IB Physics

Chapter 3 Syllabus: Two Dimensional Kinematics - Vectors and Projectile Motion

|  |  |  |
| --- | --- | --- |
| Block | Class | On this class: |
| 1  **Oct 8/12** | -Hand out *Vector Sheet*  -"Where am I?" lab  -Finding vector components  -Adding vector component vectors  -Making angle magnitude vectors  -Adding two angle magnitude vectors  -Work on vector sheet in class 1-14 | **Video: B, C, D**  **Turn in:** *Air rocket* Lab  **Turn in:**  *Plot Matching* lab  **Turn in:** *Moving Plots* lab  **Turn in:** *Where am I* lab (in class) |
| 2 Oct 13/14 | -Multiplying vectors by scalars  -Work on vector sheet in class 15-18, 19, 20  -The principles of projectile motion  -Hand out FA 3.1  -Hand out Cliff Problem Noteguide/Explain | **Video: F**  **Practice:** Vector Sheet: 1-14  **Read:** 3.1-.4 |
| 3 Oct 15/16 | -Hand out PM and 2DM worksheet  -Cliff Quizlette  -Work on 2DM 1, 2, PM 1  -Hand out Arc Problem Noteguide | **Video Flip: Cliff Problems (G)**  **Practice:** Vector Sheet: 15-20  **Read:** 3.5 |
| 4  **Oct 19/20** | -Arc Quizlette  -Work on PM 3, 2, 4  -Projectile motion demos | **Video Flip: Arc Problems (H)**  **Read:** 3.6-.7  **Practice:** 2DM 1, 2, PM 1 |
| 5 Oct 21/26 | -Work on PM 5, 6, 2DM 10-14  -Description of Air rocket competition  -Plan for air rocket competition  -Hand out FA 3.2, 3.3, 3.4  -Introduction of Vernier Trajectories lab | **Video Flip: The Range Equation (I)**  **Practice:** Projectile Motion: 2, 3, 4  **Turn in Formative:** Cliff and Arc Quizlettes |
| 6  **Oct 27/28** | -Rocket launch competition **(Outdoors)**  -Demo of boat crossing river in class | **Video Flip: Boat Crossing River (J)**  **Practice:** Projectile Motion: 5, 6, 2DM 10-14  **Bring:** A warm or rain coat |
| Oct 29/30 | Demonstrations involving flame and optics | **Bring:** A ceramic mug!! |
| 7Nov 2/3 | -In class time to work on  Vernier Trajectories lab  FA 3.2, 3.3, 3.4 | **Read:** 3.8  **Practice:** 2DM 7, 8, SO2DM 7, PM 7, 8 |
| 8  **Nov 3/4** | **Summative assessments on:**  **-SA 3.1 Vectors**  **-SA 3.2 Cliff Problems**  **-SA 3.3 Arc Problems**  In class time to work on Lab | **Turn in Formative:** Ch 3: 20(5.2 m/s),21,31, 35,47,67[[1]](#footnote-2)  **Turn in: FA 3.1 Vectors**  **Turn in: FA 3.2 Cliff Problems**  **Turn in: FA 3.3 Arc Problems**  **Turn in: FA 3.4 Boat Crossing River** |
| **Nov 5/9** | **Newton’s Laws!!!!!!!** | **Turn in:** Vernier Trajectories lab |

|  |  |
| --- | --- |
| Assignments   * 2 Labs: (There is no write up for the rocket competition)   + Where am I (Done in class)   + Vernier Trajectories (Simulation on computer) * 4 Formative Assessments   + 3.1 – Vectors   + 3.2 – Cliff Problems   + 3.3 – Arc Trajectories   + 3.4 – Boat Crossing River * 3 Summative Assessments   + 3.1 – Vectors   + 3.2 – Cliff Problems   + 3.3 – Arc Trajectories | \*Handouts:  Syllabus-2DKinematics  FA03.1  FA03.2  FA03.3  FA03.4  Quizlette-Cliff  Quizlette-Arc  Noteguide-Arc  Noteguide-Cliff  Worksheet-VectorSheet  Worksheet-ProjectileMotion  Worksheet-2DimensionalMotion+SonOf |

1. These are problems from your book. Look on page 65, that’s where the problems begin. Don’t answer the “Questions” for this, although the questions are good. Check your answer in the back of the book on page A-28. Solutions are on the PhysDocs site, and the answer to the even problem is the thing in parenthesis. [↑](#footnote-ref-2)