

Newport-Mesa Unified School District
Office of Secondary Curriculum and Instruction
Middle School Course of Study

Course Title	<i>Honors Life Science 7 (Biology)</i>			Course Code	<i>[Office use only]</i>
Content Area:	<i>Science</i>	Grade Range:	<i>7th</i>	Board Adoption Date:	
Transcript Title:	<i>Honors Biology</i>		Area of High School Subject Fulfillment?	<i>N/A</i>	
Prerequisites (list all):	<i>Advance score on ELA or proficient with teacher recommendation</i>			Length of Course:	<i>1 yr</i>
Course Sequence?	<i>No</i>	List Other Courses in the Sequence:			

COURSE DESCRIPTION *(catalog summary):*

The 7th grade honors biology course is a beginning biology course. Topics include cell biology, genetics, evolution, Earth's history, anatomy and physiology, taxonomy and ecology. There will also be a year long theme of scientific investigation and experimentation with a culminating authentic scientific research project

GOALS *(expected performance outcomes for students):*

Mastery of standards covered throughout the year. Students will be introduced to high school biological standards and AP themes. Students will be prepared to enter honors 8th grade science

CALIFORNIA CONTENT STANDARDS *(how the course aligns with California and/or national curriculum standards):*

There is no standardized test for 7th grade but the course will follow the CA State Standards for 7th grade science.

EVALUATION *(how students will be assessed and graded):*

Student achievement will be measured using multiple assessment tools: benchmarks, unit tests, research projects, science fair project and lab journals and portfolios

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Unit 1	Length of Unit ... (Days / weeks / class sessions) ... 8 weeks			
	Key Vocabulary	Standards (referenced)	Model Tasks	Tools / Texts
Scientific Inquiry Cell Biology	Question Purpose Hypothesis, variable, conclusion Data Trial Chloroplast. Nucleus. Cell Wall, cytoplasm, ribosomes, lysosomes, mitochondria photosynthesis, mitosis-including G1, G2, and S phase.	1 A-F 7A-E	Microscope Labs Apple Lab Popcorn Lab Cell Window Cheek Cells Mitosis Activity Yeast lab Elodea Lab Portfolios Lab write-ups	Microscopes Textbooks Computer lab Lab Labware
Differentiation	Support -- for students who are struggling with the content	Content: Key Terms Process: Written/diagramed terms Product: Flashcards/ Word Wall		
	Extension – for high achieving students.	Content: Introduction to long term experiment Process: Investigation and research Product: Science Fair Project		
Evaluation	Formative Assessments (ongoing & mid-lesson): Checks for understanding, quizzes and homework review, lab reports and class activities			

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	Summative Assessments (unit final evaluation): <i>Unit Tests, Lab practicals, Final Exam, Benchmarks, Lab write-ups</i>		

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Unit 2	Length of Unit ... (Days / weeks / class sessions) ... 5 weeks			
	Key Vocabulary	Standards (referenced)	Model Tasks	Tools / Texts
Genetics [Subtopics]	Meiosis, gene, allele, gametes, offspring, Punnet square, Mendel, DNA, genotype, phenotype, electrophoresis, mutation, probability, homozygous, heterozygous	2A-E	Class Genetics, DNA extraction, Superhero Genetics, Electrophoresis, Fly Lab, DNA model, Portfolios	Textbook Lab journals Lab Computer Biotechnology Equipment
Differentiation	Support -- for students who are struggling with the content	Content: Key Terms Process: Written/diagramed terms Product: Flashcards/ Word Wall		
	Extension – for high achieving students.	Content: DNA Replication/Transcription Process: Hands-on model Product: Genes		
Evaluation	Formative Assessments (ongoing & mid-lesson): Checks for understanding, quizzes and homework review, lab reports and class activities			
	Summative Assessments (unit final evaluation): Unit Tests, Lab practicals, Final Exam, Benchmarks, Lab write-ups			

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Unit 3	Length of Unit ... (Days / weeks / class sessions) 3 Weeks			
	Key Vocabulary	Standards (referenced)	Model Tasks	Tools / Texts
Evolution Earth's History	Evolution Natural Selection, Darwinian Evolution, Species, Variation, Extinction, Homologus Structures, Branching Tree, phylogeny GTS, Absolute/relative age	3 a – e and 4 a - g	Fossil Dig Bean Lab Bird Beak Activity M and M radioactive decay Geological Time Brochure Portfolios	Textbooks Computer lab Lab Labware
Differentiation	Support -- for students who are struggling with the content	Content: Key Terms Process: Written/diagramed terms Product: Flashcards/ Word Wall		
	Extension – for high achieving students.	Content: Branching Tree Diagram Process: Research Product: Branching Tree Diagram		
Evaluation	Formative Assessments (ongoing & mid-lesson): Checks for understanding, quizzes and homework review, lab reports and class activities			

