

# Biology

# 7920015

**Additional Instructional Resources:**  
A.V.E. for Success Collection: [Click here](http://www.fasa.net/iTunesU/index.cfm)

**General Resources that can be used across multiple Biology Standards:**

Course Outline [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/access_biology_overview.docx)

Scholastic [Click here](https://www.scholastic.com/teachers/activities/teaching-content/studyjams-interactive-math-and-science-activities/)

NASA Climate Kids – NASAs Eyes on Earth [Click here](https://climatekids.nasa.gov/menu)

eSchool Today [Click here](http://eschooltoday.com/)

Science for Kids Club [Click here](http://www.scienceforkidsclub.com/)

General biology resource website [Click here](http://www.halfahundredacrewood.com/2012/06/classical-conversations-cycle-1-science/)

Science videos/resources (free) [Click here](http://www.nbclearn.com/changing-planet)

STEM laboratory [Click here](http://thestemlaboratory.com/stem-activities-for-kids/#_a5y_p=4873548)

## Course Standards

[**SC.912.E.7.1:**](http://www.cpalms.org/Public/PreviewStandard/Preview/1893) Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.

**Remarks/Examples:** Describe that the Earth system contains fixed amounts of each stable chemical element and that each element moves among reservoirs in the solid earth, oceans, atmosphere and living organisms as part of biogeochemical cycles (i.e., nitrogen, water, carbon, oxygen and phosphorus), which are driven by energy from within the Earth and from the Sun.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.E.7.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8233) | Identify cycles that occur on Earth, such as the water and carbon cycles, and the role energy plays in them. |  |  |  |
| [SC.912.E.7.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8234) | Recognize the phases of the water cycle that occur on Earth and the role energy plays in the water cycle. |  |  |  |
| [SC.912.E.7.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8235) | Recognize that clouds release rain (part of the water cycle). |  |  |  |
| Resources: | Biology Modules: Cycles Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/6._cycles_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.14.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/1944) Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.

**Remarks/Examples:**  
Describe how continuous **investigations** and/or new scientific information influenced the development of the **cell** theory. Recognize the contributions of scientists in the development of the **cell** theory.

Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.14.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8326) | Identify that all living things are made of cells and cells function in similar ways (cell theory). |  |  |  |
| [SC.912.L.14.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8327) | Identify that the cell is the smallest basic unit of life and that all living things are made of cells. |  |  |  |
| [SC.912.L.14.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8328) | Match parts of common living things to their functions. |  |  |  |
| Resources: | Lesson on cell structure [Click here](http://lessonplanspage.com/basic-concepts-of-cell-and-its-structures/)  Lesson plans [Click here](http://www.ngsslifescience.com/biology_lesson_plans_human_body_systems.html)  Cell vs Virus [Click here](http://ed.ted.com/lessons/cell-vs-virus-a-battle-for-health-shannon-stiles)  Cells [Click here](http://www.gottoteach.com/2014/12/shrinky-dinks-cell-models.html)  Cell models [Click here](https://www.instagram.com/p/BBbHUzlChfo/)  **Videos** -  3 minute visual introduction to cells in the human body [Click here](https://www.youtube.com/watch?v=gFuEo2ccTPA)  Cell division song [Click here](https://www.youtube.com/watch?v=9nsRufogdoI)  Mitosis [Click here](https://www.youtube.com/watch?v=f-ldPgEfAHI)  Cell cycle (Independent) [Click here](https://www.youtube.com/watch?v=65SODTL_QsA)  Cells (Independent) [Click here](https://www.youtube.com/watch?v=e79O6CCYsP0)  Cells (Independent) [Click here](https://www.youtube.com/watch?v=MfopLilIOeA)  **Tar Heel Readers on:**  The Cell [Click here](http://tarheelreader.org/2016/03/08/the-cell/)  Cells [Click here](http://tarheelreader.org/2015/05/05/cells-9/)  Cells [Click here](http://tarheelreader.org/2009/11/02/cells-3/)  Cells, Cells, Cells [Click here](http://tarheelreader.org/2009/10/23/cells/)  Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[**SC.912.L.14.2:**](http://www.cpalms.org/Public/PreviewStandard/Preview/1945) Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier (passive and active transport).

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.14.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8329) | Identify the major parts of plant and animal cells, including the cell membrane, nucleus, and cytoplasm, and their basic functions. |  |  |  |
| [SC.912.L.14.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8330) | Recognize that cells have different parts and each has a function. |  |  |  |
| [SC.912.L.14.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8328) | Match parts of common living things to their functions. |  |  |  |
| Resources: | Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.14.3:](http://www.cpalms.org/Public/PreviewStandard/Preview/1946) Compare and contrast the general structures of plant and animal cells. Compare and contrast the general structures of prokaryotic and eukaryotic cells.

**Remarks/Examples:** Annually Assessed on Biology EOC. Also assesses [SC.912.L.14.2](file:///C:\Standards\PublicPreviewBenchmark1945.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.14.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8329) | Identify the major parts of plant and animal cells, including the cell membrane, nucleus, and cytoplasm, and their basic functions. |  |  |  |
| [SC.912.L.14.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8330) | Recognize that cells have different parts and each has a function. |  |  |  |
| [SC.912.L.14.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8328) | Match parts of common living things to their functions. |  |  |  |
| Resources: | Lesson on The Cell [Click here](http://lessonplanspage.com/biology-life-systems-cells/)  Lesson on Plant cells [Click here](http://www.ngssbiology.com/science.php/biology/searchresults/search&keywords=plant+cells/)  Lesson plan on Plant tissue [Click here](http://www.ngsslifescience.com/science.php?/biology/lessonplans/C405/)  Resource on cells [Click here](http://www.biology4kids.com/files/cell_main.html)  Plant cells [Click here](http://sciencing.com/build-3d-model-plant-cell-7390432.html)  Plant/Animal cells (free printables) [Click here](http://encouragingmomsathome.com/plant-animal-cell-printables/)  **Videos-**  Structure Song [Click here](https://www.youtube.com/watch?v=rABKB5aS2Zg)  Cells/Cell Structure [Click here](https://www.youtube.com/watch?v=3nBtY6LR030)  Plant Cells (Independent) [Click here](https://www.youtube.com/watch?v=uohe2V4yOzE)  Plant Cells (Independent) [Click here](https://www.youtube.com/watch?v=9UvlqAVCoqY)  3D Plant Cells (Independent) [Click here](https://www.youtube.com/watch?v=he_Qw4_vOJk)  Plant and Animal Cells (Independent) [Click here](https://www.youtube.com/watch?v=aFE1Gcy21iA)  Animal cell (teacher needs to talk through it) [Click here](https://www.youtube.com/watch?v=nR-lsNDVhcY)  **Tar Heel Readers on:**  From Seed to Plant [Click here](http://tarheelreader.org/2013/11/05/from-seed-to-plant/)  I like Sunflowers [Click here](http://tarheelreader.org/2013/07/02/i-like-sunflowers/)  The Life Cycle of a Seed [Click here](http://tarheelreader.org/2009/04/14/the-life-cycle-of-a-seed/)  Plants and Animals of the Ocean [Click here](http://tarheelreader.org/2009/09/29/plants-and-animals-of-the-ocean/)  A Plant’s Basic Needs [Click here](http://tarheelreader.org/2009/04/14/a-plants-basic-needs/)  Plants [Click here](http://tarheelreader.org/2009/05/12/plants-3/)  Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.14.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/1941) Compare and contrast structure and function of various types of microscopes.

[SC.912.L.14.6:](http://www.cpalms.org/Public/PreviewStandard/Preview/1948) Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.14.In.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8333) | Describe common human health issues. |  |  |  |
| [SC.912.L.14.Su.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8334) | Recognize common human health issues. |  |  |  |
| [SC.912.L.14.Pa.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8335) | Identify ways to prevent infection from bacteria and viruses, such as hand washing and first aid. |  |  |  |
| Resources: | Biology Modules: Genes & Biotech Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/4._dna_genes___biotech_ada.docx) |  |  |  |

[SC.912.L.14.7:](http://www.cpalms.org/Public/PreviewStandard/Preview/1949) Relate the structure of each of the major plant organs and tissues to physiological processes.

**Remarks/Examples:** Annually Assessed on Biology EOC.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.14.In.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8336) | Describe the general processes of food production, support, water transport, and reproduction in the major parts of plants. |  |  |  |
| [SC.912.L.14.Su.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8337) | Relate parts of plants, such as leaf, stem, root, seed, and flower, to the functions of food production, support, water transport, and reproduction. |  |  |  |
| [SC.912.L.14.Pa.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8338) | Recognize major plant parts, such as root, stem, leaf, and flower. |  |  |  |
| Resources: | Lesson on Food web [Click here](http://lessonplanspage.com/scienceweavefoodweb46-htm/)  Parts of a plant [Click here](https://extension.illinois.edu/gpe/case1/c1facts2a.html)  Parts of a plant resources [Click here](https://jr.brainpop.com/science/plants/partsofaplant/)  Food production fact sheet [Click here](http://www.soil-net.com/primary/ks2/topic9/topic9_factsheet.pdf)  Facts about Photosynthesis for kids [Click here](http://photosynthesiseducation.com/photosynthesis-for-kids/)  Lesson on where food comes from [Click here](http://sciencenetlinks.com/lessons/crops-1-where-does-food-come-from/)  Information on Photosynthesis for kids [Click here](http://www.thunderboltkids.co.za/Grade6/01-life-and-living/chapter1.html)  Plant life teacher guide [Click here](https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/eecd/Domains%20of%20Child%20Development/Science/Plant-Life.pdf)  3-D parts of a plant [Click here](http://www.teachjunkie.com/sciences/simple-3d-parts-of-a-plant-craft/)  Parts of plant [Click here](http://thesweetlifeofteaching.blogspot.com/2012/01/plants-from-past-unit.html)  Plants [Click here](http://thetherapeuticteacher.blogspot.com/2015/04/its-plant-time.html)  **Videos-**  Parts of a Plant song [Click here](https://www.youtube.com/watch?v=ql6OL7_qFgU)  Parts of a Plant [Click here](https://www.youtube.com/watch?v=xO8hrqDuMmY)  **Tar Heel Readers on Plants** [Click here](http://tarheelreader.org/2010/08/30/plants-8/) |  |  |  |

[SC.912.L.14.26:](http://www.cpalms.org/Public/PreviewStandard/Preview/1964) Identify the major parts of the brain on diagrams or models.

