**Physics G**

Two-Dimensional Motion and Vectors Syllabus

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| Block | Class | Due on this class |
| 1  Oct 21/24 | •Tests back  •Judging of lateral accelerometers  •Introduction to vectors "Where am I?"  •Rules of vectors  •Assign *Vectors Sheet*  •Finding vector components L/D + WB | **Turn in:** *Lateral Accelerometer* lab signed by your parents  **Bring:** Your lateral accelerometer |
| 2  Oct 25/26 | •Making angle magnitude vectors L/D + WB  •Adding vector component vectors L/D + WB  •Adding two angle magnitude vectors L/D + WB | **Read:** 3.1-2[[1]](#footnote-2)  **Check:** VS: 1-6 |
| Oct 31/  Nov 1 | **Demonstrations involving Thermodynamics and Optics** |  |
| 3  Nov 2/3 | •**PreQuiz** on Vectors  •Principles of projectile motion  •Simple Cliff Problem solved | **Check:** VS: 7-16 |
| 4  Nov 4/7 | •Cliff problem Quizlette  •Assign *Two Dimensional Motion*  •**Skill Set on Vectors (individual)** | **Check:** P3A:1,3 P3B:3,7 P3C: 1  **Read:** 3.3 |
| 5  Nov 8/9 | •Arc Trajectories  •Work in Quiz groups on Arc Quizlette | **Check:** 2DM: 1,2,3  **Turn in:** *Vectors Sheet +* P3A:1,3 P3B:3,7 P3C: 1[[2]](#footnote-3) |
| 6  Nov 14/15 | •Vernier #3 quandary – how far will it land?  •Deriving the Range Equation  •Finish Arc and Cliff Quizlettes + Varsity questions  •Projectile motion demos | **Check:** 2DM: 4,5,6 |
| 7  Nov 16/17 | •Arc off of a cliff quandary  •Solving boat crossing river problems  •Work in Quiz groups | **Check:** 2DM: 10-14  **Read:** 3.4 |
| 8  Nov 18/28 | •Vernier #1 quandary  •Introduction of *Vernier Trajectories* lab  •Introduction of *Trajectory of a Marble* lab  •Work time for labs/Questions from 2-D Motion | **Check:** 2DM: 7,8,9 |
| 9  Nov 29/30 | •Posers from Interactive Physics  •**Quiz on cliff and boat problems (group)**  •In class time to work on  *Vernier Trajectories* lab  *Trajectory of a Marble* lab  •Assign *Son of 2D* | **Turn in:** *Two Dimensional Motion*  **Check:** SO2DM: 1,3 |
| 10  Dec 1/2 | •In class time to work on  *Vernier Trajectories* lab  *Trajectory of a Marble* lab | **Check:** SO2DM: 5,7 |
| 11  Dec 5/6 | •**Prequiz on Projectile Motion**  •Work on stuff  •Questions from Son of 2D | **Check:** SO2DM: 2,4,6 |
| 12  Dec 7/8 | •**Skill Set on Projectile Motion**  •Mock Test  •Questions from Son of 2D | **Check:** P3D: 1,3 P3E: 1,3,5 |
| 13  Dec 9/12 | **Test** on Two dimensional motion | **Turn in:** *Son of 2D +* P3D: 1,3 P3E: 1,3,5[[3]](#footnote-4)  **Turn in:** *Vernier Trajectories* lab  **Turn in:** *Trajectory of a Marble* lab |

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| Assignments:   * *Vectors Sheet* (16) *+* P3A:1,3 P3B:3,7 P3C: 1 + 3 stamps /48 pts * *Two Dimensional Motion* (14)+ 4 stamps /36 pts * *Son of 2D* (7) + P3D: 1,3 P3E: 1,3,5 + 4 stamps /32 pts * 3 Labs:   + *Where am I* lab – Drawing in class on graph paper /10 pts   + *Vernier Trajectories* lab – Computer simulation. /30 pts   + *Trajectory of a Marble* lab – In class – hit a target with a marble. /20 pts * 3 Quizzes/1 Skill Set /10 pts ea   + Vector quiz/Skill Set (like a test)   + Cliff problems quiz   + Arc Trajectories quiz | Handouts:  Syllabus-2DMotionAndVectors  Worksheet-Vector Sheet  PreQuiz-03.1  PreQuiz-03.2  Worksheet-2DimensionalMotion  Lab-VernierTrajectories  Lab-TrajectoryOfAMarble  Worksheet-SonOf2D  Quizlette-Cliff  Quizlette-Arc  Misc-MockTest |

1. Chapter 3 starts on page 84 [↑](#footnote-ref-2)
2. Staple these book problems to the vector sheet. [↑](#footnote-ref-3)
3. Staple these book problems to the Son of 2D sheet [↑](#footnote-ref-4)