IB Physics

Chapter 5 Syllabus

Gravity and Circular Motion

|  |  |  |
| --- | --- | --- |
| Block | Class  | Due  |
| 1Nov 26/Dec 2 | -Why it is important to consider the weight of a barrel of bricks-Centripetal acceleration-Centripetal Force-RPMs, RPS and velocity-Centripetal vs. Centrifugal - -Intro to Vertical Circle | **Turn in: Force Lab (Des, CE?)****Read:** 5.1-3 |
| 2Dec 3/4 | -Work on Motion in a Vertical Circle problems -**Fun**damental forces in Physics-Universal Gravitation | **Video Flip: Vertical Circle****Practice:** (Ch 5): 1, 6(3.6 m/s/s)**Read:** 5.5 |
| 3Dec 5/8 | -Work on Orbit Problems in class - Kepler's Laws | **Video Flip: Orbit Problems****Read:** 5.6-8,10 |
| 4Dec 9/10 | -Banked corners and Gravity in space-Models of orbital mechanics-Escape Velocity-Orbit Lab -Hand out FA 5.1, 5.2, 5.3 | **Read:** 5.9 |
| 5Dec 11/12 | -Orbit Lab-Work on FA 5.1, 5.2, 5.3 | **Practice:** (Ch 5): 4(9.7 m/s),9, 10(0.84),  14(4480 N, 339 N, 31 m/s)**Turn in: Vertical Circle Problems** |
| 6Dec 15/16 | **Energy!!!!!** | **Practice:** (Ch 5): 16(1.7 m/s, 3.3 m/s), 29, 43, 48(7080 s)**Turn in: Orbit Problems****Turn In: Orbit Lab****Turn in: FA 5.1, 5.2, 5.3** |

|  |  |
| --- | --- |
| Assignments* 1 Lab:
	+ Orbit Lab – Computer simulation of orbit – in class
* 3 Formative/2 Summative Assessments:
	+ 5.1 – Centripetal Acceleration\*
	+ 5.2 - Vertical Circle
	+ 5.3 - Orbit and Gravity

\*Formative only | Handouts:Syllabus-Gravity and Circular MotionWorksheet-OrbitAndGravityLab-Orbit (class copies)Example  |