



Project Based Life-Science Correlation to the Oregon Science Standards, Grades 6-8

Grade 6

Content Standards/Performance Expecations	Location/Page where Standard is found
6.1 <u>Structure and Function</u>: Living and non-living systems are organized groups of related parts that function together and have characteristics and properties.	
6.1L.1 Compare and contrast the types and components of cells. Describe the functions and relative complexity of cells, tissues, organs, and organ systems.	LT: 89; 101-105 GF: 27-37, 80-83 Genetics: 167-178; 179-183; 202
6.2 <u>Interaction and Change</u>: The related parts within a system interact and change.	
6.2L.1 Describe the relationships and interactions between and among cells, tissues, organs, and organ systems.	GF: 80-81; 86-92; 97-104;105-111
6.2L.2 Explain how individual organisms and populations in an ecosystem interact and how changes in populations are related to resources.	Throughout, for example: LT: 83-86; 92-95; 97; 113-119; 120-121; 130-132
6.3 <u>Scientific Inquiry</u>: Scientific inquiry is the investigation of the natural world based on observation and science principles that includes proposing questions or hypotheses, and developing procedures for questioning, collecting, analyzing, and interpreting accurate and relevant data to produce justifiable evidence-based explanations.	
6.3S.1 Based on observation and science principles propose questions or hypotheses that can be examined through scientific investigation. Design and conduct an investigation that uses appropriate tools and techniques to collect relevant data.	Throughout, for example: LT: 17-20 GF: 45-50 Genetics: 106-113 AA: 102-107
6.3S.2 Organize and display relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions.	Throughout, for example: LT: 40-41; 51-52; 140-148 GF: 93-96; 52-54 Genetics: 96-102; 106-113 AA: 28-31; 47-52; 118-119

6.3S.3 Explain why if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one variable.	Throughout, for example: LT: 104-106; 140-148 GF: 48-50; 52-54 Genetics: 106-113 AA: 106; 22-23; 38-40; 111-113
6.4 <u>Engineering Design</u>: Engineering design is a process of identifying needs, defining problems, developing solutions, and evaluating proposed solutions.	
6.4D.1 Define a problem that addresses a need and identify science principles that may be related to possible solutions.	Throughout, for example: Diving In: 5-12, 94-98; MBT: 107-112
6.4D.2 Design, construct, and test a possible solution to a defined problem using appropriate tools and materials. Evaluate proposed engineering design solutions to the defined problem.	Throughout, for example: Diving In: 5-12, 94-98; MBT: 107-112
6.4D.3 Describe examples of how engineers have created inventions that address human needs and aspirations.	Throughout, for example: MBT: 20; 38-40; 45; 54-55; 74-75; 88, 101-102, 104-105

Grade 7

Content Standards/Performance Expecations	Location/Page where Standard is found
7.1 <u>Structure and Function</u>: Living and non-living systems are composed of components which affect the characteristics and properties of the system.	
7.1L.1 Compare and contrast sexual and asexual reproduction. Explain why reproduction is essential to the continuation of every species.	Genetics: 45-48; 184-188 AA: 34-35
7.1L.2 Distinguish between inherited and learned traits, explain how inherited traits are passed from generation to generation, and describe the relationships among phenotype, genotype, chromosomes, and genes.	Genetics: 45-46; 48; 189-199
7.2 <u>Interaction and Change</u>: The components and processes within a system interact.	
7.2L.1 Explain how organelles within a cell perform cellular processes and how cells obtain the raw materials for those processes.	GF: 27-40 Genetics: 167-178; 179-183 LT: 89; 101-105
7.2L.2 Explain the processes by which plants and animals obtain energy and materials for growth and metabolism.	Throughout, for example: LT: 89; 101-103 GF: 29 Genetics: 32-33