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	Summative Assessments <i>(unit final evaluation):</i> <i>Unit Tests, Lab practicals, Final Exam, Benchmarks, Lab write-ups</i>
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Unit 4	Length of Unit ... (Days / weeks / class sessions) ... 10 weeks			
	Key Vocabulary	Standards (referenced)	Model Tasks	Tools / Texts
<i>Human Body Systems Human Anatomy</i>	<i>Tissues, cells, organs, systems, bones, muscles, contraction, extension, joints, levers, neurons, CNS, PNS, stimulus, response, homeostasis, feedback, ovary, testicles, umbilical, pregnancy, zygote, fetus, embryo, placenta, blood pressure, heart, circulation, respiration, valves, ventricles, atrium, Digestion, stomach, salivary glands, senses, intestines, excretion, enzymes, immune system, RBC, WBC, platelets, AIDS, HIV, antibodies, STI, vaccines,</i>	<i>5 A-G</i>	<i>Heart dissection Eye dissection Brain observation Chicken wing dissection Enzyme lab Digestion lab Senses labs Portfolios</i>	<i>Textbooks Computer lab Lab Labware</i>
Differentiation	Support -- for	Content: <i>Key Terms</i>		

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	students who are struggling with the content	Process: <i>Written/diagramed terms</i> Product: <i>Flashcards/ Word Wall</i>			
	Extension – for high achieving students.	Content: <i>Putting it all together</i> Process: <i>research</i> Product: <i>Human Body Model</i>			
Evaluation	Formative Assessments (<i>ongoing & mid-lesson</i>): <i>Checks for understanding, quizzes and homework review, lab reports and class activities</i>				
	Summative Assessments (<i>unit final evaluation</i>): <i>Unit Tests, Lab practicals, Final Exam, Benchmarks, Lab write-ups</i>				

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Unit 5	Length of Unit ... (Days / weeks / class sessions) ... 6 weeks			
	Key Vocabulary	Standards (referenced)	Model Tasks	Tools / Texts
Taxonomical Overview	Vertebrates, invertebrates, phyla, genus, species, class, order, subphyla, taxonomy, kingdoms, bacteria, virus, fungus, plants, asexual reproduction, budding, domains	7 a - e	Frog Dissection Earthworm Dissection Protozoa observations Bacteria lab Plant lab Flower dissection Computer simulation Plant dissection Portfolios	Textbooks Computer lab Lab Labware
Differentiation	Support -- for students who are struggling with the content	Content: Key Terms Process: Written/diagramed terms Product: Flashcards/ Word Wall		
	Extension – for high achieving students.	Content: Taxonomic Project Process: Research Product: Oral Report to the class		
Evaluation	Formative Assessments (ongoing & mid-lesson): Checks for understanding, quizzes and homework review, lab reports and class activities			
	Summative Assessments (unit final evaluation): Unit Tests, Lab practicals, Final Exam, Benchmarks, Lab write-ups			

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Unit 6	Length of Unit ... (Days / weeks / class sessions) ... 3weeks			
	Key Vocabulary	Standards (referenced)	Model Tasks	Tools / Texts
Ecology and human impact	Ecosystem Biome, species, community, recycling, human population, demographics, endangered species, conservation, habitat, trophic levels, herbivores, carnivores, omnivores	Biology 6a Biology 6b Biology 6c Biology 6d Biology 6e	Recycling project Native garden Biome Project	Textbooks Computer lab Lab Labware
Differentiation	Support -- for students who are struggling with the content	Content: Key Terms Process: Written/diagramed terms Product: Flashcards/ Word Wall		
	Extension – for high achieving students.	Content: Water Conservation Activity Process: Research Product: Promote Water Conservation		
Evaluation	Formative Assessments (ongoing & mid-lesson): Checks for understanding, quizzes and homework review, lab reports and class activities			

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	Summative Assessments <i>(unit final evaluation):</i> <i>Unit Tests, Lab practicals, Final Exam, Benchmarks, Lab write-ups</i>
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