**Remarks/Examples:** Annually Assessed on Biology EOC.

Florida Standards Connections: MAFS.K12.MP.4: Model with mathematics.

[SC.912.L.14.36:](http://www.cpalms.org/Public/PreviewStandard/Preview/1974) Describe the factors affecting blood flow through the cardiovascular system.

[SC.912.L.14.52:](http://www.cpalms.org/Public/PreviewStandard/Preview/1990) Explain the basic functions of the human immune system, including specific and nonspecific immune response, vaccines, and antibiotics.

**Remarks/Examples:** Annually Assessed on Biology EOC. Also assesses [SC.912.L.14.6](file:///C:\Standards\PublicPreviewBenchmark1948.aspx) [HE.912.C.1.7](file:///C:\Standards\PublicPreviewBenchmark7245.aspx) and [HE.912.C.1.5](file:///C:\Standards\PublicPreviewBenchmark7243.aspx).

[SC.912.L.15.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/1992) Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.

**Remarks/Examples:** Annually Assessed on Biology EOC. Also assesses [SC.912.L.15.10](file:///C:\Standards\PublicPreviewBenchmark2004.aspx) [SC.912.N.1.3](file:///C:\Standards\PublicPreviewBenchmark1858.aspx) [SC.912.N.1.4](file:///C:\Standards\PublicPreviewBenchmark1859.aspx) [SC.912.N.1.6](file:///C:\Standards\PublicPreviewBenchmark1861.aspx) [SC.912.N.2.1](file:///C:\Standards\PublicPreviewBenchmark1866.aspx) [SC.912.N.3.1](file:///C:\Standards\PublicPreviewBenchmark1871.aspx) and [SC.912.N.3.4](file:///C:\Standards\PublicPreviewBenchmark1874.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.15.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8339) | Identify that prehistoric plants and animals changed over time (evolved) or became extinct. |  |  |  |
| [SC.912.L.15.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8340) | Match fossils to related species. |  |  |  |
| [SC.912.L.15.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8341) | Recognize that plants and animals change as they age. |  |  |  |
| Resources: | Information on 5 Kingdoms [Click here](http://www.kidsbiology.com/biology_basics/five_kingdoms_life/classification1.php)  Lesson on Animal Classification [Click here](http://www.discoveryeducation.com/teachers/free-lesson-plans/animal-classification.cfm)  Lessons on Classifying Organisms [Click here](http://sciencenetlinks.com/lessons/classify-it/)  Pinterest Ideas [Click here](https://www.pinterest.com/explore/animal-classification-activity/)  Animal Classification Song [Click here](http://www.watchknowlearn.org/Video.aspx?VideoID=35774&CategoryID=14363)  Plant Kingdoms [Click here](http://easyscienceforkids.com/all-about-plants/)  Classification of Organisms [Click here](http://www.kidsbiology.com/biology_basics/classification/classification1.php)  Living vs. Nonliving [Click here](http://www.teachinginbluejeans.com/living-and-nonliving-pinspiration/)  What living things need anchor chart [Click here](https://www.pinterest.com/pin/261982903302251338/)  Kingdoms [Click here](https://www.pinterest.com/pin/206884176603313653/) or [Click here](http://dandelionsdragonflies.blogspot.com/2012/08/ipad-mania.html)  **Videos -**  Classifying Organisms video [Click here](https://www.youtube.com/watch?v=AHCOzc143Ec)  Classification video [Click here](https://www.youtube.com/watch?v=vqxomJIBGcY)  Species video (Independent) [Click here](http://www.floridastudents.org/PreviewResource/StudentResource/123923)  **Tar Heel Readers on:**  Organisms are Living Things [Click here](http://tarheelreader.org/2011/01/11/organisms-are-living-things/)  Cells [Click here](http://tarheelreader.org/2015/05/05/cells-9/)  Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.15.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/1998) Describe how and why organisms are hierarchically classified and based on evolutionary relationships.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.15.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8342) | Classify living organisms into their kingdoms. |  |  |  |
| [SC.912.L.15.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8343) | Match organisms to the animal, plant, and fungus kingdoms. |  |  |  |
| [SC.912.L.15.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8344) | Sort common living things into plant and animal kingdoms. |  |  |  |
| Resources: | Biology Modules: Heredity, Classification Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/2._heredity.classification_unit_plan_ada.docx) |  |  |  |

[SC.912.L.15.5:](http://www.cpalms.org/Public/PreviewStandard/Preview/1999) Explain the reasons for changes in how organisms are classified.

[SC.912.L.15.6:](http://www.cpalms.org/Public/PreviewStandard/Preview/2000) Discuss distinguishing characteristics of the domains and kingdoms of living organisms.

**Remarks/Examples:** Annually Assessed on Biology EOC. Also assesses [SC.912.L.15.4](file:///C:\Standards\PublicPreviewBenchmark1998.aspx) [SC.912.L.15.5](file:///C:\Standards\PublicPreviewBenchmark1999.aspx) [SC.912.N.1.3](file:///C:\Standards\PublicPreviewBenchmark1858.aspx) and [SC.912.N.1.6](file:///C:\Standards\PublicPreviewBenchmark1861.aspx).

## Related Access Points

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| --- | --- | --- | --- | --- |
| [SC.912.L.15.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8342) | Classify living organisms into their kingdoms. |  |  |  |
| [SC.912.L.15.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8343) | Match organisms to the animal, plant, and fungus kingdoms. |  |  |  |
| [SC.912.L.15.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8344) | Sort common living things into plant and animal kingdoms. |  |  |  |
| Resources: | Biology Modules: Heredity, Classification Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/2._heredity.classification_unit_plan_ada.docx) |  |  |  |

[SC.912.L.15.8:](http://www.cpalms.org/Public/PreviewStandard/Preview/2002) Describe the scientific explanations of the origin of life on Earth.

**Remarks/Examples:** Annually assessed on Biology EOC. Also assesses [SC.912.N.1.3](file:///C:\Standards\PublicPreviewBenchmark1858.aspx), [SC.912.N.1.4](file:///C:\Standards\PublicPreviewBenchmark1859.aspx), and [SC.912.N.2.1](file:///C:\Standards\PublicPreviewBenchmark1866.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.15.In.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8345) | Identify that there are scientific explanations of the origin of life on Earth. |  |  |  |
| [SC.912.L.15.Su.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8346) | Recognize that there are scientific explanations of how life began. |  |  |  |
| [SC.912.L.15.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8341) | Recognize that plants and animals change as they age. |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx)  Biology Modules: Heredity, Classification Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/2._heredity.classification_unit_plan_ada.docx) |  |  |  |

[SC.912.L.15.10:](http://www.cpalms.org/Public/PreviewStandard/Preview/2004) Identify basic trends in hominid evolution from early ancestors six million years ago to modern humans, including brain size, jaw size, language, and manufacture of tools.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.15.In.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8347) | Recognize ways that the appearance of humans, their language, and their tools have changed over time. |  |  |  |
| [SC.912.L.15.Su.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8348) | Recognize that humans have changed in appearance over a very long period of time. |  |  |  |
| [SC.912.L.15.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8341) | Recognize that plants and animals change as they age. |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.15.13:](http://www.cpalms.org/Public/PreviewStandard/Preview/2007) Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.

**Remarks/Examples:** Annually assessed on Biology EOC. Also assesses [SC.912.L.15.14](file:///C:\Standards\PublicPreviewBenchmark2008.aspx), [SC.912.L.15.15](file:///C:\Standards\PublicPreviewBenchmark2009.aspx), and [SC.912.N.1.3](file:///C:\Standards\PublicPreviewBenchmark1858.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.15.In.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8349) | Recognize that some living things produce very large numbers of offspring to ensure that enough survive to continue the species (a condition for natural selection). |  |  |  |
| [SC.912.L.15.Su.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8350) | Recognize that some living things, such as fish and turtles, produce very large numbers of offspring because most will die as a result of dangers in the environment before they grow up. |  |  |  |
| [SC.912.L.15.Pa.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8351) | Recognize that animals produce offspring. |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.15.14:](http://www.cpalms.org/Public/PreviewStandard/Preview/2008) Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.15.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8352) | Identify that prehistoric plants and animals changed over time (evolved) or became extinct. |  |  |  |
| [SC.912.L.15.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8340) | Match fossils to related species. |  |  |  |
| [SC.912.L.15.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8341) | Recognize that plants and animals change as they age. |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.15.15:](http://www.cpalms.org/Public/PreviewStandard/Preview/2009) Describe how mutation and genetic recombination increase genetic variation.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.15.Su.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8354) | Recognize that characteristics of the offspring of living things are sometimes different from their parents. |  |  |  |
| [SC.912.L.15.Pa.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8355) | Recognize differences in physical characteristics within a species of animals, such as different types of dogs. |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.16.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/2010) Use Mendel's laws of segregation and independent assortment to analyze patterns of inheritance.

