



## HOMEWOOD-FLOSSMOOR HIGH SCHOOL COURSE SCOPE & SEQUENCE



Semester 1 '11 – '12

Department: Science    Course: CP Principle of Physics    Instructor(s): Phillips and Gioiosa

This course is aligned to:    **College Readiness Standards and/or College Board Standards**    Other: Illinois Learning Standards

*The Homewood-Flossmoor High School Course Scope & Sequence provides parents and students with a semester-long overview of each class that we offer. **An instructor may alter a course's scope & sequence as needed.** Students are responsible for keeping track of due dates and other pertinent course information in their H-F Student Planners. Parents, please contact your child's teacher by telephone or e-mail to clarify any questions you may have about the scope & sequence of a particular course.*

WEEK	COLLEGE READINESS AND/OR COLLEGE BOARD CONTENT STANDARDS	INSTRUCTIONAL CONTENT	ACTIVITIES, READINGS, LABS, AND/OR ASSIGNMENTS	MAJOR ASSESSMENTS	OTHER
WEEK #1 8/15 – 8/19 First day for students: 8/17		-Introduction	Teambuilding	ACT Science	
WEEK #2 8/22 – 8/26	S.I.C.1-3 S.II.C.1-4 S.III.e.1-3 M.I.d.1 M.III.d.1-9	-Math Review Introduction to Inquiry -Data Collection -Data Analysis -Conclusion writing -Hypothesis writing	-Gravity Book Lab -Falling Object Lab -Graphing	Seating Chart Assessment (All assessment are given on Mondays for the previous week's work)	
WEEK #3 8/29 – 9/2 PLC day: 9/2	S.I.C.1-3 S.II.C.1-4 S.III.e.1-3 M.I.d.1 M.III.d.1-9	Math Review -Data Collection -Data Analysis -Variables	-Walking Short v. Tall Lab -Pendulum Lab	Intro to Inquiry Quiz Pendulum Lab Test (Practicum)	
WEEK #4 9/5 – 9/9 No school: 9/5	S.I.C.1-3 S.I.e.1-3 S.III.c.1-3 M.V.d.1-4	-Distance/Displacement	Introduction to Logger Pro Read Holt 1	Hallway Vector Lab	



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WEEK #5 9/12 – 9/16 Pep Assembly: 9/16	S.I.c.1-3 S.I.e.1-3 S.III.c.1-3 M.V.d.1-4	-Constant Velocity speed vs velocity average velocity instantaneous velocity	LoggerPro Practice	-Distance /Displacement Quiz	
WEEK #6 9/19 – 9/23 PLC day: 9/23	S.I.c.1-3 S.I.e.1-3 S.III.c.1-3 M.V.d.1-4	Constant Velocity -Graphing x vs t	LoggerPro Data Manip.	Unit 1 Test	
WEEK #7 9/26 – 9/30	S.I.c.1-3 M.I.d.1 S.III.d.1-6 S.I.d.1-6 R.II.c.1-2	Constant Velocity -Analyzing x vs t graphs	Google Earth Activity Battery Cart Lab	Constant Velocity Quiz	
WEEK #8 10/3 – 10/7 PLC day: 10/7	S.I.c.1-3 M.I.d.1 S.III.d.1-6 S.I.d.1-6 R.II.c.1-2	Acceleration -Basic Equations	Cart on Ramp Lab Read Holt 2.1	Battery Cart Practicum	
WEEK #9 10/10–10/14 No school: 10/10 All School Testing: 10/12	S.I.c.1-3 M.I.d.1 S.III.d.1-6 S.I.d.1-6 R.II.c.1-2	-Graphical Acceleration -Change in Motion Analysis of Acceleration	Bowling Ball Read Holt 2.2	Acceleration Quiz 1	
WEEK #10 10/17 –10/21 End of 1 <sup>st</sup> Quarter: 10/21	S.I.c.1-3 M.I.d.1 S.III.d.1-6 S.I.d.1-6 R.II.c.1-2	Acceleration -Incorporation of Multiple Acceleration Equations	Cart on Ramp Lab 2	Cart on Ramp Practicum Acceleration Quiz 2	



