<u>Physics 20 with Mr. Standring</u> Course Outline 2014 - 2015 Semester I

Unit A consists of an in-depth study of the concepts of motion introduced in Science 10, extending the concepts of Velocity and Acceleration to include Vectors. Students then proceed to master the concepts in Units B and C by applying their knowledge to Forces, Circular Motion and Gravitation, using satellite motion to show the interaction between these concepts. Unit D looks at Energy types, Conservation of Energy as well as Waves.

Text: Pearson, *Physics* (Replacement Cost \$130.00)

Supplies: iDevice, Binder, paper, graph paper, pen, pencil and data sheet

Equipment: Scientific calculator and ruler

(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	Relevant Text Sections	Tentative Test Dates
Unit 0: Orientation and Required Skills	Appendix Pages 872-880	N/A
Unit A: Kinematics	Chapters 1 & 2	October 3
Unit B: Forces - Newton's Laws	Chapter 3	October 31
Unit C: Gravity& Circular Motion	Chapters 4 & 5	November 27
Unit D: Work, Energy and Waves	Chapters 6, 7 & 8	January 15
Final Exam	All of the above	TBA

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

Student Assessment

Coursework 80% - Unit Exams & Quizzes – 40%

- Assignments/Labs & Reports – 40 %

Final Exam 20%

Each report card mark is a cumulative mark from the beginning of the semester.

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

Course: Physics 20

WEEK	Topics Taught		
Sept 3 – 5 Mon - Sept 2 – Labour Day – No School Sept 3 – Classes Begin Days 1 – 3	•Math Review	•Displacement	
Sept 8 – 12 Days 4 – 8	•Kinematics – Velocity in 1D, 2D		
Sept 15 – 19 Days 9 – 13	 Kinematics – 2D Velocity & Rivers Horizontal Acceleration a = Δv/Δt, vf2 = vi2 + 2ad, d = vit +1/2at2 		
Sept 22 – 25 Friday - Oct 26 – PD Day #3 – No School Days 14 – 17	•Gravitational Acceleration / Projectile Motion		
Sept 29 - Oct 3 Days 18 – 22	•Projectile Motion Unit A Exam Oct 3 Day 22	•Dynamics - Forces	
Oct 6 – 10 Days 23 – 27	•Newton's Laws	•2D Forces	
Oct 14 – 17 Mon - Oct 13 – Thanksgiving Day – No School Days 28 –31	•2D Analysis	•Inclines	
Oct 20 – 23 Friday - Oct 24 – PD Day #4 – No School Days 32 – 35	•Inclines	•Static Objects	
Oct 27 – 31 Days 36 – 40	•Statics Unit B Exam Oct 31 Day	40	
Nov 3 – 7 Days 41 – 45	•Gravitation & Fields		
Nov 12 – 14 Mon - Nov 10 – Day in Lieu of PTI – No School Tue - Nov 11 – Remembrance Day – No School Days 46 – 48	•Gravity Fields	•Cavendish's Experiment	•Circular motion
Nov 17 – 21 Days 49 – 53	•Vertical Circular Motion	•Gravity & Circular Motion	•Satellites
Nov 24 – Nov 27 Days 54 – 57	•Kepler Unit C Exam Nov 27 Day	•Work	
Dec 1 – 5 Days 58 – 62	•Potential & Kinetic Energy	•Isolated Systems	•Conservation of Energy
Dec 8 – 11 Friday - Dec 12 – PD Day #5 – No School Days 63 – 66	•Non-isolated Systems	•Periodic Motion – Displaceme	ent, Acceleration, Energy
Dec 15 – 19 Days 67 – 72	•Waves & Sound •	Interference & Superposition	•Doppler
Dec 20 – Jan 4	Christmas Holidays ூ		
Jan 5 – 9 Days 73 – 77	Unit D Exam Jan 9 Day77		
Jan 12 – 16 Days 78 – 82	Review Week		
Jan. 19 – 23	Exam Week		
Jan 26 – 29 Feb 2 nd Second semester begins Friday - Jan 30 – District Faith Day – No School	Jan 22 Physics 20 fine	al	