**Remarks/Examples:**

Annually assessed on Biology EOC. Also assesses [SC.912.L.16.2](file:///C:\Standards\PublicPreviewBenchmark2011.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8356) | Identify that genes are sets of instructions that determine which characteristics are passed from parent to offspring. |  |  |  |
| [SC.912.L.16.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8357) | Recognize characteristics (traits) that offspring inherit from parents. |  |  |  |
| [SC.912.L.16.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8358) | Recognize similar characteristics (traits) between a child and parents, such as hair, eye, and skin color, or height. |  |  |  |
| Resources: | Biology Modules: Heredity, Classification Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/2._heredity.classification_unit_plan_ada.docx)  Biology Modules: Genes & Biotech Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/4._dna_genes___biotech_ada.docx) |  |  |  |

[SC.912.L.16.2:](http://www.cpalms.org/Public/PreviewStandard/Preview/2011) Discuss observed inheritance patterns caused by various modes of inheritance, including dominant, recessive, codominant, sex-linked, polygenic, and multiple alleles.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8359) | Identify traits that plants and animals, including humans, inherit. |  |  |  |
| [SC.912.L.16.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8357) | Recognize characteristics (traits) that offspring inherit from parents. |  |  |  |
| [SC.912.L.16.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8358) | Recognize similar characteristics (traits) between a child and parents, such as hair, eye, and skin color, or height. |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx)  Biology Modules: Heredity, Classification Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/2._heredity.classification_unit_plan_ada.docx) |  |  |  |

[SC.912.L.16.3:](http://www.cpalms.org/Public/PreviewStandard/Preview/2015) Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.

**Remarks/Examples:** Integrate [HE.912.C.1.7](file:///C:\Standards\PublicPreviewBenchmark7245.aspx). Analyze how heredity and family history can impact personal health. Annually assessed on Biology EOC. Also assesses [SC.912.L.16.4](file:///C:\Standards\PublicPreviewBenchmark2016.aspx) [SC.912.L.16.5](file:///C:\Standards\PublicPreviewBenchmark2017.aspx) [SC.912.L.16.9](file:///C:\Standards\PublicPreviewBenchmark2012.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8360) | Recognize that a substance called DNA carries genetic information in all organisms, and changes (mutations) in DNA can be helpful or harmful to an organism. |  |  |  |
| [SC.912.L.16.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8361) | Recognize that all organisms have a substance called DNA with unique information. |  |  |  |
| [SC.912.L.16.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8362) | Recognize similarities in characteristics of plants and animals of the same type (species). |  |  |  |
| Resources: | Higher level lesson on DNA [Click here](http://lessonplanspage.com/sciencednaextraction912-htm/)  Overview of DNA for kids [Click here](http://www.ducksters.com/science/biology/dna.php)  Explanation of DNA for kids [Click here](https://owlcation.com/academia/explaining-dna-to-a-six-year-old)  Your DNA [Click here](http://easyscienceforkids.com/human-body/)  DNA [Click here](http://thehappyhousewife.com/homeschool/teach-genetics-with-edible-dna/)  DNA [Click here](http://www.sciencebuddies.org/blog/2016/04/student-science-for-dna-day.php)  Science for DNA [Click here](http://www.sciencebuddies.org/blog/2016/04/student-science-for-dna-day.php)  **Videos –**  DNA [Click here](https://www.youtube.com/watch?v=zwibgNGe4aY)  DNA (Independent) [Click here](https://www.youtube.com/watch?v=BmDG_fKUTR8)  **Tar Heel Readers on Science A to Z**  [Click here](http://tarheelreader.org/2008/09/16/science-a-to-z/)  Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx)  Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx)  Biology Modules: Genes & Biotech Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/4._dna_genes___biotech_ada.docx) |  |  |  |

[SC.912.L.16.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/2016) Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8360) | Recognize that a substance called DNA carries genetic information in all organisms, and changes (mutations) in DNA can be helpful or harmful to an organism. |  |  |  |
| [SC.912.L.16.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8361) | Recognize that all organisms have a substance called DNA with unique information. |  |  |  |
| [SC.912.L.16.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8362) | Recognize similarities in characteristics of plants and animals of the same type (species). |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.16.5:](http://www.cpalms.org/Public/PreviewStandard/Preview/2017) Explain the basic processes of transcription and translation, and how they result in the expression of genes.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8360) | Recognize that a substance called DNA carries genetic information in all organisms, and changes (mutations) in DNA can be helpful or harmful to an organism. |  |  |  |
| [SC.912.L.16.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8361) | Recognize that all organisms have a substance called DNA with unique information. |  |  |  |
| [SC.912.L.16.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8362) | Recognize similarities in characteristics of plants and animals of the same type (species). |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx)  Biology Modules: Genes & Biotech Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/4._dna_genes___biotech_ada.docx) |  |  |  |

[SC.912.L.16.8:](http://www.cpalms.org/Public/PreviewStandard/Preview/2020) Explain the relationship between mutation, cell cycle, and uncontrolled cell growth potentially resulting in cancer.

**Remarks/Examples:**

Integrate [HE.912.C.1.7](file:///C:\Standards\PublicPreviewBenchmark7245.aspx). Analyze how heredity and family history can impact personal health.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8363) | Identify that cancer can result when cells change or grow uncontrollably. |  |  |  |
| [SC.912.L.16.Su.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8364) | Recognize that cancer may result when cells change or grow too fast. |  |  |  |
| [SC.912.L.16.Pa.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8365) | Recognize that illness can result when parts of our bodies are not working properly. |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx)  Biology Modules: Genes & Biotech Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/4._dna_genes___biotech_ada.docx) |  |  |  |

[SC.912.L.16.9:](http://www.cpalms.org/Public/PreviewStandard/Preview/2012) Explain how and why the genetic code is universal and is common to almost all organisms.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8360) | Recognize that a substance called DNA carries genetic information in all organisms, and changes (mutations) in DNA can be helpful or harmful to an organism. |  |  |  |
| [SC.912.L.16.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8361) | Recognize that all organisms have a substance called DNA with unique information. |  |  |  |
| [SC.912.L.16.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8362) | Recognize similarities in characteristics of plants and animals of the same type (species). |  |  |  |
| Resources: | Biology Modules: Evolution Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/1.__evolution__unit_lesson_plan_ada.docx)  Biology Modules: Heredity, Classification Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/2._heredity.classification_unit_plan_ada.docx)  Biology Modules: Genes & Biotech Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/4._dna_genes___biotech_ada.docx) |  |  |  |

[SC.912.L.16.10:](http://www.cpalms.org/Public/PreviewStandard/Preview/2021) Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.

**Remarks/Examples:** Annually assessed on Biology EOC.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8366) | Identify ways that biotechnology has impacted society and the environment, such as the development of new medicines and farming techniques. |  |  |  |
| [SC.912.L.16.Su.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8367) | Recognize that new medicines and foods can be developed by science (biotechnology). |  |  |  |
| [SC.912.L.16.Pa.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8368) | Recognize a food. |  |  |  |
| Resources: | Biotechnology definition for kids [Click here](http://encyclopedia.kids.net.au/page/bi/Biotechnology)  Description of Biotechnology [Click here](http://jumpmag.co.uk/biotechnology/)  Medical biotechnology Science Fair Project Ideas [Click here](http://www.sciencebuddies.org/science-fair-projects/Intro-Medical-Biotechnology.shtml)  Introduction to Biotechnology (lesson plans) [Click here](http://www.beyondbenign.us/home/K12education/biotech_ms.html)  Biotech Careers (Independent) [Click here](https://www.pbslearningmedia.org/resource/biot09.biotech.car.careers/careers-in-biotechnology/#.WRMwbtLyvIU)  Biotech Student Profile (Independent) [Click here](https://www.pbslearningmedia.org/resource/biot09.biotech.car.biotstudent/biotechnology-student-profile/#.WRMwq9LyvIU)  **Videos –**  Biotechnology [Click here](https://www.youtube.com/watch?v=A9mqwVZFCRk)  Biotechnology (Independent) [Click here](https://www.youtube.com/watch?v=A9mqwVZFCRk)  Biotechnology (Independent) [Click here](https://www.youtube.com/watch?v=f8PyAQ9bAPk)  Biology Modules: Genes & Biotech Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/4._dna_genes___biotech_ada.docx) |  |  |  |

[SC.912.L.16.13:](http://www.cpalms.org/Public/PreviewStandard/Preview/2024) Describe the basic anatomy and physiology of the human reproductive system. Describe the process of human development from fertilization to birth and major changes that occur in each trimester of pregnancy.

