**SPH3U0 Unit 4: Dynamics Mr. Nestor Nov/Dec 2019**

Chapter 4: Gravity Extends Throughout the Universe **Pearson Physics Source 11**

Chapter 5: Forces can Change Velocity

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| Day & Date | Topic | Text Section  and Pages | Assignment |
| Day 1  Thu Nov 14 | **Introduction to Dynamics**  • Four Fundamental Forces  • Free Body Diagrams | 4.1  pgs.97-100 | **Acceleration Lab due!!**  Textbook Notesheet  Free Body Diagram Worksheet  HW: Read Section 4.1 pages 97-101  Questions 4.1 pg 105 #3,4,9,11 |
| Fri Nov 15 | **PD Day** |  |  |
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| Day 2  Mon Nov 18 | **Fundamental Forces** |  |  |
| Day 3  Tue Nov 19 | **Finding Net Force** | 4.1 pgs. 101-103  5.1 pgs. 127-130 | Net Force Worksheet  4.1 P1,2 pg. 103, 5.1 #4,5 pg 130 |
| Day 4  Wed Nov 20 | **Newton’s First Law**  • The Law of Inertia | 5.1  pgs. 127-130 | Newton’s First Law- Application Worksheet  5.1 #4,5 pg 130 |
| Thu Nov 21 | **Mousetrap Car Project** | | |
| Fri Nov 22 |
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| Day 5  Mon Nov 25 | **Newton’s Second Law** | 5.2  pg. 131-138 | Fan Cart Gizmo Activity |
| Day 6  Tue Nov 26 | **Complex 2nd Law Questions** | 5.2  pg. 131-138 | Newton’s Second Law Problem Worksheet |
| Day 7  Wed Nov 27 | **Newton’s Third Law**  • Action-reaction forces | 5.3  pg. 139-143 | Newton’s Third Law Worksheet  5.3 #2,3,4,5,6 pg 143 |
| Day 8  Thu Nov 28 | **Quiz: Newton’s Three Laws**  • Eureka Videos |  |  |
| Day 9  Fri Nov 29 | **Gravitational Force due to the Earth**  **Fg= mg** | 4.2  pg. 106-108  pg. 109-113 | 4.2 P1-3 pg. 109  4.2 #1,2 pg. 114 |
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| Day 10  Mon Dec 2 | **Newton’s Law of Universal Gravitation** |  | Universal Gravitation Worksheet |
| Day 11  Tue Dec 3 | **Static and Kinetic Friction**  **Ff= μFN** | 5.4  pg. 144-151 | Friction Problem Worksheet  5.4 P1-3 pg 149 (Static Friction)  5.4 P1,2 pg 150 (Kinetic Friction) |
| Day 12  Wed Dec 4 | **Complex Friction Problems** |  | Complex Friction Problem Worksheet  5.4 #7, 6, 11 pg 152 |
| Day 13  Thu Dec 5 | **Quiz: Gravity & Friction**  **Friction Lab (In Class Write Up)** |  | Lab Write-up |
| Day 14  Fri Dec 6 | **Friction Lab (In Class Write Up)**  • Lab Due End Of Period |  | Lab Write-up |
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| Day 11  Tue Dec 9 | Review for Unit Test |  | Review Worksheet  Chapt 4 Review #1,2,10,14,15,16,35  Chapt 5 Review #2,7,11,12,15,16,21,23ab |
| Day 12  Wed Dec 10 | **Dynamics Unit Test** |  |  |
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