



**Lab-Aids Correlations for
Idaho Content Standards for Science
Life Science**

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This document is intended to show how the SEPUP *Science and Global Issues: Biology, 3rd Edition*, curriculum materials align with the [Idaho Content Standards for Science](#) for Life Science.

ABOUT LAB-AIDS

Lab-Aids has maintained its home offices and operations in Ronkonkoma, NY, since 1963. We publish over 200 kits and core curriculum programs to support science teaching and learning, grades 6-12. All core curricula support an inquiry-driven pedagogy, with support for literacy skill development and with assessment programs that clearly show what students know and are able to do as a result of program use. All programs have extensive support for technology and feature comprehensive teacher support. For more information, please visit www.lab-aids.com and navigate to the program of interest.

ABOUT SEPUP

Materials from the Science Education for Public Understanding Program (SEPUP) are developed at the Lawrence Hall of Science, at the University of California, Berkeley, and distributed nationally by Lab-Aids, Inc. Since 1987, development of SEPUP materials has been supported by grants from the National Science Foundation and other public and private sources. SEPUP programs include student books, equipment kits, teacher materials, and online digital content.

ABOUT THE LAB-AIDS CITATIONS

Citations included in the correlation document are as follows:

Unit title:	<i>Cells:</i>
Activity Number	2, 3, 4, 5, 6*, 7*, 8

* indicates where standard is assessed

Idaho Content Standard for Life Science	Science and Global Issues: Biology: Unit Name: Activity Number
HS-LS-1 - From Molecules to Organisms: Structures and Processes	
HS-LS-1.1 Students who demonstrate understanding can: Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	<i>Cells:</i> 6 <i>Genetics:</i> 2, 7, 8, 9, 10*, 15
HS-LS-1.2 Students who demonstrate understanding can: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.	<i>Cells:</i> 2, 3, 4, 5, 6*, 7*, 8
HS-LS-1.3 Students who demonstrate understanding can: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	<i>Cells:</i> 1, 2, 3, 4, 5, 7, 8, 9
HS-LS-1.4 Students who demonstrate understanding can: Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	<i>Genetics:</i> 3, 8*
HS-LS-1.5 Students who demonstrate understanding can: Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	<i>Cells:</i> 11*, 12, 13, 15
HS-LS-1.6 Students who demonstrate understanding can: Construct an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	<i>Cells:</i> 9, 10, 11, 13, 14, 15, 16*
HS-LS-1.7 Students who demonstrate understanding can: Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy.	<i>Cells:</i> 9, 10, 14, 15*, 16

Idaho Content Standard for Life Science	<i>Science and Global Issues: Biology:</i> Unit Name: Activity Number
HS-LS-2 – Ecosystems: Interactions, Energy, and Dynamics	
HS-LS-2.1 Students who demonstrate understanding can: Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	<i>Ecology:</i> 1, 2, 3*, 4
HS-LS-2.2 Students who demonstrate understanding can: Use mathematical representations to support explanations that biotic and abiotic factors affect biodiversity at different scales within an ecosystem.	<i>Ecology:</i> 3, 4, 5*
HS-LS-2.3 Students who demonstrate understanding can: Construct an explanation using mathematical representations to support claims for the flow of energy through trophic levels and the cycling of matter in an ecosystem.	<i>Ecology:</i> 6, 7, 8*, 9, 10* <i>Cells:</i> 10, 15*
HS-LS-2.4 Students who demonstrate understanding can: Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	<i>Ecology:</i> 11, 12*
HS-LS-2.5 Students who demonstrate understanding can: Evaluate the claims, evidence, and reasoning that changing the conditions of a static ecosystem may result in a new ecosystem.	<i>Ecology:</i> 13, 14*, 15, 16
HS-LS-2.6 Students who demonstrate understanding can: Design, evaluate, and/or refine practices used to manage a natural resource based on direct and indirect influences of human activities on biodiversity and ecosystem health.	<i>Ecology:</i> 13, 14, 15, 16, 17* <i>Cells:</i> 13, 17 <i>Genetics:</i> 16, 17 <i>Evolution:</i> 10, 12, 13, 14*, 15*

Idaho Content Standard for Life Science	Science and Global Issues: Biology: Unit Name: Activity Number
HS-LS-2.7 Students who demonstrate understanding can: Evaluate the evidence for the role of group behavior on individual and species' ability to survive and reproduce.	<i>Evolution:</i> 1, 3*
HS-LS-3 – Heredity: Inheritance and Variation of Traits	
HS-LS-3.1 Students who demonstrate understanding can: Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	<i>Genetics:</i> 4, 5, 7, 10, 11*, 12*
HS-LS-3.2 Students who demonstrate understanding can: Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	<i>Genetics:</i> 1, 6, 11, 12, 13*
HS-LS-3.3 Students who demonstrate understanding can: Apply concepts of probability and statistical analysis to explain the variation and distribution of expressed traits in a population.	<i>Genetics:</i> 4, 5, 6*, 14*
HS-LS-4 – Biological Adaptation: Unity and Diversity	
HS-LS-4.1 Students who demonstrate understanding can: Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	<i>Evolution:</i> 6, 7, 8, 9, 10
HS-LS-4.2 Students who demonstrate understanding can: Construct an explanation based on evidence that the process of evolution, through the mechanism of natural selection, primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	<i>Evolution:</i> 1, 2, 3, 4, 5*, 6, 12
HS-LS-4.3 Students who demonstrate understanding can: Apply concepts of probability and statistical analysis to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	<i>Genetics:</i> 14, 15, 16 <i>Evolution:</i> 1, 2, 3, 4*, 5, 6
HS-LS-4.4 Students who demonstrate understanding can: Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	<i>Evolution:</i> 1, 2, 3, 4, 5, 6*, 11, 12

Idaho Content Standard for Life Science	<i>Science and Global Issues: Biology:</i> Unit Name: Activity Number
<p>HS-LS-4.5 Students who demonstrate understanding can: Evaluate models that demonstrate how changes in an environment may result in the evolution of a population of a given species; the emergence of new species over generations; or the extinction of other species due to the processes of genetic drift, gene flow, mutation, and natural selection.</p>	<p><i>Evolution:</i> 6, 7, 8*, 9, 10</p>