**IB Physics**

Chapter 6 Syllabus

Work and Energy

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| Block | Class | Due | | |
| 1  Dec 15/16 | -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 | | |
| 2  Dec 17/18 | -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 5.1, 5.2, 5.3, 6.1, 6.2 | **Video Flip: Making the Spring Constant Graph (Part I and Part II to 4:30)**  **Practice:**  Ch 6: 4(8100 J), 10(1.2E6 J), 15, 18(-5.32E5 J), 26(0.34 m), 31  **Read:** 6.5-9  **Turn In: Spring Constant Graph** | | |
| 3  Dec 19/  Jan 5 | -Work on Energy 1, 4, 3, 5, 6, 7, 8  -Power  -Efficiency | **Read:** 6.10 | | |
| 4  Jan 6/7 | -Rollercoasters  -Work on Energy 9 - 14, FA 6.1, 6.2  -Energy Lab brainstorm | **Practice:** Energy: 1,4,3,5,6,7,8 **(In class)**  Ch 6:64(8.1E6 J),58(28.2 s),59,66(10.6 W) **(Home)** | | |
| 5  Jan 8/9 | **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** | **Video Flip: Energy Lab ideas**  **Practice:** Ch 6: Energy: 9-14  **Turn In:** FA 5.1, 5.2, 5.3, 6.1, 6.2 | | |
| 6  Jan 12/13 | -Energy Lab  -Play with Coaster program | **Practice:**  Ch 6: 39, 40(2.5r), 35, 37 | | |
| 7  Jan 14/15 | -Work on lab and problems  -Experts for Assessments | **Practice:** Ch 6: 42(104 N/m),43,52(10. m/s),55 Energy: 15 (EC) | | |
| 8  Jan 16/20 | **Momentum!!!!** | **Turn In: Energy Lab** | | |
| Finals | **Final Assessment Makeup** |  | | |
| 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   \*no summative | | | \*Handouts:  Syllabus-Work and Energy  Worksheet-Energy  Lab-Spring Constant Graph  Lab-Energy Lab  IA-DCP-Description  Misc-MockTest |