



HOMEWOOD-FLOSSMOOR HIGH SCHOOL COURSE SCOPE & SEQUENCE



Semester 1 '10 – '11
This course is aligned to:

Department: Science Course: 4015: Biology with Reading
College Readiness Standards and/or College Board Standards

Instructor(s): S. Byrne

*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	STANDARDS	INSTRUCTIONAL CONTENT	ACTIVITIES, READINGS, LABS, ASSIGNMENTS	MAJOR ASSESSMENTS	OTHER
WEEK #1 8/16 – 8/20 No school: 8/16 & 8/17	S.I.b.2. S.I.b.3.	Nature of Science and Inquiry	Safety and Equipment Safety Contract Predicting Strategies	Safety Quiz Equipment Quiz	
WEEK #2 8/23 – 8/27	S.II.b.1. S.II.c.2. S.II.c.3. S.II.c.4. R.II.a.1.	Nature of Science and Inquiry	Scientific Method Redi's Experiment Predicting Strategies	M&M Lab Design and Experiment	
WEEK #3 8/30 – 9/3 PLC day: 9/3	S.I.b.2. S.I.b.3. S.I.c.3. R.II.a.1 11.A.4c	Nature of Science and Inquiry	Metric System Graphs Predicting Strategies	Metric Lab Graphing Activity	
WEEK #4 9/6 – 9/10 No school: 9/6 Pep assembly: 9/10	S.I.b.2. S.I.b.3. R.I.d.3	Nature of Science and Inquiry	Microscope Characteristics of Living Things Summarizing Strategies	Microscope Lab What is Living Lab	
WEEK #5 9/13 – 9/17	S.I.b.2. S.I.b.3. R.I.d.3. 12.A.3a 12.A.4b	The Cell	The Cell Discovery and Theory Prokaryote v Eukaryotes Summarizing Strategies	Cell Theory Timeline Prokaryotes and Eukaryotes Comparison	



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WEEK #6 9/20 – 9/24 PLC day: 9/24	S.I.b.2. S.I.b.3. R.I.d.3	The Cell	The Cell Cell Structure / Function Plant and Animal Cells Summarizing Strategies	Cell Doctor Activity Cell Comparison Project Cell Structure Activity	
WEEK #7 9/27 – 10/1	S.I.b.2. S.I.b.3. R.I.d.3	The Cell	Membrane Structure and Types Osmosis Diffusion Active and Passive Transport Summarizing Strategies	Cell Membrane Activity and/or Lab Osmosis Diffusion Lab Unit Exam	
WEEK #8 10/4 – 10/8 PLC day: 10/8	S.I.b.2. S.I.b.3. R.I.d.3	Cellular Respiration	Glycolysis Fermentation: Alcoholic and Lactic Acid Predicting and Summarizing Strategies	Fermentation Lab Muscle Lab Unit Exam	
WEEK #9 10/11 – 10/15 No school: 10/11 All School Testing: 10/13	S.I.b.2. S.I.b.3. R.I.d.3	Photosynthesis	Process of Photosynthesis Autotrophs and Heterotrophs ATP and ADP Predicting and Summarizing Strategies	Absorption of Chlorophyll Active Reading: Energy and Photosynthesis Photosynthesis Quiz	
WEEK #10 10/18 – 10/22 End of 1 st Quarter: 10/22	S.I.b.2. S.I.b.3. R.I.d.3	Photosynthesis and Cellular Respiration	Photosynthesis History and Overview Pigments and Chlorophyll Structure of a Chloroplast Light and Dark Reactions Predicting and Summarizing Strategies	Photosynthesis Lab	



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WEEK #11 10/25 –10/29 PLC day: 10/29	S.I.b.2. S.I.b.3. R.I.d.3	DNA	DNA Structure and Function Nucleotides Connecting strategies	Genetic Code Problems Building a DNA Model	
WEEK #12 11/1 – 11/5 Parent/teacher Conferences: 11/4 No school: 11/5	S.I.b.2. S.I.b.3. R.I.d.3	DNA and Protein Synthesis	Chromosomes, DNA Replication Structure of RNA Types of RNA Connecting Strategies	Weekly Quiz	
WEEK #13 11/8 –11/12 No school: 11/11	S.I.b.2. S.I.b.3. R.I.d.3	Protein Synthesis	RNA and Protein Synthesis Transcription Translation Anticodons Connecting Strategies	Weekly Quiz Protein Synthesis Lab	
WEEK #14 11/15 –11/19 PLC day: 11/19	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4a	Mitosis and Meiosis	Cell division notes Mitosis online lab Questioning Strategies	Weekly Quiz	
WEEK #15 11/22 – 11/26 No school: 11/25 &11/26	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4a	Mitosis and Meiosis	Onion root tip lab Cancer Meiosis Questioning Strategies	Mitosis Quiz	