**Remarks/Examples:** Annually assessed on Biology EOC.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8369) | Describe the basic process of human development from fertilization to birth. |  |  |  |
| [SC.912.L.16.Su.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8370) | Recognize major phases in the process of human development from fertilization to birth. |  |  |  |
| [SC.912.L.16.Pa.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8371) | Recognize the sequence of human development from baby to child to adult. |  |  |  |
| Resources: | Provides detailed stages of growth of a baby. This is more of a teacher resource to use in conjunction with pictures or a video. (Independent/Supported) [Click here](https://my.clevelandclinic.org/health/articles/fetal-development-stages-of-growth)  Picture slides used in conjunction with the website listed above (Cleveland Clinic). (Independent/Supported) [Click here](http://www.nhs.uk/Tools/Pages/Pregnancy.aspx)  Pictures with descriptions of the development of a baby. (Independent/Supported) [Click here](https://www.babycenter.com/fetal-development-week-by-week)  PBS – This has an activity for students to do on child development birth – 5 years. There are guiding questions. (Participatory) [Click here](http://www.pbs.org/wnet/humanspark/lessons/the-developing-child/lesson-activities/?p=474)  Ck-12 – This website has information on the development of a baby into an adolescent. It has videos built in and review questions at the end. (Participatory) [Click here](http://www.ck12.org/book/CK-12-Biology-Concepts/section/13.70/)  Human Development [Click here](https://childdevelopmentinfo.com/ages-stages/#.WRMV6LzytE4)  Development from baby to child to adult visual (Participatory) [Click here](https://www.pinterest.com/pin/174373816805299573/)  Human life cycle vocabulary cards (under $2) (Participatory) [Click here](https://www.teacherspayteachers.com/Product/Human-Life-Cycle-Vocabulary-Cards-1090983)  **Videos –**  Development from fertilization through birth. (Independent/Supported) [Click here](https://www.youtube.com/watch?v=b_Lr3yZXn8E)  Human Life Cycle – Quick intro (Participatory) [Click here](https://www.youtube.com/watch?v=SdprpVCIhu0)  **Tar Heel Readers**: The Life of a Panda [Click here](http://tarheelreader.org/2013/05/28/the-life-of-a-panda-by-ben/) |  |  |  |

[SC.912.L.16.14:](http://www.cpalms.org/Public/PreviewStandard/Preview/2025) Describe the cell cycle, including the process of mitosis. Explain the role of mitosis in the formation of new cells and its importance in maintaining chromosome number during asexual reproduction.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.7:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8372) | Recognize that cells reproduce by dividing to produce new cells that are identical (mitosis) or new cells that are different (meiosis). |  |  |  |
| [SC.912.L.16.Su.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8373) | Recognize that cells reproduce by dividing. |  |  |  |
| [SC.912.L.16.Pa.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8374) | Recognize that living things produce offspring (reproduce). |  |  |  |
| Resources: | Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.16.16:](http://www.cpalms.org/Public/PreviewStandard/Preview/2026) Describe the process of meiosis, including independent assortment and crossing over. Explain how reduction division results in the formation of haploid gametes or spores.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.In.7:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8372) | Recognize that cells reproduce by dividing to produce new cells that are identical (mitosis) or new cells that are different (meiosis). |  |  |  |
| [SC.912.L.16.Su.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8373) | Recognize that cells reproduce by dividing. |  |  |  |
| [SC.912.L.16.Pa.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8374) | Recognize that living things produce offspring (reproduce). |  |  |  |
| Resources: | Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.16.17:](http://www.cpalms.org/Public/PreviewStandard/Preview/2027) Compare and contrast mitosis and meiosis and relate to the processes of sexual and asexual reproduction and their consequences for genetic variation.

**Remarks/Examples:** Annually assessed on Biology EOC. Also assesses [SC.912.L.16.8](file:///C:\Standards\PublicPreviewBenchmark2020.aspx) [SC.912.L.16.14](file:///C:\Standards\PublicPreviewBenchmark2025.aspx) [SC.912.L.16.16](file:///C:\Standards\PublicPreviewBenchmark2026.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.16.Su.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8373) | Recognize that cells reproduce by dividing. |  |  |  |
| [SC.912.L.16.Pa.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8374) | Recognize that living things produce offspring (reproduce). |  |  |  |
| Resources: | Resources on cell division [Click here](http://www.ducksters.com/science/biology/cell_division.php)  Resource information and video on mitosis [Click here](http://www.biology4kids.com/files/cell2_mitosis.html)  Mitosis [Click here](http://suzyhomeschooler.com/stem-saturday-mitosis/)  Mitosis puzzle [Click here](http://www.commoncorematerial.com/2015/11/mitosis-puzzle-activity_29.html?m=1)  Cells (midochondria) [Click here](http://www.kidsbiology.com/biology_basics/cells_tissues_organs/cell_mitochondria13.php)  **Videos on:**  Mitosis: [Click here](http://www.ducksters.com/science/biology/cell_mitochondria.php)  Mitosis and Meosis: [Click here](https://www.youtube.com/watch?v=toWK0fIyFlY)  **Tar Heel Readers on:**  Mitosis [Click here](http://tarheelreader.org/2016/10/22/mitosis-3/)  Cells [Click here](http://tarheelreader.org/2009/10/23/cells/)  Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.17.2:](http://www.cpalms.org/Public/PreviewStandard/Preview/2030) Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.17.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8375) | Recognize that living things in oceans and fresh water are affected by the location, availability of light, depth of the water, and temperature. |  |  |  |
| [SC.912.L.17.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8376) | Recognize that living things in bodies of water are affected by the location and depth of the water. |  |  |  |
| [SC.912.L.17.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8377) | Recognize common living things in bodies of water. |  |  |  |
| Resources: | Biology Modules: Cycles Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/6._cycles_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.17.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/2032) Describe changes in ecosystems resulting from seasonal variations, climate change and succession.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.17.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8378) | Identify that living things in an ecosystem are affected by changes in the environment, such as changes to the food supply, climate change, or the introduction of predators. |  |  |  |
| [SC.912.L.17.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8379) | Recognize how animals and plants in an ecosystem may be affected by changes to the food supply or climate. |  |  |  |
| [SC.912.L.17.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8380) | Recognize what happens to plants and animals when they don’t get enough food or water. |  |  |  |
| Resources: |  |  |  |  |

[SC.912.L.17.5:](http://www.cpalms.org/Public/PreviewStandard/Preview/2033) Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.

**Remarks/Examples:** Annually assessed on Biology EOC. Also assesses [SC.912.L.17.2](file:///C:\Standards\PublicPreviewBenchmark2030.aspx) [SC.912.L.17.4](file:///C:\Standards\PublicPreviewBenchmark2032.aspx) [SC.912.L.17.8](file:///C:\Standards\PublicPreviewBenchmark2036.aspx) [SC.912.N.1.4](file:///C:\Standards\PublicPreviewBenchmark1859.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.17.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8378) | Identify that living things in an ecosystem are affected by changes in the environment, such as changes to the food supply, climate change, or the introduction of predators. |  |  |  |
| [SC.912.L.17.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8379) | Recognize how animals and plants in an ecosystem may be affected by changes to the food supply or climate. |  |  |  |
| [SC.912.L.17.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8380) | Recognize what happens to plants and animals when they don’t get enough food or water. |  |  |  |
| Resources: | Resources for Ecosystem [Click here](http://www.kidsgeo.com/geography-for-kids/0164-ecosystems.php)  Ecosystem facts and video [Click here](http://easyscienceforkids.com/all-about-ecosystems/)  Pinterest activities [Click here](https://www.pinterest.com/explore/ecosystem-activities/)  Science activities [Click here](http://www.ecosystemforkids.com/)  Information and video connections [Click here](http://www.neok12.com/Ecosystems.htm)  NASA Climate Kids – NASAs Eyes on Earth – This site provides multiple resources and activities/projects for the ecosystem, climate change, food, plants/animals [Click here](https://climatekids.nasa.gov/menu/plants-and-animals/)  Science for Kids Club – Downloadable PDF about climate change [Click here](http://www.scienceforkidsclub.com/climate-change.html)  Organisms/Habitats [Click here](http://dragonsdencurriculum.blogspot.com/2015/06/organisms-and-habitats_11.html)  **Videos:**  Climate change video (Participatory) [Click here](https://www.youtube.com/watch?v=Sv7OHfpIRfU)  How does climate change? And what happens to environments and ecosystems when it does video [Click here](https://www.youtube.com/watch?v=SzcGTd8qWTg)  Bill Nye the Science Guy climate change using emojis video [Click here](https://www.youtube.com/watch?v=rPqd20tdncg)  **Tar Heel Readers: The Farmer** [Click here](http://tarheelreader.org/2010/02/12/the-farmer/)  Biology Modules: Ecosystems Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/5._ecosystems_and_populations.docx) |  |  |  |

[SC.912.L.17.8:](http://www.cpalms.org/Public/PreviewStandard/Preview/2036) Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.17.In.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8384) | Recognize possible changes in an ecosystem (biodiversity) that can result from natural catastrophic events, changes in climate, and human activity. |  |  |  |
| [SC.912.L.17.Su.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8385) | Recognize changes in living things (biodiversity) that can result from natural catastrophic events and human activity. |  |  |  |
| [SC.912.L.17.Pa.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8386) | Recognize actions that are harmful to living things. |  |  |  |
| Resources: |  |  |  |  |

[SC.912.L.17.9:](http://www.cpalms.org/Public/PreviewStandard/Preview/2037) Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.

