Physics

Linear Kinematics Unit Syllabus

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| Block | Class  | Due on this class (Suggested Practice) |
| **1****Sept** **4/5** | -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) |
| **2****Sept** **6/9** | **DI**-Speed**DI**-Review Dimensional analysis (DA)**-Math pretest** | **Video (all):** Tour of the Website |
| **3****Sept****10/11** | **GW**-Work in groups on Speed and DA Quizlette and FA 2.1-Group Quiz on Speed and DA-NRTS and Homework reminder | **Turn in:** Speed and DA Quizlette |
| **4****Sept** **12/13** | -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 2.1(Practice 2.1 #1-8) |
| **5**Sept **16/17** | **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) |
| **6****Sept** **18/19** | **GW**-Finish Acceleration Quizlette**GW**-FA 2.2 Acceleration | **Turn in:** Acceleration Quizlette  |
| **7****Sept** **20/23** | -Questions on FA 2.2?**SA 2.2 Acceleration (30 minutes)****VF**-2G Slope and velocity**DI**-Tangent lines | **Turn in:** FA 2.2(Practice 2.2 #1-6) |
| **8****Sept** **24/25** | **DI**-Qualitative Graphs-Rangefinders and graphs**GW**-Graphs of Motion | **VF: 2G, 2H Velocity graphs**(Practice 2.2 #17-22) |
| **9****Sept** **26/27** | -Moving Plots equipment demo-Cha Cha Cha demo**GW**-Labs |  |
| **10****Sept 30/****Oct 1** | **GW**-Labs | **Turn in:** Moving plots lab (Pairs)**Turn in:** Cha Cha Cha Lab |
| **11****Oct****2/3** | **DI**-Example Problems**GW**-How Far Quizlette | **VF: 2E Solving Kinematics** |
| **12****Oct****4/7** | **GW-**How Far Group Quiz**GW**-Work on How Far Quizlette**GW**-FA 2.3 |  |
| **13****Oct** **8/9** | -Questions on FA 2.3?**SA 2.3 Kinematics (30 minutes)****DI**-Free Fall Demos/Solving | **VF: 2F Free Fall Problems****Turn in:** How Far Quizlette(Practice 2.3 #1-5, 21, 22) |
| **14****Oct** **10/14** | -Reaction time lab demo**GW**-Work on Free Fall Quizlette **GW**-FA 2.4 | (Practice 2.3 #6-10, 23, 24) |
| **15****Oct** **15/16** | **GW**-Reaction time lab **GW**-Work on Free Fall Quizlette  | **Turn in:** Free Fall Quizlette**Turn in:** Reaction time lab (indiv)(Practice 2.4 #1, 2, 3) |
| **16****Oct** **17/18** | -Questions on FA 2.4?**GW**-Free Fall Group Quiz**SA 2.4 Free Fall (30 minutes)** |  (Practice 2.4 #4, 5, 6**)****Turn in:** Air Rocket Lab (indiv) |
| **17****Oct** **21/22** | -Air Rocket lab-Air Rocket Calculations **DI**-The Range Equation (Magic!!) |  |
| **18****Oct****23/24** | -Warmup – calculate angle-Air Rocket Competition: Hitting a target |  |
| **1****Oct****28/29** | **DI-Vector Components****GW-**Where Oh Where am I? | **VF: 3C, 3D Vectors** |
| **2****Nov 1/****Oct 31** | **Demonstrations involving cider and slides** | **Bring a ceramic Mug** |
| **3****Oct 30/****Nov 4** | **DI-More Vector Components****GW**-Vector Quizlette |  |

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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  |