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WEEK #11 10/24–10/28 PLC day: 10/28	<ol style="list-style-type: none"> <li>1. S.I.c.1-3</li> <li>2. M.I.d.1</li> <li>3. S.III.d.1-6</li> <li>4. S.I.d.1-6</li> <li>5. R.II.c.1-2</li> </ol>	Acceleration due to gravity -Free Fall	Read Holt 2.3 Bleacher Drop Lab Picket Fence Lab	Unit 2 Test	
WEEK #12 10/31 – 11/4 Soph. Plan Test; Parent/ teacher conferences: 11/3 No school: 11/4	<ol style="list-style-type: none"> <li>1. S.I.c.1-3</li> <li>2. M.I.d.1</li> <li>3. R.II.c.1-2</li> <li>4. M.V.d.1-4</li> <li>5. S.II.c.1-4</li> </ol>	Projectiles -Trig Review	Read Holt 3.3 Table Top Lab Matchbox Lab	Free Fall quiz	
WEEK #13 11/7 –11/11 No school: 11/11	<ol style="list-style-type: none"> <li>1. S.I.c.1-3</li> <li>2. M.I.d.1</li> <li>3. R.II.c.1-2</li> <li>4. M.V.d.1-4</li> <li>5. S.II.c.1-4</li> </ol>	Projectiles Horizontal Projectiles	Read Holt 3.3 Launcher Lab	Trig Review Quiz	
WEEK #14 11/14 –11/18 PLC day: 11/18	<ol style="list-style-type: none"> <li>1. S.I.d.1-6</li> <li>2. S.I.c.1-3</li> <li>3. S.III.c.1-3</li> <li>4. M.V.d.1-4</li> </ol>	Projectiles At an angle	Projectiles Lab	Projectiles Quiz Unit 3 Test	
WEEK #15 11/21 – 11/25 No school: 11/24 &11/25		Force -Conceptual Forces -Types of Forces	Force Demos Holt 4.1		



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WEEK #16 11/29 – 12/2	<ol style="list-style-type: none"> <li>1. S.I.c.1-3</li> <li>2. M.I.d.1</li> <li>3. R.II.c.1-2</li> <li>4. M.V.d.1-4</li> <li>5. S.II.c.1-4</li> </ol>	Force -Force Diagrams -Balanced Forces	Balance Forces Lab Friction Lab	Force Quiz 1	
WEEK #17 12/5 – 12/9 PLC day: 12/9	<ol style="list-style-type: none"> <li>1. S.I.c.1-3</li> <li>2. M.I.d.1</li> <li>3. R.II.c.1-2</li> <li>4. S.II.c.1-4</li> </ol>	Force -Unbalanced Force - $F=ma$ -Newton's Laws of Motion	Newton's Laws Lab Read Holt 4.2-4.4	Force Quiz 2	
WEEK #18 12/12 – 12/16	<ol style="list-style-type: none"> <li>1. S.I.c.1-3</li> <li>2. M.I.d.1</li> <li>3. R.II.c.1-2</li> <li>4. M.V.d.1-4</li> <li>5. S.II.c.1-4</li> </ol>	Energy/Work/Power -Energy Calculations -Conservation of Energy	SkatePark Lab Read Holt 5.2-3	Newton's Laws Quiz Unit 4 Test	
WEEK #19 12/19 – 12/23 Winter Break Begins 12/21	<ol style="list-style-type: none"> <li>1. S.I.C.1-3</li> <li>2. S.II.C.1-4</li> <li>3. S.III.d.1-4</li> <li>4. M.I.d.1</li> <li>5. M.III.d.1-9</li> </ol>	Energy/Work/Power -Power -Work	Read Holt 5.1 and 5.4	Conservation of Energy Quiz	
WEEK #20 1/2– 1/6 Classes Resume 1/4	<ol style="list-style-type: none"> <li>1. S.I.C.1-3</li> <li>2. S.II.C.1-4</li> <li>3. S.III.d.1-4</li> <li>4. M.I.d.1</li> <li>5. M.III.d.1-9</li> </ol>	Momentum -Inelastic and Elastic Collisions	Read Holt 6.1-6.3	Practice Final	Bridge Extra Credit Due



