	Location	Time
The first Wednesday of each Month & January 17 (Last day of Classes)	Room 208	3:30 pm – 4:45 pm

Student Assessment

Coursework	50%	Unit Exams & Quizzes – 30% Assignments/Labs & Reports – 20%
Diploma	50%	

Note: Your school mark for the course is blended 50/50 with your diploma exam mark.

Daniel Standring High School Science Department
School Schedule/Course Outline – Semester I – 2013-2014

Course: Physics 30

WEEK	Topics Taught
Sept 2 – 6 Sept 2 – Labour Day – No School Sept 3 – Classes Begin Days 1 – 4	Physics 20 Mechanics Review Momentum and Impulse (*Impulse demo*)
Sept 9 – 13 Sept 11 – Meet the Teacher Evening 6:00-7:30 Days 5 – 9	Conservation of Momentum – 1-D (*Recoil demo*) Conservation of Momentum – 2-D (*2-D collision lab)*
Sept 16 – 20 Days 10 – 14	Collision Elasticity, Review **Unit A Exam Sept 20 Day 14** Static Electricity (*Static Electricity demos*)
Sept 23 – 27 Days 15 – 19	Electric Force, Coulomb's Law, Field Theory (Diagrams), Electric Fields
Sept 30 - Oct 4 Days 20 – 24	Parallel Plates, Accelerating Charged Particles, Millikan, Deflecting Charges
Oct 7 – 11 Days 25 – 29	Magnetism, Domain Theory, Magnetic Fields, 1st and 2nd Left-Hand Rules
Oct 14 – 18 Oct 14 – Thanksgiving Day – No School Oct 16&17 – Parent-Teacher Interviews 4:00-7:00 Days 30 –33	Magnetic Force, 3rd Left-Hand Rule, Mass Spectrometer, *(Magnetic Field Lab)*, Conductors in a Field (Motor Effect), Induction (Lenz's Law), Review
Oct 21 – 25 Oct 25 – PD Day #4 – No School Days 34 – 37	**Unit B Exam Oct 25 Day 37** Characteristics of EMR, Wave Nature of Light, Speed of Light
Oct 28 – Nov 1 Days 38 – 42	Reflection, Refraction, (*Refraction Lab*), Internal Reflection, Lenses, (*Lens Lab)*
Nov 4 – 8 Days 43 – 47	Mirrors, Dispersion, Polarized Light, Diffraction, *(Diffraction Demo)*
Nov 11 – 15 Nov 11 – Remembrance Day – No School Days 48 – 51	Particle Nature of Light, Photon Theory, Photoelectric Effect
Nov 18 – 22 Days 52 – 56	Compton Effect, Review
Nov 25 – Nov 29 Days 57 – 61	**Unit C Exam Nov 28 Day 60** Atomic Models, Cathode Rays
Dec 2 – 6 Dec 6 – PD Day #5 – No School Days 62 – 65	Emission and Absorption Spectra, Bohr Model, Franck-Hertz
Dec 9 – 13 Days 66 – 70	de Broglie (Matter) Waves, Wave-Particle Duality
Dec 16 – 20 Days 71 – 75	Radiation, Isotope Notation, Nuclear Equations, Radioactive Decay, Half-Life, Mass Defect, Standard Model, *U of A Field Trip (Physics Labs)*
Dec 21 – Jan 5	**Christmas Holidays ☺**
Jan 6 – 10 Days 76 – 80	**Unit D Exam Jan 9 Day 79** Review
Jan 13 – 17 Jan 14 Social 30 Part A Diploma Jan 17 – Last day of classes Days 82 – 86	**Course Review Exam Jan 16 Day 85** Review
Jan. 20 – 24 Jan 20 Social 30 Part B Diploma Jan 21 ELA 20 Jan 23 Math 30 Diploma	**Exam Week**
Jan 27 – 31 **Jan 30 Second semester begins** Jan 31 No Classes – Faith Day	***Jan 27 Physics 30 Diploma*** ***Jan 28 Chemistry 30 Diploma*** ***Jan 29 Physics 20 final***