7.3 <u>Scientific Inquiry</u>: Scientific inquiry is the investigation of the natural world based on observation and science principles that includes proposing questions or hypotheses, designing procedures for questioning, collecting, analyzing, and interpreting multiple forms of accurate and relevant data to produce justifiable evidence-based explanations.	
7.3S.1 Based on observations and science principles propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools and techniques to collect relevant data.	Throughout, for example: Diving In: LS 3 (43-48); Digging In: LS 3 (66-67, 94-96); MBT: LS 2 (45-48); PF 99-100; LT: 39; GF: 47-48
7.3S.2 Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions including possible sources of error.	Throughout, for example: Ongoing use of Project Board (in every module) Diving In: 9-11, 99-101; MBT: 49-53, 65; PF: 102-103; LT: 40-41, 51-52; GF 53, 74-75
7.3S.3 Evaluate the validity of scientific explanations and conclusions based on the amount and quality of the evidence cited.	Throughout, for example: Ongoing use of Project Board (in every module) Diving In: 9-11, 99-101; MBT: 49-53, 65; PF: 102-103; LT: 40-41, 51-52; GF: 53, 74-75
7.4 <u>Engineering Design</u>: Engineering design is a process of identifying needs, defining problems, identifying constraints, developing solutions, and evaluating proposed solutions.	
7.4D.1 Define a problem that addresses a need and identify constraints that may be related to possible solutions.	Digging In: 6-8, 88-92;
7.4D.2 Design, construct, and test a possible solution using appropriate tools and materials. Evaluate the proposed solutions to identify how design constraints are addressed.	Digging In: 6-10, 88-98,109-111
7.4D.3 Explain how new scientific knowledge can be used to develop new technologies and how new technologies can be used to generate new scientific knowledge.	Throughout, for example: GF: 59-61, 131-132, 134-136 AA: 138-139

Grade 8

Content Standards/Performance Expecations	Location/Page where Standard is found
8.1 <u>Structure and Function</u>: Systems and their components function at various levels of complexity.	
8.1L.1 Explain how genetics and anatomical characteristics are used to classify organisms and infer evolutionary relationships.	Throughout, for example: LT: 86-91; Genetics: 49-53, 124-128, 141-147; AA 44-48, 74-77, 115-119, 131-135

<p>8.2 <u>Interaction and Change</u>: Systems interact with other systems.</p>	
<p>8.2L.1 Explain how species change through the process of natural selection. Describe evidence for evolution.</p>	<p>Genetics: 103-106; 114-119; 120-128</p>
<p>8.3 <u>Scientific Inquiry</u>: Scientific inquiry is the investigation of the natural world based on observations and science principles that includes proposing questions or hypotheses and designing procedures for questioning, collecting, analyzing, and interpreting multiple forms of accurate and relevant data to produce justifiable evidence-based explanations and new explorations.</p>	
<p>8.3S.1 Based on observations and science principles propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools, techniques, independent and dependent variables, and controls to collect relevant data.</p>	<p>Genetics: 3-12; 105 AA: 3-10; 11</p>
<p>8.3S.2 Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of a scientific investigation, and communicate the conclusions including possible sources of error. Suggest new investigations based on analysis of results.</p>	<p>Genetics: 70; 76-81; 96-102; 226-234 AA: 48-51; 91-95; 105-107; 148-152</p>
<p>8.3S.3 Explain how scientific explanations and theories evolve as new information becomes available.</p>	<p>Genetics: 39-44; 61-64; 89-92; 96-102; 226-234 AA: 64-67; 105-107; 116-119</p>
<p>8.4 <u>Engineering Design</u>: Engineering design is a process of identifying needs, defining problems, identifying design criteria and constraints, developing solutions, and evaluating proposed solutions.</p>	
<p>8.4D.1 Define a problem that addresses a need, and using relevant science principles investigate possible solutions given specified criteria, constraints, priorities, and trade-offs.</p>	<p>AA: 145-146</p>
<p>8.4D.2 Design, construct, and test a proposed engineering design solution and collect relevant data. Evaluate a proposed design solution in terms of design and performance criteria, constraints, priorities, and trade-offs. Identify possible design improvements.</p>	<p>AA: 147-153</p>
<p>8.4D.3 Explain how creating a new technology requires considering societal goals, costs, priorities, and trade-offs.</p>	<p>Throughout, for example: Genetics: 216-218 LT: 42-44; 46-48 AA: 5-6</p>