IB Physics

Magnetism and Induction

Chapter 20, 21 Syllabus

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|  | Class  | Due on this class | If you miss this class |
| 1Feb7 | -Intro to Magnetism-Magnetic Field lines/Domains/Currents-Force on current-carrying wires: Magnitude and direction-Force on charged particles – motion in B fields-Hand out FA20.1,2 |  | **Read:** 20.1-3, 5**Watch:** Videos A, B |
| 2Feb9 | -Force on charged particles – motion in B fields -Crossed field problems: Eq = qvB-The Hall Effect | **Check:** P20.2 1abc, 2abc, 3abc**Check:** FA20.1 | **Read:** 20.4,11,12**Watch:** Videos C, D, E |
| 3Feb13 | -Hysteresis - a demo I probably shouldn't do...-Ampere's Law-Galvanometers and Speakers-DC Motors | **Check:** P20.2 1de, 2de, 3de**Turn in:** P20.2 1-3**Turn in:** FA20.1 | **Read:** 20.5,6,8,10**Watch:** Videos G, H1 |
| 4Feb15 | -Lenz's discovery and magnetic flux-Electromagnetic induction-Lenz's law-Induced EMF in moving conductors-Hand out FA21.1,2 | **Video Flip: Solenoids (H2)** | **Read:** 20.7**Read:** 21.1-2**Watch:** Videos H2**Watch:** Videos A, B, C |
| 5Feb20 | -My friend eddy-Alternators-Solving voltages, currents and power in transformers -Transmission of electrical power | **Check:** P21.1 5abc, P21.2 1abc, 2abc**Check:** FA21.1 | **Read:** 21.3,5,7**Watch:** Videos D, E, F |
| 6Feb22 | -Magnetic field patterns for Solenoids, Wires, and Flat coils-Lab Explanations-Hand out FAs | **Check:** P21.2 1de, 2de, 3de**Turn in:** P21.2 1-3**Turn in:** FA21.1 | **Read:** 20.2,5,7**Watch:** Videos K (from 20) |
| 7Feb 26 | -Work on Labs | **Check:** **Ch 20:** 3,9,16(2.5E6 m/s, 4.1 mm) | Come in before or after school to make up the labs |
| 8Mar 1 | -Work on Labs | **Check:** **Ch 21:** 5,13,15 | Come in before or after school to make up the labs |
| 9Mar5 | Summative Assessments on:SA20.1 - Right Hand RulesSA20.2 - Forces on Wires and ParticlesSA21.1 - Lenz's LawSA21.2 - Electrical Induction | **Turn in:** FA 20.1, 20.2, 20.3, 21.1, 21.2**Turn In:** **20:** 3,9,16, **21:** 5,13,15 | Make up the assessments |
| 10Mar7 | Atomic and Nuclear!!! | **Turn In:** MagnaProbe Lab**Turn In:** Magnet Design Lab**Turn In:** Specific Heat of Water(**Turn In:** Index of Refraction) - IB only |  |
| Assignments* 3 Labs:
	+ MagnaProbe Lab – Station exploration of magnetic fields
	+ Magnet Lab – student designed lab – no handout
	+ Specific Heat of Water lab
* 5 Formative, 4 Summative Assessments
	+ 20.1 – Right Hand Rules
	+ 20.2 – Forces on Wires and Particles
	+ 20.3 - Ampere's Law (no summative)
	+ 21.1 – Lenz's Law
	+ 21.2 – Electrical Induction
* 6 Book Problems: **20:** 3,9,16, **21:** 5,13,15
 | Handouts |