**Remarks/Examples:**

Annually assessed on Biology EOC. Also assesses [SC.912.E.7.1](file:///C:\Standards\PublicPreviewBenchmark1893.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.17.In.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8387) | Identify the components of a food web, including sunlight, producers, consumers, and decomposers, and trace the flow of energy from the Sun. |  |  |  |
| [SC.912.L.17.Su.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8388) | Identify producers, consumers, and decomposers in a simple food chain. |  |  |  |
| [SC.912.L.17.Pa.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8389) | Recognize that animals (consumers) eat animals and plants for food. |  |  |  |
| Resources: | Parts of food chain [Click here](http://www.sheppardsoftware.com/content/animals/kidscorner/foodchain/producersconsumers.htm)  Resources and video on food chain [Click here](http://www.geography4kids.com/files/land_foodchain.html)  Food web facts [Click here](http://idahoptv.org/sciencetrek/topics/food_chain/facts.cfm)  7 Ways to teach Ecosystems and Food Webs – site provides activities for teaching food webs (including hands-on vocabulary) [Click here](http://thesciencepenguin.com/2015/01/7-ideas-teach-ecosystems-food-webs.html)  Ducksters, Education Site – Site has video, visuals, information on the food chain/food web. Also has related games and printables [Click here](http://www.ducksters.com/science/ecosystems/food_chain_and_web.php)  Interactive Sites for Education on food chains [Click here](http://interactivesites.weebly.com/food-chains.html)  Food web hands-on activity [Click here](http://b-inspiredmama.com/food-web-science-for-kids/)  **Videos:**  Ecosystems (producers, consumers, decomposers) [Click here](https://www.youtube.com/watch?v=bJEToQ49Yjc&feature=share)  Food chain [Click here](https://www.youtube.com/watch?v=SWvtRf4TAO4)  Food chain (Supported/Participatory) [Click here](https://www.youtube.com/watch?v=YuO4WB4SwCg)  Food Chain video [Click here](http://ed.ted.com/lessons/dead-stuff-the-secret-ingredient-in-our-food-chain-john-c-moore)  Food Chains compilation video [Click here](https://www.youtube.com/watch?v=CZhE2p46vJk)  Fabulous food chains video [Click here](https://www.youtube.com/watch?v=MuKs9o1s8h8)  School Tube – Bill Nye – Food Web video. Site also has other food web videos/resources [Click here](http://www.schooltube.com/video/caa25da3b12a4e669b6d/Bill%20Nye-Food%20Web)  **Tar Heel Readers on:**  Living Things Depend on One Another [Click here](http://tarheelreader.org/2011/04/06/living-things-depend-on-one-another/)  Food Chains [Click here](http://tarheelreader.org/2009/10/25/food-chains/)  Biology Modules: Ecosystems Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/5._ecosystems_and_populations.docx) |  |  |  |

[SC.912.L.17.11:](http://www.cpalms.org/Public/PreviewStandard/Preview/2039) Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.17.In.7:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8393) | Identify types of renewable and nonrenewable natural resources and explain the need for conservation. |  |  |  |
| [SC.912.L.17.Su.7:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8394) | Identify a way to conserve a familiar, nonrenewable, natural resource. |  |  |  |
| [SC.912.L.17.Pa.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8392) | Recognize the importance of clean water for living things. |  |  |  |
| Resources: | Biology Modules: Cycles Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/6._cycles_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.17.13:](http://www.cpalms.org/Public/PreviewStandard/Preview/2040) Discuss the need for adequate monitoring of environmental parameters when making policy decisions.

[SC.912.L.17.20:](http://www.cpalms.org/Public/PreviewStandard/Preview/2043) Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

**Remarks/Examples:** Annually assessed on Biology EOC. Also assesses [SC.912.L.17.11](file:///C:\Standards\PublicPreviewBenchmark2039.aspx), [SC.912.L.17.13](file:///C:\Standards\PublicPreviewBenchmark2040.aspx), [SC.912.N.1.3](file:///C:\Standards\PublicPreviewBenchmark1858.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.17.In.8:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8395) | Describe ways the lifestyles of individuals and groups can help or hurt the environment. |  |  |  |
| [SC.912.L.17.Su.8:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8396) | Identify ways individuals can help the environment. |  |  |  |
| [SC.912.L.17.Pa.7:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8397) | Recognize a way to help the local environment. |  |  |  |
| Resources: | Orange Senqu - This website provides information about life in aquatic ecosystems. It has interactive tools. (Independent) [Click here](http://www.orangesenqurak.com/river/ecology+biodiversity/aquatic+ecology/liae.aspx)  Altamonte Springs Science Incubator – Relationships Among Organisms/Life in Aquatic Systems (Freshwater). Provides vocabulary, hands-on activity, real pictures of animals, food web worksheet [Click here](http://www.altamonte.org/DocumentCenter/View/1324)  Kids Do Ecology – Introduces kids to ecology. Includes games, activities, information, and additional resources/website links for teachers and students [Click here](http://kids.nceas.ucsb.edu/index.html)  Sciencing – Provides information on the four types of aquatic ecosystems. (Independent, Supported) [Click here](http://sciencing.com/description-four-types-aquatic-ecosystems-8145.html)  Carbon footprint [Click here](http://www.kitchencounterchronicle.com/what-is-carbon-footprint-stem-kids/)  Pinterest Board on the Lorax [Click here](https://www.pinterest.com/pin/174373816805299552/)  Pollution experiment [Click here](http://www.sciencebuddies.org/blog/2016/04/student-science-for-dna-day.php)  **Videos:**  Aquatic systems – Good, short video to introduce the standard. This video describes different aquatic ecosystems on earth and the importance of zones of tolerance for the species living in aquatic ecosystems. [Click here](https://www.youtube.com/watch?v=4tU08jCvwGg)  Aquatic Systems [Click here](https://www.youtube.com/watch?v=fkj_1F_1nkc)  Coral reefs [Click here](http://ed.ted.com/lessons/conserving-our-spectacular-vulnerable-coral-reefs-joshua-drew)  Pollution [Click here](http://www.floridastudents.org/PreviewResource/StudentResource/128371)  Conservationists [Click here](http://nationalgeographic.org/media/giant-catfish/)  **Tar Heel Readers on:**  Celebrate Earth Day [Click here](http://tarheelreader.org/2013/04/10/celebrate-earth-day/)  Every day is Earth Day [Click here](http://tarheelreader.org/2010/04/22/everyday-is-earth-day/)  Good Citizens Recycle [Click here](http://tarheelreader.org/2009/10/22/good-citizens-recycle/)  You Don’t Throw Your Garbage in the Trash [Click here](http://tarheelreader.org/2009/09/27/if-you-dont-throw-your-garbage-in-the-trash-can-where-does-it-go/)  Water Pollution [Click here](http://tarheelreader.org/2008/07/30/water-pollution/)  Air Pollution [Click here](http://tarheelreader.org/2008/07/30/air-pollution/)  Biology Modules: Ecosystems Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/5._ecosystems_and_populations.docx)  Biology Modules: Cycles Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/6._cycles_lesson_plan_ada.docx) |  |  |  |

[SC.912.L.18.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/2044) Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.

**Remarks/Examples:**

Annually assessed on Biology EOC. Also assesses [SC.912.L.18.11](file:///C:\Standards\PublicPreviewBenchmark2054.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.18.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8398) | Identify that carbohydrates, fats, proteins, and nucleic acids (macromolecules) are important for human organisms. |  |  |  |
| [SC.912.L.18.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8399) | Recognize that humans use proteins, carbohydrates, and fats. |  |  |  |
| [SC.912.L.18.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8400) | Recognize that humans need different kinds of food. |  |  |  |
| Resources: | Lesson on DNA into proteins [Click here](http://lessonplanspage.com/sciencebreakingcodedna46-htm/)  Lesson plan [Click here](http://www.ngsslifescience.com/biology_lesson_plans_macromolecules.html)  Resource for Fuel for your Body [Click here](http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=284&id=1431)  Worksheets [Click here](https://www.education.com/worksheets/healthy+proteins/)  Food facts for kids [Click here](http://www.sciencekids.co.nz/sciencefacts/food/proteins.html)  Overview of Carbohydrates [Click here](http://www.ducksters.com/sciens.phpce/biology/carbohydrate)  Food and Energy info for kids [Click here](http://kidshealth.org/en/kids/sports.html?WT.ac=k-ra)  Food/Nutrition [Click here](https://www.choosemyplate.gov/)  **Videos -**  Biomolecules [Click here](https://www.youtube.com/watch?v=YO244P1e9QM)  Good intro video to Carbs/Proteins/Fats [Click here](https://www.youtube.com/watch?v=Xiiou51ySXM)  Fats and Carbs [Click here](https://www.youtube.com/watch?v=lVinEih_XVg)  Carbohydrates, Proteins & Fats (Independent) [Click here](https://www.youtube.com/watch?v=_bpJkvwmfVk)  Difference between Fat & Carb [Click here](https://www.youtube.com/watch?v=DhqdZJc6wZ4)  Carbohydrates, Lipids, Proteins (Independent) [Click here](https://www.youtube.com/watch?v=OOc3zEgLLtk)  **Tar Heel Readers on:**  What is Protein [Click here](http://tarheelreader.org/2015/11/14/what-is-protein/)  Nutrients and You [Click here](http://tarheelreader.org/2009/10/20/nutrients-and-you/)  Oils and Fats [Click here](http://tarheelreader.org/2010/05/24/oils-and-fats/)  Food Groups [Click here](http://tarheelreader.org/2009/10/22/food-groups-3/)  Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.18.7:](http://www.cpalms.org/Public/PreviewStandard/Preview/2050) Identify the reactants, products, and basic functions of photosynthesis.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.18.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8401) | Identify the products and function of photosynthesis. |  |  |  |
| [SC.912.L.18.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8402) | Recognize that the function of photosynthesis is to produce food for plants. |  |  |  |
| [SC.912.L.18.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8403) | Recognize that plants need water, light, and air to grow. |  |  |  |
| Resources: | Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.18.8:](http://www.cpalms.org/Public/PreviewStandard/Preview/2051) Identify the reactants, products, and basic functions of aerobic and anaerobic cellular respiration.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.18.In.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8404) | Identify that cells release energy from food so the organism can use it (cellular respiration). |  |  |  |
| [SC.912.L.18.Su.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8405) | Recognize that cells get energy from food. |  |  |  |
| [SC.912.L.18.Pa.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8406) | Identify that food is a source of energy. |  |  |  |
| Resources: | Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.18.9:](http://www.cpalms.org/Public/PreviewStandard/Preview/2052) Explain the interrelated nature of photosynthesis and cellular respiration.