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WEEK #21 1/9 – 1/13 Finals: 1/9 – 1/11 Marking Day: 1/12 Institute Day: 1/13		Review		Final Exam	
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Semester 2 '11 –'12 Department: Science Course: CP Principle of Physics Instructor(s):Phillips and Gioiosa  
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WEEK #1 1/16 – 1/20 No school: 1/16	S.I.b.2	Electrostatics -Basics	R- HOLT pg 558-563 L – Static Electricity lab D- Van Der Graff N- Charge/Static PP W- Attraction Review	Q- Semester 2 Math Check	Distribute Syllabus, Rules, Contracts
WEEK #2 1/23 – 1/27 PLC day: 1/27	S.I.d.4 S.I.d.5 S.I.d.6	Electrostatics - Electric Fields and Potential	R- HOLT 564-571 L- Phet Balloon and Static Electricity L- Phet John Travoltage N- Diagramming Fields PP W- CDP 32.2 W- Drawing Fields	Q- Basic Electrostatics	Safety Contracts Due
WEEK #3 1/30 – 2/3	S.I.f.2	Electrostatics - Electric Fields and Potential continued	R- HOLT 572-579 L- Phet Electric Field of Dreams W- Exercises 15.5 W- CDP 32.1 W- CDP 33.1 L- Phet Charges and Fields	W- Exercises A15 1-15	Distribute 3 <sup>rd</sup> Quarter Extra Credit Opportunity
WEEK #4 2/6 – 2/10	M.IV.b.2	Electrostatics -Current	R- HOLT 608-611 W- CDP 34.1	L- Phet Ohms Law	Optional Lab- Phet Electric Field



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PLC day: 2/10		-Ohm's Law (voltage, current, resistance)	W- CDP 34.2 L- Phet Resistance of a Wire W- BOP Slides		Hockey
WEEK #5 2/13 – 2/17	M.IV.f.1	Electrostatics -Current -Ohm's Law (voltage, current, resistance)	R- HOLT 612-616 N- Electrostatics L- Volt Meters W- Hewitt p. 546-547 26-52 L- Phet Battery Voltage W- Exercises 16.1- 16.3	W- Exercises A16 1-15 Q- Current/Ohm's Law	
WEEK #6 2/20 – 2/24 No school: 2/20 PLC day: 2/24	SII.c.4 SII.d.2	Electrostatics -Circuits	R- HOLT 640-646 L- McGuyver Flashlight L- Phet Circuit Construction Kit N- Circuits PP W- CDP 35.1 W- Exercises 16.4	W- Exercises 16A 1-15	
WEEK #7 2/27 – 3/2	S.I.d.1 S.I.f.1	Electrostatics -Circuits continued	R-HOLT 647-656 W- CDP 35.2 L- Simple/Series Circuits W- Breaker Box Planning W- Hewitt p. 559- 600 1-15 W- Hewitt p. 600-601 16- 33	A- House Wiring Q- Unit Test Electrostatics	
WEEK #8 3/5 – 3/9 No School: 3/5 Institute Day 3/6	S.I.a.3 S.I.b.3 S.I.f.2	Magnetism -Concepts -Motors	R- 678-683 N- Magnets/Diagrams L- Inquiry Magnets L- Phet Magnets and Electromagnets W- CDP 36.1 W- Exercises 37.1- 37.2 W- Hewitt p. 575-576 1-32	W- Exercises 17A 1-15	Optional Labs Phet- Generator
WEEK #9 3/12 – 3/16 PLC day: 3/16	SIII.d.1 SIII.d.2 SIII.d.3 SIII.d.4	Waves -Basics -Properties (wavelength/frequency)	R- HOLT 382-388 W- CDP 25.2 N- Wave PP L- Wave Generator	A- TurningPoint Review (electricity and magnetism)	