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WEEK #16 11/29 – 12/3	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4a	Mitosis and Meiosis	Mitosis and meiosis comparison lab Mitosis and meiosis illustrations Meiosis and karyotyping online lab Questioning Strategies	Cancer Project	
WEEK #17 12/6 – 12/10 PLC day: 12/10	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4a	Mitosis and Meiosis Genetics	Mitosis and meiosis review Genetics notes Connecting and Questioning Strategies	Mitosis and meiosis exam	
WEEK #18 12/13 – 12/17	S.I.b.2. S.I.b.3. R.I.d.3 12.A.5b	Genetics	Monohybrid crosses Baby lab Incomplete dominance notes Connecting and Questioning Strategies	Weekly Quiz	
WEEK #19 1/3 – 1/7	S.I.b.2. S.I.b.3. R.I.d.3	Genetics	Sex-linkage problems Pedigrees Connecting and Questioning Strategies	Weekly Quiz Unit Exam	
WEEK #20 1/10 – 1/14 Finals: 1/11 – 1/13 Marking Day 1/14	Tuesday: Periods 2 and 3 Wednesday: Period 4 and 5 Thursday: Period 6 and 7 Friday: Marking Day (No Classes)				



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Semester 2 '10 – '11
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WEEK #1 1/17 – 1/21 No school: 1/17	S.I.b.2. S.I.b.3. R.I.d.3	Genetics	Pedigree lab Dihybrid crosses Inferring Strategies	Weekly Quiz	
WEEK #2 1/24 – 1/28 PLC day: 1/28	S.I.b.2. S.I.b.3. R.I.d.3	Genetics	Blood typing notes Blood typing problems Blood typing online lab Inferring Strategies	Weekly Quiz	
WEEK #3 1/31 – 2/4	S.I.b.2. S.I.b.3. R.I.d.3	Genetics	Blood typing lab Genetics review packet Inferring Strategies	Weekly Quiz	
WEEK #4 2/7 – 2/11 PLC day: 2/11	S.I.b.2. S.I.b.3. R.I.d.3	Genetics	Blood typing lab Genetics review packet Imaging Strategies	Genetics Exam	
WEEK #5 2/14 – 2/18	S.I.b.2. S.I.b.3. R.I.d.3	DNA Technology	Biotechnology Murder on Halsted lab Family Secrets Activity Imaging Strategies	Weekly Quiz	
WEEK #6 2/21 – 2/25	S.I.b.2. S.I.b.3.	DNA Technology	Family secrets part II Family secrets part III	Weekly Quiz	



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No school: 2/21 PLC day: 2/25	R.I.d.3		GATTACA Bioethical decision making activity Imaging Strategies		
WEEK #7 2/28 – 3/4	S.I.b.2. S.I.b.3. R.I.d.3	DNA Technology	Family secrets part II Family secrets part III GATTACA Bioethical decision making activity Inferring and Imaging Strategies	Unit Exam	
WEEK #8 3/7 – 3/11 No School: 3/7 & 3/8	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4c	Evolution	Darwin online lab Evolution lab Inferring and Imaging Strategies	Weekly Quiz	
WEEK #9 3/14 – 3/18 PLC day: 3/18	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4c 12.B.3b	Evolution	Homologous structures Vestigial structures Inferring and Imaging Strategies	Weekly Quiz	
WEEK #10 3/21 – 3/25 End of 3 rd Quarter: 3/25	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4c	Evolution	Genes and Variation Speciation Inferring and Imaging Strategies	Unit Exam	Global warming speaker



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WEEK #11 4/4 – 4/8	S.I.b.2. S.I.b.3. R.I.d.3 12.B.3a	Ecology	What is Ecology? Energy Flow Cycles of Matter Combining Reading Strategies	Weekly Quiz	
WEEK #12 4/11 – 4/15 PLC day: 4/15	S.I.b.2. S.I.b.3. R.I.d.3 12.B.4a 12.B.5a 12.B.4b	Ecology	The Role of Climate What Shapes an ecosystem? Biomes Biodiveristy Combining Reading Strategies	Unit Exam	
WEEK #13 4/18- 4/22 No school: 4/22	S.I.b.2. S.I.b.3. R.I.d.3	Biochemistry	The nature of matter Properties of water Carbon compounds Combining Reading Strategies	Weekly Quiz	
WEEK #14 4/25 – 4/29 PSAE: 4/27 & 4/28	S.I.b.2. S.I.b.3. R.I.d.3	Biochemistry	Chemical Reactions and Enzymes Food and Nutrition Combining Reading Strategies	Unit Exam	
WEEK #15 5/2 – 5/6 PLC day: 5/6	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4b	Digestive System	The process of digestion Organs and Function Combining Reading Strategies	Weekly Quiz	
WEEK #16	S.I.b.2.	Circulatory System	Organs and Functions	Weekly Quiz	



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5/9 – 5/13	S.I.b.3. R.I.d.3 12.A.4b		Combining Reading Strategies		
WEEK #17 5/16 – 5/20 PLC day: 5/20	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4b	Circulatory System	Blood Pressure Lymphatic System Combining Reading Strategies	Unit Exam	
WEEK #18 5/23 – 5/27 Seniors' last day: 5/26	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4b	Respiratory System	Organs and Functions Combining Reading Strategies	Weekly Quiz	
WEEK #19 5/30 – 6/3	S.I.b.2. S.I.b.3. R.I.d.3 12.A.4b	Respiratory System	Respiration How smoking affects the respiratory system Combining Reading Strategies	Unit Exam	
No school: 5/30 Final Exams: 5/31 – 6/2 Marking Day: 6/3	Tuesday: Periods 6 and 7 Wednesday: Period 4 and 5 Thursday: Period 2 and 3 Friday: Marking Day (No Classes)				