Physics

Linear Kinematics Unit Syllabus

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|  | Block | Class | Due on this class (Suggested Practice) |
| **M** | **1**  **Sept**  **14** | -Introductions  -What is Physics?  -Index Card survey | Need: Your smiling face |
| **T** | **2**  **Sept**  **15** | -Course basics and Canvas  -Course Policy  -Speed Trap lab description | **Index Card Survey** |
| **Th** | **3**  **Sept**  **17** | -Tour of the Website assignment  -Data collection assignment for No reason to Speed Lab (NRTS)  **-Math pretest** | **VF: Doing Video Flips (VF)**  **VF: Submitting Work on Canvas**  Need: Paper and pencil and a calculator |
| **F** | **4**  **Sept**  **18** | **DI**-Speed  **DI**-Review Dimensional analysis (DA) | **VF: 2A1 - Solving Speed Problems**  **VF: 2A2 - Unit Conversions**  **VF: Tour of the Website** |
| **M** | **5** Sept **21** | -DI – How to do Formative Assessments (FAs)  -NRTS and Homework reminder  **GW**-Work in groups on Speed and DA Quizlette and FA 2.1 | **Turn in:** Speed Trap Lab  **Turn in:** Speed and DA Quizlette  **Turn in:** Course Policy Quiz |
| **T** | **6**  **Sept**  **22** | -Group Quiz on Speed and DA (2.1)  **SA 2.1 Speed (Due by the end of the day Wednesday)**  **GW** -Work on No Reason To Speed Lab | **Turn in:** FA 2.1  Suggested Practice 2.1 #1-8) |
| **Th** | **7**  **Sept**  **24** | **DI** - Vector Velocity  **DI** - Complex Acceleration  **GW**-Work on Acceleration Quizlette | **VF: 2C - Simple Acceleration**  Suggested Practice 2.1 #9-16 |
| **F** | **8**  **Sept**  **25** | **GW**-Finish Acceleration Quizlette  **GW**-Work on No Reason To Speed Lab | **Turn in:** Acceleration Quizlette  **Turn in:** No reason to Speed lab |
| **M** | **9**  **Sept**  **28** | -Group Quiz on Acceleration (2.2)  **SA 2.2 Acceleration (Due by the end of the day Tuesday)** | **Turn in:** FA 2.2  Suggested Practice 2.2 #1-6 |
| **T** | **10**  **Sept**  **29** | **DI**-Tangent lines  **DI**-Qualitative Graphs  **GW**-Graphs of Motion Quiz | **VF: 2G – Position vs. Time Graphs**  **VF: 2H - Velocity graphs**  Suggested Practice 2.2 #17-22 |
| **Th** | **11**  **Oct**  **1** | -Moving Plots Lab demo  **GW**-Labs |  |
| **F** | **12**  **Oct**  **2** | **Lab Help** | **Turn in:** Moving plots lab |
| **M** | **13**  **Oct**  **5** | **ILD** – Graphs of Motion | **VF: 2E Solving Kinematics** |
| **T** | **14**  **Oct**  **6** | **ILD** – Graphs of Motion | **Turn in: Graphs of Motion ILDs** |
| **Th** | **15**  **Oct**  **8** | **DI**-Example Problems  **GW**-How Far Quizlette | **VF: 2F Free Fall Problems**  **Turn in:** How Far Quizlette  Suggested Practice 2.3 #1-5, 21, 22 |
| **F** | **16**  **Oct**  **9** | **GW-**How Far Group Quiz  **GW**-Work on How Far Quizlette  **GW**-FA 2.3 | Suggested Practice 2.3 #6-10, 23, 24 |
| **M** | **17**  **Oct**  **12** | **GW**-Kinematics Group Quiz  **SA 2.3 Kinematics (Due by the end of the day Tuesday)** |  |
| **T** | **18**  **Oct**  **13** | **DI**-Free Fall Demos/Solving  **GW**-Work on Free Fall Quizlette |  |
| **Th** | **19**  **Oct**  **15** | **GW**-Work on Free Fall Quizlette  **GW**-FA 2.4 | **Turn in:** Free Fall Quizlette  Suggested Practice 2.4 #1, 2, 3 |
| **F** | **20**  **Oct**  **16** | **GW**-Free Fall Group Quiz  **SA 2.4 Free Fall (Due by the end of the day Monday)** | Suggested Practice 2.4 #4, 5, 6 |

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| Assignments   * 3 Labs:   + Speed Trap Lab – Timing cars, No handout /20 pts (indiv)   + No Reason to Speed Lab – Spreadsheet and questions /40 pts (indiv)   + Moving Plots Lab – Video Analysis of a glider accelerating /40 pts (pairs) * 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 |