**Remarks/Examples:**

Annually assessed on Biology EOC. Also assesses [SC.912.L.18.7](file:///C:\Standards\PublicPreviewBenchmark2050.aspx) [SC.912.L.18.8](file:///C:\Standards\PublicPreviewBenchmark2051.aspx) [SC.912.L.18.10](file:///C:\Standards\PublicPreviewBenchmark2053.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.18.In.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8407) | Recognize that plants give off oxygen that is used by animals and animals give off carbon dioxide that is used by plants. |  |  |  |
| [SC.912.L.18.Su.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8408) | Recognize that people and animals breathe in the oxygen that plants give off. |  |  |  |
| [SC.912.L.18.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8403) | Recognize that plants need water, light, and air to grow. |  |  |  |
| Resources: | Resource on Oxygen for Kids [Click here](http://www.ducksters.com/science/chemistry/oxygen.php)  Ecosystem and Carbon Cycle [Click here](http://www.ducksters.com/science/ecosystems/carbon_cycle.php)  Plant Experiment Creating Oxygen [Click here](http://www.kids-fun-science.com/plant-experiments.html)  Fun facts on Oxygen [Click here](http://www.scienceforkidsclub.com/oxygen.html)  Lesson on Oxygen and CO2 [Click here](http://lessonplanspage.com/scienceo2co2cycle47-htm/)  Experiment on how do leaves breath [Click here](http://www.kcedventures.com/blog/how-do-leaves-breathe-a-simple-science-experiment-for-kids)  **Videos-**  Facts about oxygen [Click here](https://www.youtube.com/watch?v=W_nIWEtj91Y)  Oxygen’s journey through the body [Click here](https://www.youtube.com/watch?v=GVU_zANtroE)  **Tar Heel Readers on My Tree** [Click here](http://tarheelreader.org/2012/02/09/my-tree-6/)  Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.18.10:](http://www.cpalms.org/Public/PreviewStandard/Preview/2053) Connect the role of adenosine triphosphate (ATP) to energy transfers within a cell.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.18.In.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8409) | Recognize that energy is stored in cells. |  |  |  |
| [SC.912.L.18.Su.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8405) | Recognize that cells get energy from food. |  |  |  |
| [SC.912.L.18.Pa.3:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8406) | Identify that food is a source of energy. |  |  |  |
| Resources: | Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.18.11:](http://www.cpalms.org/Public/PreviewStandard/Preview/2054) Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature, and their effect on enzyme activity.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.18.In.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8410) | Recognize that enzymes break down food molecules during the digestive process. |  |  |  |
| [SC.912.L.18.Su.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8411) | Recognize that food is broken down in digestion (use of enzymes). |  |  |  |
| [SC.912.L.18.Pa.4:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8412) | Recognize that saliva helps people eat when they chew. |  |  |  |
| Resources: | Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx) |  |  |  |

[SC.912.L.18.12:](http://www.cpalms.org/Public/PreviewStandard/Preview/2055) Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.

**Remarks/Examples:** Annually assessed on Biology EOC.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.L.18.In.7:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8413) | Identify that special properties of water, such as the ability to moderate temperature and dissolve substances, help to sustain living things on Earth. |  |  |  |
| [SC.912.L.18.Su.6:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8414) | Identify the important role of water in sustaining life of plants and animals. |  |  |  |
| [SC.912.L.18.Pa.5:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8415) | Recognize that plants and animals use water to live. |  |  |  |
| Resources: | Lesson on Water Cycle [Click here](http://lessonplanspage.com/scienceowatercycle1motivationactivity4-htm/)  Experiment: Water and Plant Growth [Click here](http://lessonplanspage.com/sciencedoplantsneedwaterairfoodorsoilthemosttogrowexperiment912-htm/)  Scientific Facts about Water [Click here](http://www.sciencekids.co.nz/sciencefacts/water.html)  Dehydration Information for Kids [Click here](http://kidshealth.org/en/kids/dehydration.html?WT.ac=k-ra)  Sweating info for Kids [Click here](http://kidshealth.org/en/kids/sweat.html?WT.ac=k-ra)  Water Cycle [Click here](http://working5to9math.blogspot.com/search/label/foldables)  Water Cycle [Click here](https://www.1001gardens.org/2015/08/diy-tutorial-fog-water-rain-create-your-own-water-cycle-in-a-plastic-bag/)  Rain Clouds Experiment [Click here](http://www.tobyandroo.com/diy-rain-clouds-one-best-science-activities-for-kids/)  **Videos-**  Bill Nye Water [Click here](https://www.youtube.com/watch?v=YPJ2iIzrqac)  Water Cycle [Click here](https://www.youtube.com/watch?v=al-do-HGuIk)  The Water Cycle [Click here](https://www.youtube.com/watch?v=ZzY5-NZSzVw)  Water and Life (Independent/supported) [Click here](https://www.youtube.com/watch?v=ZzY5-NZSzVw)  **Tar Heel Readers on:**  Water is Important [Click here](http://tarheelreader.org/2009/12/10/water-is-important-2/)  Living Things Need? [Click here](http://tarheelreader.org/2011/03/28/living-things-need/)  The Water Cycle [Click here](http://tarheelreader.org/2010/04/16/the-water-cycle-4/)  The Importance of Water [Click here](http://tarheelreader.org/2009/10/21/the-importance-of-water/)  What Needs Water [Click here](http://tarheelreader.org/2008/09/29/what-needs-water/)  Biology Modules: Cells & Photosynthesis Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/3._cells_and_photsynethesis_lp_ada.docx)  Biology Modules: Cycles Unit [Click here](https://www.accesstofls.org/core_curriculum_resources/Science/Biology/6._cycles_lesson_plan_ada.docx) |  |  |  |

[SC.912.N.1.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/1856) Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following:

1. **Pose questions about the natural world,** (Articulate the purpose of the investigation and identify the relevant scientific concepts).
2. **Conduct systematic observations,** (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines).
3. **Examine books and other sources of information to see what is already known,**
4. **Review what is known in light of empirical evidence,** (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models).
5. **Plan investigations,** (Design and evaluate a scientific investigation).
6. **Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs),** (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage).
7. **Pose answers, explanations, or descriptions of events,**
8. **Generate explanations that explicate or describe natural phenomena (inferences),**
9. **Use appropriate evidence and reasoning to justify these explanations to others,**
10. **Communicate results of scientific investigations, and**
11. **Evaluate the merits of the explanations produced by others.**

**Remarks/Examples:**

Florida Standards Connections for 6-12 Literacy in Science

For Students in Grades 9-10

LAFS.910.RST.1.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

LAFS.910.RST.1.3   Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks attending to special cases or exceptions defined in the text.

LAFS.910.RST.3.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

LAFS.910.WHST.1.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

LAFS.910.WHST.3.9 Draw evidence from informational texts to support analysis, reflection, and research.

For Students in Grades 11-12

LAFS.1112.RST.1.1 Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

LAFS.1112.RST.1.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks analyze the specific results based on explanations in the text.

LAFS.1112.RST.3.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

LAFS.1112.WHST.1.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

LAFS.1112.WHST.3.9 Draw evidence from informational texts to support analysis, reflection, and research.

Florida Standards Connections for Mathematical Practices

MAFS.K12.MP.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.2: Reason abstractly and quantitatively.

MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others. [Viable arguments include evidence.]

MAFS.K12.MP.4: Model with mathematics.

MAFS.K12.MP.5: Use appropriate tools strategically.

MAFS.K12.MP.6: Attend to precision.

MAFS.K12.MP.7: Look for and make use of structure.

MAFS.K12.MP.8: Look for and express regularity in repeated reasoning.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.1.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8166) | Identify a problem based on a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Identify a scientific question 2. Examine reliable sources of information to identify what is already known 3. Develop a possible explanation (hypothesis) 4. Plan and carry out an experiment 5. Gather data based on measurement and observations 6. Evaluate the data 7. Use the data to support reasonable explanations, inferences, and conclusions. |  |  |  |
| [SC.912.N.1.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8167) | Recognize a problem based on a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Recognize a scientific question 2. Use reliable information and identify what is already known 3. Create possible explanation 4. Carry out a planned experiment 5. Record observations 6. Summarize results 7. Reach a reasonable conclusion. |  |  |  |
| [SC.912.N.1.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8168) | Recognize a problem related to a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Observe objects and activities 2. Follow planned procedures 3. Recognize a solution. |  |  |  |
| Resources: | Just Science Now - This website list various quality science websites. The sites listed that provide specific instructions for using the inquiry method in science instruction [Click here](http://www.justsciencenow.com/links.htm)  Curriculum Resources for Inquiry-Based Learning – This site lists Biology projects developed by undergraduate and graduate students at Cornell University [Click here](http://csip.cornell.edu/Curriculum_Resources/default.html)  Khan Academy website –Provides information regarding the scientific method as it relates to biology. It has a video, introduction to the scientific method and controlled experiments (with visuals). (Independent) [Click here](https://www.khanacademy.org/science/biology/intro-to-biology/science-of-biology/v/the-scientific-method)  Kids Do Ecology – Has information to help students understand scientific method including collecting and displaying data. [Click here](http://kids.nceas.ucsb.edu/index.html)  Scientific method lesson with sponge Bob [Click here](http://www.ngsslifescience.com/science.php?/biology/lessonplans/C390/)  Scientific method cards [Click here](http://www.classroomfreebies.com/2012/07/scientific-method-cards.html)  Experiment using scientific method [Click here](http://totallytots.blogspot.com/2011/12/touch-feel-learn-melting-ice.html?utm_source=feedburner&utm_medium=email&utm_campaign=Feed:+TotallyTots+(Totally+Tots))  Experiment to teach Scientific method [Click here](http://www.momto2poshlildivas.com/2012/03/dissolving-peeps-experiment.html)  Scientific method experiment [Click here](http://thesciencepenguin.com/2013/05/skittles-and-the-scientific-method.html)  **Videos:**  Introduction to Scientific Inquiry video (Participatory - Supported) [Click here](https://www.youtube.com/watch?v=lN7yd23hCbE)  Scientific Method video – shows the seven steps of scientific method using a simple illustration [Click here](https://www.youtube.com/watch?v=3QJrunuIve0)  ACCESS Biology Teachers Resource Guide  [Click here](http://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/access_biology_teachers_resource_guide.docx) |  |  |  |

[SC.912.N.1.3:](http://www.cpalms.org/Public/PreviewStandard/Preview/1858) Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on  critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.

