

Biology Semester Lesson Plan

FALL SEMESTER	Week 1	Week 2	Week 3 – 5	Week 6 – 7
Topics	Scientific Investigation	Scientific Investigation, Metric Conversions & Dimensional Analysis	Animal and Plant Cell Structures	Cell Biology -DNA & RNA Structure & Function
Standards	Investigation & Experimentation 1a, 1c, 1d, 1m, 1n	Investigation & Experimentation 1h	Cell Biology 1a, 1g, 1d, 1e, 1f	Cell Biology 1d, 1e, 1h
Labs	- Nicenet.org Newsgroup input - Photo seating chart & newsgroup post		Cheek & Elodea Cells, 15 pts	
Demonstrations	<ul style="list-style-type: none"> • Pressure Fountain • Floating Raisins • Temperature Inversion 		<ul style="list-style-type: none"> • Diffusion, green dye in water • Osmosis, tea bag in water • Potatoes in water & saltwater 	Nucleotide bonding using index cards
Readings & Handouts	Student Lab Safety, Course Syllabus, Semester Outline, Computer Acceptable Use Policy	Metric Money Dimensional Analysis	Animal & Plant cell structures Worksheet	DNA & RNA Structure worksheet
Homework	<ul style="list-style-type: none"> • Student/Parent Contract, 5 pts • Newspaper article Assignment, 5 pts 	Metric Conversions, 5 pts Dimensional Analysis, 5 pts	Coloring plates, animal & cell structures, 5 pts Vocabulary Flash Cards, 5 pts	Coloring plates, DNA & RNA structure, 5 pts
Internet, AV	www.brainpop.com, Internet		www.brainpop.com , Cell structures	www.brainpop.com , DNA
Projects				DNA Model Project, 50 pts
Tests		Unit Exam, Investigation & Experimentation, 50 pts		
Quizzes	Lab Safety Quiz/Contract, 15 pts	Quiz, Metric Conversions, 15 pts Dimensional Analysis, 15 pts		Quiz, DNA & RNA Structure & Function, 15 pts
Total Points	25 pts	80 pts	70 pts	70 pts

	Week 8 - 10	Week 11 – 12	Week 13	Week 14 – 15
Topics	Cell Biology -DNA Replication & Protein Synthesis	Cell Biology -Cancer & HIV	Genetics -Meiosis	Genetics -Mendelian Genetics
Standards	Cell Biology 1a, 1d, 1e, 1h Genetics 4a, 4b	Cell Biology 1c	Genetics 2a, 2b, 2d, 2e	Genetics 2c, 2f, 2g, 3a, 3b, 3c
Labs				
Demonstrations				
Readings & Handouts	<ul style="list-style-type: none"> DNA Replication Handout Protein Synthesis Handout 		Mitosis & Meiosis Stages Handout	Heath Biology Book Chapter
Homework	Diagramming DNA Replication, Transcription, & Translation 15 pts	Concept Map, First Draft, & 2 Proofread copies of research paper, 5 pts each		Predicting Genotypes Worksheet, 5 pts
Internet, AV	Internet Assignments <ul style="list-style-type: none"> DNA Structure & Replication, 5 pts Protein Synthesis, 5 pts 	<ul style="list-style-type: none"> www.brainpop.com, Cancer & HIV www.cancer.org, American Cancer Society Movie, Medicine Man Reflection, 5 pts 	<ul style="list-style-type: none"> www.brainpop.com, Genes Internet Assignment, Meiosis, 5 pts 	Internet Assignment, Solving Punnett Squares, 5 pts www.brainpop.com , Heredity
Projects		Cancer Research Paper, 50 pts (Extra Credit, Oral Presentation & Turn in early)		Predicting Genotypes Family Tree, 50 pts (Group Oral Presentation & Individual Written Reflection)
Tests	Unit Exam, Cell Biology 50 pts			
Quizzes	Quiz, DNA Replication & Protein Synthesis, 15 pts	Quiz, Cancer & HIV, 15 pts	Quiz, Meiosis 15 pts	2 Quizzes, Mendel's Principles & Predicting Genotypes & Phenotypes, 15 pts each
Points	90 pts	90 pts		90 pts

	Week 16 – 17	Week 18
Topics	Genetic Engineering -Human Genome Project, Cloning, & Genetically Modified Foods	Final Exams Week
Standards		
Labs		
Demonstrations		
Readings & Handouts	Heath Biology Book <ul style="list-style-type: none"> • Human Genome Project • Genetically Modified Foods Cloning Article, New Scientist Online	
Homework	Reflections on each abovementioned article, 5 pts each	
Internet, AV	Internet Research www.newscientist.com www.doegenome.org www.scientificamerican.com	
Projects	Genetic Engineering Survey, 50 pts (Group Oral Presentation & Individual Written Reflection)	
Tests		Unit Exam, Genetics & Previous Semester Topics 100 pts
Quizzes	Quiz, Genetic Engineering 15 pts	
Points	80 pts	100 pts

Note: Our semester is a 19 week semester. One of those weeks is only two days because Thanksgiving break is from Wednesday 11/26 through Friday 11/28.