**IB Physics**

Chapter 6 Syllabus

Work and Energy

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| --- | --- | --- | --- |
| Block | In Class | Due  | If you miss this class |
| 1Jan 3/4 | -Calculating work-Energy-Potential and Kinetic Energy-Springs and force and energy-Spring Constant Graph assignment – (come to the next class with the points and error bars made) |  | **Read:** 6.1-4**Watch:** Videos A-F |
| 2Jan 5/6 | -Graphing the Spring Constant – Slope, and uncertainty of slope-Introduction to Conservation of energy -Staring death in the eye-Conservation of Energy Whiteboards-Hand out FA 6.1, 6.2 | **Video Flip: Making the Spring Constant Graph (Part I and Part II to 4:30)****Ch 6:** 4(8100 J),15,26(0.34 m),27**Turn In: Spring Constant Graph** | **Read:** 6.5-9**Watch:** Videos G |
| 3Jan 9/10 | -Work on Energy 1, 4, 3, 5, 6, 7, 8-Power-Efficiency | **Ch 6:** 19,29 | **Read:** 6.10**Watch:** Videos H-J |
| 4Jan 11/12 | -Rollercoasters -Work on Energy 9 - 14, FA 6.1, 6.2-Energy Lab brainstorm | **Ch 6:** 64(8.1E6 J),58 (28.2 s)  | **Watch:** Energy lab videos |
| 5Jan 13/17 | **Summative Assessments:****SA 5.2 - Vertical Circle****SA 5.3 – Gravity and Orbit****SA 6.1 - Work and Power****SA 6.2 - Conservation of Energy**  | **Turn In:** FA 5.1, 5.2, 5.3, 6.1, 6.2 |  |
| 6Jan 18/19 | -Energy Lab-Play with Coaster program | **Video Flip: Energy Lab ideas** **Ch 6:** 35,39 | Come in before or after school to make up the lab |
| 7Jan 20/23 | -Work on lab and problems  | **Ch 6:** 40(2.5r), 52(10. m/s) | Come in before or after school to make up the lab |
| Jan 24/25 | **Momentum!!!!** | **Turn In: Energy Lab****Turn In: Ch6:**4,15,26,27,19,29,64,58,35,39,40,52 |  |
| Jan 26/27 | **More Momentum!!!!!!** |  |  |
| Finals | **Final - (cumulative for semester)** |  |  |
| Assignments* 2 Labs:
	+ Spring Constant Graph of data I give you with error bars and uncertainties
	+ Either Human Power output or a lab of your own choosing
* 5 Formative/ 4 Summative Assessments:
	+ 5.1 – Centripetal Force and Acceleration\*
	+ 5.2 – Vertical Circle
	+ 5.3 – Gravity and Orbit
	+ 6.1 - Work and Power
	+ 6.2 - Conservation of energy
* 12 book problems:
	+ **Ch6:**4,15,26,27,19,29,64,58,35,39,40,52

\*no summative | \*Handouts:Syllabus-Work and EnergyWorksheet-EnergyLab-Spring Constant GraphFA6.1FA6.2Worksheet-ConservationOfEnergy6.2Worksheet-WorkAndPower6.1 |  |