IB Physics

Forces

Chapter 4 Syllabus

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| Block | Class  | Due on this class |
| 1Oct 29/30 | -Welcome to Physics! – Aristotle and Galileo-Newton's laws -Net Force Part 1 - Horizontal -The difference between mass and weight | **Read:** 4.1-6 |
| 1¾ Oct 31/Nov 3 | -Projection Science-Hot Beverages | **Bring a ceramic mug****☺☺☺☺☺☺☺☺☺** |
| 2Nov 4/5 | -Net Force Part 2 - weight-Solving Net Force Problems with weight-Calculating Force of friction | **Read:** 4.7**Practice:** Ch 4: 1, 3, 4(750 N, 130 N, 280 N), 5, 7, 9Net Force: 1, 2, 5, 6, 9, 7[[1]](#footnote-1) |
| 3Nov 6/7 | -Solving problems with Friction-Work on some friction problems in class-Inclined Planes Demo-Forces on inclined planes - Note guide/Video Flip | **Practice:** Net Force: 4, 10, 8, 11, 13, 14, **16**, **17,** 12, 15 |
| 4Nov 12/13 | -Calculating the four forces on inclined planes-Work on Inclined Planes Problems | **Video Flip: Inclined Planes (I)****Read:** p. 94**Practice:** Friction: 4a, 5, 6, 7, 9, 8, 10, 11 |
| 5Nov 14/17 | -Solving Pulley problems -Intro of *Force Lab (no handout)*-How to deal with no mass on Inclined Planes-Hand out FA 4.2, 4.3, 4.4, 4.5, Force Lab - Design | **Read:** 9.1-2 (pp. 226-229, only not torque)**Practice:** Inclined Planes: 1, 2, 5, 6, **10**, **11** Net Force: **18**, **19** Friction: **16**, **17** |
| 6Nov 18/19 | -Variables for *Force Lab*-Work on *Force Lab* | **Video Flip: Force Lab Variables****Practice:** Inclined Planes: 7, 9 Ch 4: 15, 24(0.703 m/s/s @ 237o, 0.520 m/s/s @51.0o) 25, 45, 48ab(1.9 m/s/s, 370 N), 87(!) |
| 7Nov 20/21 | -Work on *Force Lab*  | **Practice:** Net Force: **20** Friction: **18, 19**, **20**  Pulleys and Equil: 7 Inclines Planes: **12**, **13**, **14**  |
| 8Nov 24/25 | **-Summative Assessments:****-SA 4.2 - Vertical Dynamics****-SA 4.3 - Friction****-SA 4.4 - Inclined Planes** |  |
| 9Nov 26/ Dec 2 | -Why it is important to consider the weight of a barrel of bricks.**Gravity and circular motion!!!!!** | **Turn in: Force Lab (Des)** |
| Assignments* 1 Lab:
	+ Student designed lab on force
* 4 Formative/ 3 Summative Assessments:
	+ 4.2 – Vertical Dynamics
	+ 4.3 – Friction
	+ 4.4 – Inclined Planes
	+ 4.5 – Pulleys
 | \*Handouts:Syllabus-ForcesFA 4.2/FA 4.3/FA 4.4/FA 4.5Worksheet-NetForceAndFrictionNoteGuide-InclinedPlanesExampleWorksheet-PlanesAndEquil |

1. This is the order that you should do the problems in. (Increasing difficulty) [↑](#footnote-ref-1)