IB Physics

Linear Kinematics Syllabus

Text: *Oxford Physics*

Block	In Class	Due on this class
1 **Sept 6**	-Information card/Introductions -Chromebooks: -Syllabus/Course Policy (Canvas Quiz) -Video Flips/Noteguides (Canvas Quiz) -Speed Trap lab outside **DI**-Calculating Speed and Uncertainty Speed Fractional Uncertainty **DI**-Sig Figs	Bring a calculator, a writing utensil, and paper **Turn in:** Completed information card **Read:** Oxford Reading 1.2: pp. 8-16
2 **Sept 8**	**WU**-Uncertainty -Seating in Quad Pods **DI**-Speed Trap Example **GW**-Group Quiz 1.1/ Speed Trap Lab/FA 1.1	**VF 1A-1E Sig Figs and Uncertainty** **Turn in:** Speed Trap Lab **Turn in:** Group Quiz 1.1 - Uncertainty
3 **Sept 12**	**DI**-Vector Nature of Velocity **SA 1.1 Uncertainty** **VF**-2C,2D (This is what your earbuds are for. While everyone is finishing up their test, you can listen to these video flips)	**VF 2A - Calculating Speed** **VF 2B - Vector Velocity** **Turn in:** FA 1.1 **Read:** Oxford Reading 1.1: pp.1-7
4 **Sept 14**	**WU**-Kinematics **DI**-Example Kinematics **GW**-Group Quiz 2.3 **IW**-FA 2.3	**VF 2C - Acceleration** **VF 2D - Kinematics** **Read:** Oxford Reading 2.1: pp. 28-38
5 **Sept 18**	**WU**-Graphs **DI**-Course Policy **SA 2.3-Kinematics** **VF**-2H, 2F1, 2G1 **IW**-Work on Graphs of motion	**VF 2F, 2G - Graphs of Motion Calculations** **Turn in:** FA 2.3 **Turn in:** Group Quiz 2.3 - Kinematics **Turn in:** Course Policy Quiz (on Canvas)
6 **Sept 20**	**WU**-Free Fall **DI**-Demos for Free Fall **GW**-Group Quiz 2.4 - Free Fall **Lab**-Get tapes for Moving Plots **DI**-How to analyze your tapes	**VF 2H - Free Fall Problems** **Read:** Oxford Reading 2.1: pp. 39-41 **Turn in:** Kinematics Warmups
7 **Sept 22**	**Lab**-Air Rocket data gathering **GW**-Labs	**VF 2F1, 2G1 - Qualitative Graphs of Motion** **Read:** Oxford Reading 1.2: p. 17
8 **Sept 26**	-Go Over VF 2F1, 2G1, and show the graphs lab **GW**-Labs - Canvas GOM, and MPL **DI**-Playing with rangefinders: Cha Cha Cha Lab **GW**-Group Quiz 2.4	**Turn in:** Group Quiz 2.4 - Free Fall
9 **Sept 28**	-Hand out Noteguides/Plan -Air Rocket/MPL **SA 2.4-Free Fall** **IW/GW**-Labs	**Turn in:** FA 2.4/Worksheet 2.4 #1,5,6,7,8 **Turn in:** Group Quiz 2.4 - Free Fall **Turn in:** Canvas Position/Velocity/Acceleration Graph Labs (No worries if they are late)
1 **Oct 2**	**GW**-Graphs of Motion ILDs **IW**-Vector Quizlette #B1-6 Try to get B 1-6 done)	**VF 3A - Types of Vectors** **VF 3B - Finding Vector Components** **Turn in:** Graphs of Motion ILDs
2 **Oct 4**	**GW**-Vectors Group Work	**VF: 3C, 3D, 3E - Vector operations** **Turn in:** Moving Plots lab **Turn in:** Air Rocket lab

Assignments

- 4 Labs:
    - Speed Trap Lab – done the first day of class, written up the second day. No handout
    - Air Rocket Lab-outdoors
    - Moving Plots Lab – tape timer dots thingy
    - Plot Matching Lab – matching the plots on the computer/written note saying you did it. No handout
- 3 Formative/Summative Assessments:
    - 1.1 Propagation of Uncertainty
    - 2.3 Basic Kinematics
    - 2.4 Free Fall Kinematics

- **Columns:**
    - **Block** - The top number is the block number - 1, 2, 3, etc. The date is below that.
    - **Class** - What we are doing in class
    - **Due** - What is due that class. **All Video Flips are due before school on the day they are due**, everything else is due at the end of the day unless otherwise noted.
- **SA** – Summative Assessment. (A short test with 5 questions typically)
- **FA** – Formative Assessment. (A practice test you take before the test. Very much like the test. Be sure to grade it and correct it. Write "graded" on the top so I know you graded it)
- **VF** – Video Flip. (Watch the videos, take notes, try some of the example problems, and then use your notes to take the short quiz at the end. These are due without exception before school on the day they are due. (i.e. before class))
- **DI** – Direct Instruction. (I will talk in class. A Lecture. Hopefully witty and informative.)
- **GW** – Group Work. (You work in your quad pods)
- **IW** – Individual Work. (Do this by yourself. All SAs are IW of course, your FAs should be IW)
- **ILD** - Interactive Lecture Demo - predict as a group and individually the outcome of a demonstration.
- **WU** - Warmup (You will do this with a random person from the class, and we will all report back)

Canvas - I have a system for organizing items in modules.

- **1-Course Policy Quiz** - The 1 at the beginning is the day of the calendar it is associated with. It is when I would hand this assignment or paper out normally
- **2-VF1B Basic Uncertainty** - This is what the video flips look like - they have videos in them and a quiz at the end. **Due the night before at midnight**
- **4-Worksheet 2.3** - These are usually a bunch of practice problems - usually they have videos associated with them, and usually they are optional. Check the calendar, and Canvas.
- **4-FA2.3 Basic Kinematics**- This is what a practice test or Formative assessment looks like. Due before you take the test.
- **5-SA2.3 Basic Kinematics** - This is what a Summative Assessment (test) looks like.