**Remarks/Examples:** Assess the reliability of data and identify reasons for inconsistent results, such as sources of error or uncontrolled conditions.  
  
Florida Standards Connections: MAFS.K12.MP.2: Reason abstractly and quantitatively MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.1.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8169) | Describe the processes used in scientific investigations, including posing a research question, forming a hypothesis, reviewing what is known, collecting evidence, evaluating results, and reaching conclusions. |  |  |  |
| [SC.912.N.1.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8170) | Identify the basic process used in scientific investigations, including questioning, observing, recording, determining, and sharing results. |  |  |  |
| [SC.912.N.1.Pa.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8171) | Recognize a process used in science to solve problems, such as observing, following procedures, and recognizing results. |  |  |  |
| Resources: |  |  |  |  |

[SC.912.N.1.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/1859) Identify sources of information and assess their reliability according to the strict standards of scientific investigation.

**Remarks/Examples:** Read, interpret, and examine the credibility and validity of scientific claims in different sources of information, such as scientific articles, advertisements, or media stories. Strict standards of science include controlled variables, sufficient sample size, replication of results, empirical and measurable evidence, and the concept of falsification.  
  
Florida Standards Connections: [LAFS.910.RST.1.1](file:///C:\Standards\PublicPreviewBenchmark6214.aspx) / [LAFS.1112.RST.1.1](file:///C:\Standards\PublicPreviewBenchmark6195.aspx).

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.1.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8166) | Identify a problem based on a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Identify a scientific question 2. Examine reliable sources of information to identify what is already known 3. Develop a possible explanation (hypothesis) 4. Plan and carry out an experiment 5. Gather data based on measurement and observations 6. Evaluate the data 7. Use the data to support reasonable explanations, inferences, and conclusions. |  |  |  |
| [SC.912.N.1.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8167) | Recognize a problem based on a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Recognize a scientific question 2. Use reliable information and identify what is already known 3. Create possible explanation 4. Carry out a planned experiment 5. Record observations 6. Summarize results 7. Reach a reasonable conclusion. |  |  |  |
| [SC.912.N.1.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8168) | Recognize a problem related to a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Observe objects and activities 2. Follow planned procedures 3. Recognize a solution. |  |  |  |
| Resources: |  |  |  |  |

[SC.912.N.1.6:](http://www.cpalms.org/Public/PreviewStandard/Preview/1861) Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.

**Remarks/Examples:** Collect data/evidence and use tables/graphs to draw conclusions and make inferences based on patterns or trends in the data.  
  
Florida Standards Connections: MAFS.K12.MP.1: Make sense of problems and persevere in solving them.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.1.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8166) | Identify a problem based on a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Identify a scientific question 2. Examine reliable sources of information to identify what is already known 3. Develop a possible explanation (hypothesis) 4. Plan and carry out an experiment 5. Gather data based on measurement and observations 6. Evaluate the data 7. Use the data to support reasonable explanations, inferences, and conclusions. |  |  |  |
| [SC.912.N.1.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8167) | Recognize a problem based on a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Recognize a scientific question 2. Use reliable information and identify what is already known 3. Create possible explanation 4. Carry out a planned experiment 5. Record observations 6. Summarize results 7. Reach a reasonable conclusion. |  |  |  |
| [SC.912.N.1.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8168) | Recognize a problem related to a specific body of knowledge, including life science, earth and space science, or physical science, and do the following: 1. Observe objects and activities 2. Follow planned procedures 3. Recognize a solution. |  |  |  |
| Resources: |  |  |  |  |

[SC.912.N.2.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/1866) Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).

**Remarks/Examples:** Science is the systematic and organized inquiry that is derived from observations and experimentation that can be verified or tested by further investigation to explain natural phenomena (e.g. Science is testable, pseudo-science is not science seeks falsifications, pseudo-science seeks confirmations.)

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.2.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8178) | Identify examples of investigations that involve science. |  |  |  |
| [SC.912.N.2.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8179) | Identify questions that can be answered by science. |  |  |  |
| [SC.912.N.2.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8180) | Recognize an example of work by scientists. |  |  |  |
| Resources: |  |  |  |  |

[SC.912.N.2.2:](http://www.cpalms.org/Public/PreviewStandard/Preview/1867) Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.

**Remarks/Examples:** Identify scientific questions that can be disproved by experimentation/testing. Recognize that pseudoscience is a claim, belief, or practice which is presented as scientific, but does not adhere to strict standards of science (e.g. controlled variables, sample size, replicability, empirical and measurable evidence, and the concept of falsification).  
  
Florida Standards Connections: MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.2.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8181) | Distinguish between questions that can be answered by science and observable information and questions that can’t be answered by science and observable information. |  |  |  |
| [SC.912.N.2.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8179) | Identify questions that can be answered by science. |  |  |  |
| [SC.912.N.2.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8180) | Recognize an example of work by scientists. |  |  |  |
| Resources: |  |  |  |  |

[SC.912.N.3.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/1871) Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.

**Remarks/Examples:** Explain that a scientific theory is a well-tested hypothesis supported by a preponderance of empirical evidence.  
  
Florida Standards Connections: MAFS.K12.MP.1: Make sense of problems and persevere in solving them and, MAFS.K12.MP.3: Construct viable arguments and critique the reasoning of others.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.3.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8187) | Recognize that a scientific theory is developed by repeated investigations of many scientists and agreement on the likely explanation. |  |  |  |
| [SC.912.N.3.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8188) | Recognize that scientific theories are supported by evidence and agreement of many scientists. |  |  |  |
| [SC.912.N.3.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8189) | Recognize examples of cause-effect descriptions or explanations related to science |  |  |  |
| Resources: |  |  |  |  |

[SC.912.N.3.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/1874) Recognize that theories do not become laws, nor do laws become theories; theories are well supported explanations and laws are well supported descriptions.

**Remarks/Examples:** Recognize that theories do not become laws, theories explain laws. Recognize that not all scientific laws have accompanying explanatory theories.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [SC.912.N.3.In.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8187) | Recognize that a scientific theory is developed by repeated investigations of many scientists and agreement on the likely explanation. |  |  |  |
| [SC.912.N.3.In.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8190) | Identify examples of scientific laws that describe relationships in the natural world, such as Newton’s laws. |  |  |  |
| [SC.912.N.3.Su.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8188) | Recognize that scientific theories are supported by evidence and agreement of many scientists. |  |  |  |
| [SC.912.N.3.Su.2:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8191) | Recognize examples of scientific laws that describe relationships in nature, such as Newton’s laws. |  |  |  |
| [SC.912.N.3.Pa.1:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/8189) | Recognize examples of cause-effect descriptions or explanations related to science. |  |  |  |
| Resources: |  |  |  |  |

[LAFS.910.RST.1.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/6214) Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

[LAFS.910.RST.1.2:](http://www.cpalms.org/Public/PreviewStandard/Preview/6215) Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

[LAFS.910.RST.1.3:](http://www.cpalms.org/Public/PreviewStandard/Preview/6216) Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

[LAFS.910.RST.2.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/6217) Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.

[LAFS.910.RST.2.5:](http://www.cpalms.org/Public/PreviewStandard/Preview/6218) Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).

[LAFS.910.RST.2.6:](http://www.cpalms.org/Public/PreviewStandard/Preview/6219) Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

[LAFS.910.RST.3.7:](http://www.cpalms.org/Public/PreviewStandard/Preview/6220) Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

[LAFS.910.RST.3.8:](http://www.cpalms.org/Public/PreviewStandard/Preview/6221) Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.

[LAFS.910.RST.3.9:](http://www.cpalms.org/Public/PreviewStandard/Preview/6222) Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

[LAFS.910.RST.4.10:](http://www.cpalms.org/Public/PreviewStandard/Preview/6223) By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.

[LAFS.910.SL.1.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/6108) Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

1. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
2. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
3. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.

Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [LAFS.910.SL.1.AP.1a:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17369) | Clarify, verify or challenge ideas and conclusions within a discussion on a given topic or text. |  |  |  |
| [LAFS.910.SL.1.AP.1b:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17370) | Summarize points of agreement and disagreement within a discussion on a given topic or text. |  |  |  |
| [LAFS.910.SL.1.AP.1c:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17371) | Use evidence and reasoning presented in discussion on topic or text to make new connections with own view or understanding. |  |  |  |
| [LAFS.910.SL.1.AP.1d:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17372) | Work with peers to set rules for collegial discussions and decision making. |  |  |  |
| [LAFS.910.SL.1.AP.1e:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17373) | Actively seek the ideas or opinions of others in a discussion on a given topic or text. |  |  |  |
| [LAFS.910.SL.1.AP.1f:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17374) | Engage appropriately in discussion with others who have a diverse or divergent perspective. |  |  |  |
| Resources: |  |  |  |  |

[LAFS.910.SL.1.2:](http://www.cpalms.org/Public/PreviewStandard/Preview/6109) Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [LAFS.910.SL.1.AP.2a:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17375) | Analyze credibility of sources and accuracy of information presented in social media regarding a given topic or text. |  |  |  |

[LAFS.910.SL.1.3:](http://www.cpalms.org/Public/PreviewStandard/Preview/6110) Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [LAFS.910.SL.1.AP.3a:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17376) | Determine the speaker’s point of view or purpose in a text. |  |  |  |
| [LAFS.910.SL.1.AP.3b:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17377) | Determine what arguments the speaker makes |  |  |  |
| [LAFS.910.SL.1.AP.3c:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17378) | Evaluate the evidence used to make the argument. |  |  |  |
| [LAFS.910.SL.1.AP.3d:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17379) | Evaluate a speaker’s point of view, reasoning and use of evidence for false statements, faulty reasoning or exaggeration. |  |  |  |

[LAFS.910.SL.2.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/6111) Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [LAFS.910.SL.2.AP.4a:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17380) | Orally report on a topic, with a logical sequence of ideas, appropriate facts and relevant, descriptive details that support the main ideas. |  |  |  |

[LAFS.910.SL.2.5:](http://www.cpalms.org/Public/PreviewStandard/Preview/6112) Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [LAFS.910.SL.2.AP.5a:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/17381) | Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points. |  |  |  |

[LAFS.910.WHST.1.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/6233) Write arguments focused on *discipline-specific content.*

1. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.
2. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience’s knowledge level and concerns.
3. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
4. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
5. Provide a concluding statement or section that follows from or supports the argument presented.

