

L-day 5 CLASS: 1.) talk about solenoids 2.) talk about shortcut to finding force between current-carrying wires 3.) begin looking at devices: Hall effect, motors, speakers, doorbells, ramp problem, galvanometers, other demos;	Day 6	CLASS: 1.) finish up	CLASS: TEST 11 (magnetism)	L-day 3 CLASS: 1.) go over test; 2.) 45 min period--Speed Test
HMWK: 1.) if you have time--from Fletch's chapter on Magnetism, Prob 16.11, 12, 20 and 21;	Chipotle night from 5:30 to 7:00 pm	HMWK: 1.) prepare for test;	HMWK: 1.) relax	HAVE A GREAT SPRING BREAK
3/18	3/19	3/20	3/21	3/22
Spring Break	Spring Break	Spring Break	Spring Break	Spring Break
3/25	3/26	3/27	3/28	3/29
Spring Break	Spring Break	Spring Break	Spring Break	Spring Break
4/1	4/2	4/3	4/4	4/5
CLASS: 0.) ask who isn't going on MM trip 1.) begin Faraday's Law and induction section with mini-lab (Island Series--induction); 2.) do horseshoe magnetic and coil demonstration--talk about classical explanation; 3.) do horseshoe magnetic and coil demo--talk about it from Faraday's perspective; 4.) define magnetic flux mathematically	CLASS: 1.) reiterate horseshoe magnetic demo--point out that rotating coil in power plants generates AC; 2.) redefine magnetic flux in more complete way, complete with example calculation; 3.) present Faraday's Law both in short and expanded form; 4.) do a full problem (a. what flux, b. what induced EMF, c. what's current (given R), d. what's i's direction (can't do until define Lenz's Law); 5.) talk about Edison and Tesla	Day 6	CLASS: 1.) finish problem; 2.) talk about Lenz's Law; 3.) do Faraday's Law Lab--PhET; 4.) start discussion about transformers	CLASS: 0.) test on Wednesday 1.) collect PhET labs; 2.) do lab/demo of rail gun--introduce idea of transformers during the talk; 3.) talk more fully about transformers (show yoke ppt); 4.) talk about what will happen if the primary coil is attached to an AC source; 5.) show symbol for a coil in a circuit, and the symbol for a transformer (the two coils making up the transformer); 6.) talk about Edison and power production) (should have done yesterday) 7.) finish PhET lab
HMWK: ASSIGNED: 1.) do Prob 20.1 and 20.4 (this last one is tricky--THINK ABOUT IT before turning to the solutions--how do magnetic fields act around current-carrying wires, and how is magnetic flux mathematically defined--this is all about knowing how the variables are defined!)	HMWK: ASSIGNED: 1.) do Prob 20.10; 2.) from Fletch's Chapter on Induction (Ch 17), do Prob's 17.1, 17.2, 17.3 and 17.4 (these are all possible test questions). XtraWrk: 3.) do Prob 20.1 and 20.4 (this last one is tricky--THINK ABOUT IT before turning to the solutions--how do magnetic fields act around current-carrying wires, and how is magnetic flux mathematically defined--this is all about knowing how the variables are defined!)		HMWK: ASSIGNED: 1.) do Prob 20.15 and 20.30; 2.) if you want to see the video on motional EMFs, it is at http://youtu.be/4hZhrUNUz8	HMWK: ASSIGNED: 1.) do Prob 20.45 and 20.48; 2.) from Fletch's Induction chapter (Ch 17), look at Prob's 17.5, 17.7-9, 17.13 and 17.15 (these are all possible test questions);
4/8	4/9	4/10	4/11	4/12