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	SIII.d.5		L- Phet Wave on a String W- Hewitt p 388 1-20		
WEEK #10 3/19 – 3/23 End of 3 <sup>rd</sup> Quarter: 3/23	S.I.e.1 S.I.e.2	Waves continued - Wave interactions	R- HOLT 389-394 W- CDP 25.1 W- CDP 25.3 L- Phet Wave Interference N- Extra Credit Presentations	W- Exercises A12 1-15 Q- Wave Basics	3 <sup>rd</sup> Quarter Extra Credit Project Due



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WEEK #11 4/2 – 4/6 No School: 4/6	S.II.b.1	Waves- Sound	R- HOLT 408-413 W- CDP 26.1 L- Straw Flutes W- Hewitt p. 401-402 1-20 L- 2D Wave Lab		
WEEK #12 4/9 – 4/13 PLC day: 4/13	S.II.d.3	Waves- Sound continued	R- HOLT 414-420 W- Hewitt p. 402-403 21-39 L- Speed of Sound L- Build Speaker W- Exercises 12.3	A- Sound Quiz	
WEEK #13 4/16- 4/20	S.II.f.2	Waves- Light	R- HOLT 446-450 W- Exercises 13.1 N- Light PP W- CDP 29.2 W- CDP 29.1		Distribute 4 <sup>th</sup> Quarter Extra Credit Project
WEEK #14 4/23 – 4/27 PSAE: 4/24 & 4/25		Waves- Light Continued	W- Exercises 13.2 W- Hewitt p. 419-420 1-23 L- Phet Color Vision W- Hewitt p. 420 24-36 W- CDP 27.2 L- Light Walk-a-Round	Q- Waves/Light	
WEEK #15 4/30 – 5/4 PLC day: 5/4	S.II.e.2	Waves- Light -Color	R- HOLT 469-474 L- Color and Polarization W- Hewitt p 439-440 1-25 W- Hewitt p. 440-441 26-45 W- CDP 27.2 N- Reflection	A- TurningPoint Review	
WEEK #16 5/7 – 5/11	S.II.e.3	Waves- Reflection	R-HOLT 451-454 L- Phet Geometric Optics L- Single Mirror Reflection L- Double Mirror Reflection	Q- Light/Color W- Exercises 13A 1-13	Distribute Semester Review Packet



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			R- Chapter 29 W- Hewitt p. 460-461 1-25 W- CDP 29.1 W- CDP 29.2		
WEEK #17 5/14 – 5/18 PLC day: 5/18	S.II.f.1	Waves- Reflection Waves- Refraction	R-HOLT 455-468, 488-493 N- Curved Mirrors (equations and drawings) L- Curved Mirrors N- Refraction W- CDP 29.3 W- CDP 29.4 W- Hewitt p. 461-462 26-41		
WEEK #18 5/21 – 5/25 Seniors' last day: 5/24	S.III.f.1 S.III.f.2	Waves- Light -Lenses	R- HOLT 494-505 N- Lens Drawings W- Hewitt p. 477-478 1-28 W- Exercises 14.1- 14.2 W- CDP 30.2 L- Ray Box (lens)	Q- Reflection/Refraction W- Exercises A14 1-13	4 <sup>th</sup> Quarter Extra Credit Due
WEEK #19 5/28 – 6/1 No school: 5/28 Final Exams: 5/29 – 5/31 Marking Day: 6/1	S.I.c.2		W- Hewitt p. 478-479 29-34 L- Physics Olympics	Q- Lenses A- TurningPoint Review for the Final	Final Review Packet Due