Physics

Linear Kinematics Unit Syllabus

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| Block | Class  | Due on this class | If you miss this class: |
| 1**Sept** **5/6** | -Course Policy/Index Cards-Speed Trap/Uncertainty-Tour of the Website assignment-Data collection assignment for No reason to Speed Lab (NRTS) | **Bring:** Your smiling face**Bring:** Paper and pencil and a calculator**Turn in:** Completed information sheet**Turn in:** Speed trap (In class) (indiv) | **Watch:** Videos 1A1 (?)**Watch:** Videos for the Speed Trap Lab**Watch and Read:** Info on the No Reason to Speed Lab |
| 2**Sept** **7/10** | **DI**-Speed**DI**-Review Dimensional analysis (DA)**-Math pretest** | **Video (all):** Tour of the Website | **Read:** 2-1, 1-2 to 1-3**Read:** This syllabus!**Watch:** Videos 2A1, 2A2 (?) |
| 3**Sept****11/12**  | **GW**-Work in groups on Speed and DA Quizlette and FA 2.1-NRTS and Homework reminder | **Turn in:** Speed and DA Quizlette | **Watch:** Videos 2A1, 2A2 (?)Work on Speed and DA Quizlette on your own |
| 4**Sept** **13/14** | -Questions on FA 2.1?-Google Classroom/Laptops/VF**SA 2.1 Speed (30 minutes)**-Work on No Reason To Speed Lab | **Turn in:** FA 2.1Practice 2.1 #1-8 |  |
| 5Sept **17/18** | **DI** - Vector Velocity**DI** - Complex Acceleration-Finish No Reason to Speed lab?**GW**-Work on Acceleration Quizlette | **VF: 2C - Simple Acceleration****Turn in:** No reason to Speed lab (indiv)Practice 2.1 #9-16 | **Read:** 2-2, pp 48-51**Watch:** Videos 2B-2D |
| 6**Sept** **19/20** | -Lateral Accelerometer assignment**GW**-Finish Acceleration Quizlette**GW**-FA 2.2 Acceleration | **Turn in:** Acceleration Quizlette  | Work on Acceleration Quizlette on your own |
| 7**Sept** **21/25** | -Questions on FA 2.2?**SA 2.2 Acceleration (30 minutes)****VF**-2G Slope and velocity**DI**-Tangent lines | **Turn in:** FA 2.2Practice 2.2 #1-6 | **Read:** 2-2, pp51-58**Watch:** Videos for the moving Plots Lab**Watch:** Videos 2G |
| 8**Sept** **26/27** | **DI**-Qualitative Graphs-Rangefinders and graphs**GW**-Graphs of Motion | **VF: 2H Velocity graphs**Practice 2.2 #17-22 | **Watch:** Videos for the moving Plots Lab**Watch:** Videos 2H |
| 9**Sept 28/****Oct 1** | -Moving Plots equipment demo-Cha Cha Cha demo**GW**-Labs |  | Come in and make up these labs |
| 10**Oct****2/3** | **GW**-Labs | **Turn in:** Moving plots lab (Pairs)**Turn in:** Cha Cha Cha Lab | **Watch:** Videos for the moving Plots Lab**Make up your Summative assessments** |
| 11**Oct****4/5** | **DI**-Example Problems**GW**-How Far Quizlette | **VF: 2E Solving Kinematics** | **Watch:** Videos 2E**Read:** 2-3 |
| 12**Oct****8/9** | **GW**-Work on How Far Quizlette**GW**-FA 2.3 |  | Work on How Far Quizlette on your own |
| 13**Oct** **10/11** | -Questions on FA 2.3?**SA 2.3 Kinematics (30 minutes)****DI**-Free Fall Demos | **VF: 2F Free Fall Problems****Turn in:** How Far QuizlettePractice 2.3 #1-5, 21, 22 | Work on How Far Quizlette on your ownMake up the reaction time lab |
| 14**Oct** **15/16** | -Reaction time lab demo**GW**-Work on Free Fall Quizlette  | Practice 2.3 #6-10, 23, 24 | **Watch:** Videos 2F |
| 15**Oct** **17/18** | **GW**-Reaction time lab **GW**-Work on Free Fall Quizlette  | **Turn in:** Free Fall Quizlette**Turn in:** Reaction time lab (indiv) | Work on How Far Quizlette on your own |
| 16**Oct** **19/22** | -Air Rocket lab-Air Rocket Calculations -The Range Equation (Magic!!) |  Practice 2.4 #1, 2, 3**Turn in:** Air Rocket Lab (indiv) | Get data from a group member and do the calculations yourself |
| 17**Oct** **23/24** | -Warmup – calculate angle-Air Rocket Competition: Hitting a target | Practice 2.4 #4, 5, 6 | **Video:** Video 2Z |
| 18**Oct****29/30** | -Questions on FA 2.4?**SA 2.4 Free Fall (30 minutes)****DI-Vector Components** |  |  |
| 31/1 | **??????????????????????????** | **Bring a ceramic mug** |  |
| 1**Nov**2/6 | **GW-**Where Oh Where am I?**GW**-Vector Quizlette | **VF: 3C, 3D Vectors** |  |

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| Assignments* 7 Labs:
	+ Speed Trap Lab – Timing cars, No handout /20 pts (indiv)
	+ No Reason to Speed Lab – Spreadsheet and questions /40 pts (indiv)
	+ Air Rocket Lab – Initial velocity outdoors, No handout /30 pts (indiv)
	+ Reaction Time Lab – Dropping meter stick /20 pts (indiv)
	+ Moving Plots Lab – tape timer and cart /40 pts (pairs)
	+ Cha3 /20 pts (group)
	+ Rocket Competition – No write-up required
* 4 Formative Quizlettes (In class group work) (10 pts ea)
	+ Quizlette 2.1 - Speed
	+ Quizlette 2.2 - Acceleration
	+ Quizlette 2.3 - How Far
	+ Quizlette 2.4 - Free Fall
* 4 Formative/Summative Assessments: (10 pts ea)
	+ 2.1 Speed
	+ 2.2 Acceleration
	+ 2.3 Basic Kinematics
	+ 2.4 Free Fall Kinematics
 | Handouts  |