<p>L-day 5</p> <p>CLASS:</p> <ol style="list-style-type: none"> 1.) look at motional EMF's by looking at Prob 20.67 (FL 4); 2.) look at motional emfs ppt; 3.) discuss eddy currents; 4.) show eddy current demo--rotating disk; 5.) talk about inductance in RL circuits; 6.) show current versus time graph for an inductor 7.) talk about time constant for RL circuit 	<p>CLASS:</p> <ol style="list-style-type: none"> 1.) show Al foil dropping through magnetic field demo; 3.) show magnet through wrapped coils and LEDs demo; 4.) tell "bar sliding down incline in B-field story" and do demo; 5.) tell pendulum story 	<p>CLASS:</p> <p>TEST 12 (Faraday's Law)</p>	<p>Day 6</p>	<p>CLASS:</p> <ol style="list-style-type: none"> 1.) go over test; 2.) prepare for Magic Mountain trip (spent all day doing this) 3.) 3.)
<p>HMWK:</p> <ol style="list-style-type: none"> 1.) if you have nothing else to do and want something challenging to chew on, try Prob 20.67; 	<p>HMWK:</p> <ol style="list-style-type: none"> 1.) prepare for test-- 2.) CHIPOTLE NIGHT tonight from 5:30-7:00 PM 	<p>HMWK:</p> <ol style="list-style-type: none"> 1.) relax 		<p>HMWK:</p> <p>ASSIGNED:</p> <ol style="list-style-type: none"> 1.) from Fletch's book, do Prob 13.31, 32 and 33; 2.) skim first half of Fletch's Chapter 15 (it's on semiconductors)
4/15	4/16	4/17	4/18	4/19
<p>Magic Mountain trip</p>	<p>CLASS:</p> <ol style="list-style-type: none"> 1.) show AC demo (heartbeating speaker); 2.) talk about AC and RMS values; 3.) talk about how oscilloscopes work if time (didn't do this year--on Thursday); 	<p>CLASS:</p> <ol style="list-style-type: none"> 1.) talk about semiconductors; 2.) talk about diodes (half-wave rectifiers); 3.) talk about LED's; 4.) talk about full wave rectifiers 	<p>CLASS:</p> <ol style="list-style-type: none"> 0.) CHANGING TEST FOR NEXT WEDNESDAY (but am extending MM lab due date until a week from Friday); 1.) do transistors 2.) talk about circuit elements in AC circuits -- RL, RC, and RLC circuits, and impedance; finish up RLC circuits and impedance; 	<p>Day 6</p>
<p>HMWK:</p> <ol style="list-style-type: none"> 1.) Write up Magic Mountain lab (this will be due next Monday, 4/22) 	<p>HMWK:</p> <ol style="list-style-type: none"> 1.) skim last half of Fletch's chapter on semiconductors (Ch 15)--look at chapter end problems (they are all qualitative and similar to what you will run into on your last test) 	<p>HMWK:</p> <ol style="list-style-type: none"> 1.) from Fletch's book skim Circuits 13, parts B and E (this has to do with AC circuits and RMS values); 2.) from Fletch's book skim Circuits 14, part F (this has to do with capacitors in AC circuits); 3.) from Fletch's book skim Circuits 17, part H (this has to do with inductors in AC circuits); 	<p>HMWK:</p> <p>ASSIGNED:</p> <ol style="list-style-type: none"> 1.) From Fletcher's book, do 13.34 and 13.35 	
4/22	4/23	4/24	4/25	4/26
<p>CLASS:</p> <ol style="list-style-type: none"> 1.) talk about Chipotle night; 2.) talk about radios (last topic for the test) 	<p>CLASS:</p> <ol style="list-style-type: none"> 1.) finish radio tear into VCRs 	<p>L-esy 5</p> <p>CLASS:</p> <ol style="list-style-type: none"> 1.) learn how to solder 	<p>CLASS:</p> <p>TEST 13 (AC circuits, RMS values, RLC circuits, semiconductors, diodes, transistors, and radios)</p>	<p>CLASS:</p> <ol style="list-style-type: none"> 1.) MAGIC MOUNTAIN LAB DUE; 2.) go over test; 3.) second day of soldering
<p>HMWK:</p> <ol style="list-style-type: none"> 1.) begin to prepare for test--Chipotle night; 2.) If you are confused about what's happening in class, read Fletch's Ch18 Part C and D (this talks about circuit elements in AC circuits and how RLC circuits can be used to "tune" a radio circuit); 3.) look at video zPoly 48 (reactance, impedance in RL and RC, AC circuits) at http://youtu.be/1R9Rj--74IQ 	<p>HMWK:</p> <ol style="list-style-type: none"> 1.) prepare for test; 2.) if you are confused about what's happening in class, finish skimming through Fletch's chapter 18 (it's about AM radios in general) 	<p>HMWK:</p>	<p>HMWK:</p> <ol style="list-style-type: none"> 1.) relax 	<p>CLASS:</p>
4/29	4/30	5/1	5/2	5/3

Day 6	CLASS: 1.) introduce breadboarding;	CLASS: 1.) introduce the solar robot lab 2.) learn how to solder	L-day 3 CLASS: 1.) work on solar robots	CLASS: 1.) determine when we'll meet in next two weeks to determine day for Parting Shot and for end-of-year demonstrations; 2.) continue working on solar robot
5/6	5/7	5/8	5/9	5/10
U.S. Govt AP; Art History CLASS: 1.)	Day 6	English Lit; Comp Sci CLASS: 1.) Don't meet (19)	Chinese Lang; Psych CLASS: 1.)	L-day 3 U.S. History; Spanish Lit CLASS: 1.)
5/13	5/14	5/15	5/16	5/17
Calculus CLASS: 1.) don't meet (18)	English Lang; Physics C CLASS: 1.) Parting shot	Day 6 French Lang AP; Comp Sci Prin; Music Theory AP	Spanish Lang; Biology CLASS: 1.) (3)	Latin CLASS: 1.) demos
5/20	5/21	5/22	5/23	5/24
L-day 3 CLASS: 1.) senior last day	CLASS: 1.) senior week	CLASS: 1.) senior week	Day 6 (senior week)	CLASS: 1.) senior week
5/27	5/28	5/29	5/30	5/31
Memorial Day Holiday SENIOR TRIP	BLOCK DAY/SENIOR TRIP	BLOCK DAY/SENIOR TRIP	BLOCK DAY/SENIOR TRIP	BLOCK DAY/SENIOR TRIP