[LAFS.910.WHST.1.2:](http://www.cpalms.org/Public/PreviewStandard/Preview/6234) Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

1. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
2. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience’s knowledge of the topic.
3. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts.
4. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.
5. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
6. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). implications or the significance of the topic).

[LAFS.910.WHST.2.4:](http://www.cpalms.org/Public/PreviewStandard/Preview/6235) Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

[LAFS.910.WHST.2.5:](http://www.cpalms.org/Public/PreviewStandard/Preview/6236) Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

[LAFS.910.WHST.2.6:](http://www.cpalms.org/Public/PreviewStandard/Preview/6237) Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.

[LAFS.910.WHST.3.7:](http://www.cpalms.org/Public/PreviewStandard/Preview/6238) Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

[LAFS.910.WHST.3.8:](http://www.cpalms.org/Public/PreviewStandard/Preview/6239) Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

[LAFS.910.WHST.3.9:](http://www.cpalms.org/Public/PreviewStandard/Preview/6240) Draw evidence from informational texts to support analysis, reflection, and research.

[LAFS.910.WHST.4.10:](http://www.cpalms.org/Public/PreviewStandard/Preview/6241) Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

[HE.912.C.1.3:](http://www.cpalms.org/Public/PreviewStandard/Preview/7241) Evaluate how environment and personal health are interrelated.

**Remarks/Examples:** Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [HE.912.C.1.In.c:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14838) | Explain how environment and personal health are interrelated, such as food options within a community and availability of recreational facilities. |  |  |  |
| [HE.912.C.1.Su.c:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14839) | Identify ways selected environmental factors can affect personal health, such as food options within a community and availability of recreational facilities. |  |  |  |
| [HE.912.C.1.Pa.c:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14840) | Recognize environmental factors and related personal health behaviors, such as having recreational facilities available and increased physical activity. |  |  |  |

[HE.912.C.1.5:](http://www.cpalms.org/Public/PreviewStandard/Preview/7243) Analyze strategies for prevention, detection, and treatment of communicable and chronic diseases.

**Remarks/Examples:**  
Health prevention, detection, and treatment of: breast and testicular cancer, suicide, obesity, and industrial-related chronic disease.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [HE.912.C.1.In.e:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14845) | Describe strategies for prevention, detection, and treatment of common communicable and chronic diseases, such as preventing and treating obesity, early detection of cancer, and getting adequate physical exercise to help prevent diabetes and heart disease. |  |  |  |
| [HE.912.C.1.Su.e:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14846) | Identify common strategies for prevention, detection, and treatment of common communicable and chronic diseases, such as preventing and treating obesity, early detection of cancer, and getting adequate physical exercise to help prevent diabetes and heart disease. |  |  |  |
| [HE.912.C.1.Pa.e:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14848) | Recognize selected strategies for prevention of common communicable diseases, such as sanitization, avoiding direct contact with infection, and proper disposal of hygiene products. |  |  |  |

[HE.912.C.1.7:](http://www.cpalms.org/Public/PreviewStandard/Preview/7245) Analyze how heredity and family history can impact personal health.

**Remarks/Examples:** Drug use, family obesity, heart disease, mental health, and non-communicable illness or disease.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [HE.912.C.1.In.g:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14853) | Explain how heredity and family history can impact personal health, such as drug use, family obesity, heart disease, and mental health. |  |  |  |
| [HE.912.C.1.Su.g:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14854) | Describe ways personal health can be affected by heredity and family history, such as drug use, family obesity, heart disease, and mental health. |  |  |  |
| [HE.912.C.1.Pa.g:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/14855) | Recognize ways personal health can be affected by heredity or family history, such as drug use, family obesity, heart disease, and mental health. |  |  |  |

[MAFS.912.N-Q.1.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/5519) Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

## Related Access Points

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MAFS.912.N-Q.1.AP.1a:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/15648) | Interpret units in the context of the problem. |  |  |  |
| [MAFS.912.N-Q.1.AP.1b:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/15653) | When solving a multi-step problem, use units to evaluate the appropriateness of the solution. |  |  |  |
| [MAFS.912.N-Q.1.AP.1c:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/15656) | Choose the appropriate units for a specific formula and interpret the meaning of the unit in that context. |  |  |  |
| [MAFS.912.N-Q.1.AP.1d:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/16101) | Choose and interpret both the scale and the origin in graphs and data displays. |  |  |  |

[MAFS.912.N-Q.1.3:](http://www.cpalms.org/Public/PreviewStandard/Preview/5521) Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

**Related Access Points**

| **Name** | **Description** | **Date(s) Instruction** | **Date(s) Assessment** | **Date Mastery** |
| --- | --- | --- | --- | --- |
| [MAFS.912.N-Q.1.AP.3a:](http://www.cpalms.org/Public/PreviewAccessPoint/Preview/15662) | Describe the accuracy of measurement when reporting quantities (you can lessen your limitations by measuring precisely). |  |  |  |

[MA.K12.MTR.1.1:](https://www.cpalms.org/PreviewStandard/Preview/15875) Actively participate in effortful learning both individually and collectively.

Mathematicians who participate in effortful learning both individually and with others:

* Analyze the problem in a way that makes sense given the task.
* Ask questions that will help with solving the task.
* Build perseverance by modifying methods as needed while solving a challenging task.
* Stay engaged and maintain a positive mindset when working to solve tasks.
* Help and support each other when attempting a new method or approach.

**Clarifications:**  
Teachers who encourage students to participate actively in effortful learning both individually and with others:

* Cultivate a community of growth mindset learners.
* Foster perseverance in students by choosing tasks that are challenging.
* Develop students’ ability to analyze and problem solve.
* Recognize students’ effort when solving challenging problems.

[MA.K12.MTR.2.1:](https://www.cpalms.org/PreviewStandard/Preview/15876) Demonstrate understanding by representing problems in multiple ways.

Mathematicians who demonstrate understanding by representing problems in multiple ways:

* Build understanding through modeling and using manipulatives.
* Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations.
* Progress from modeling problems with objects and drawings to using algorithms and equations.
* Express connections between concepts and representations.
* Choose a representation based on the given context or purpose.

**Clarifications:**  
Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:

* Help students make connections between concepts and representations.
* Provide opportunities for students to use manipulatives when investigating concepts.
* Guide students from concrete to pictorial to abstract representations as understanding progresses.
* Show students that various representations can have different purposes and can be useful in different situations.

[MA.K12.MTR.3.1:](https://www.cpalms.org/PreviewStandard/Preview/15877) Complete tasks with mathematical fluency.

Mathematicians who complete tasks with mathematical fluency:

* Select efficient and appropriate methods for solving problems within the given context.
* Maintain flexibility and accuracy while performing procedures and mental calculations.
* Complete tasks accurately and with confidence.
* Adapt procedures to apply them to a new context.
* Use feedback to improve efficiency when performing calculations.

**Clarifications:**  
Teachers who encourage students to complete tasks with mathematical fluency:

* Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately.
* Offer multiple opportunities for students to practice efficient and generalizable methods.
* Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used.

[MA.K12.MTR.4.1:](https://www.cpalms.org/PreviewStandard/Preview/15878) Engage in discussions that reflect on the mathematical thinking of self and others.

Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:

* Communicate mathematical ideas, vocabulary and methods effectively.
* Analyze the mathematical thinking of others.
* Compare the efficiency of a method to those expressed by others.
* Recognize errors and suggest how to correctly solve the task.
* Justify results by explaining methods and processes.
* Construct possible arguments based on evidence.

**Clarifications:**  
Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:

* Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning.
* Create opportunities for students to discuss their thinking with peers.
* Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods.
* Develop students’ ability to justify methods and compare their responses to the responses of their peers.

[MA.K12.MTR.5.1:](https://www.cpalms.org/PreviewStandard/Preview/15879) Use patterns and structure to help understand and connect mathematical concepts.

Mathematicians who use patterns and structure to help understand and connect mathematical concepts:

* Focus on relevant details within a problem.
* Create plans and procedures to logically order events, steps or ideas to solve problems.
* Decompose a complex problem into manageable parts.
* Relate previously learned concepts to new concepts.
* Look for similarities among problems.
* Connect solutions of problems to more complicated large-scale situations.

**Clarifications:**  
Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:

* Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts.
* Support students to develop generalizations based on the similarities found among problems.
* Provide opportunities for students to create plans and procedures to solve problems.
* Develop students’ ability to construct relationships between their current understanding and more sophisticated ways of thinking.

[MA.K12.MTR.6.1:](https://www.cpalms.org/PreviewStandard/Preview/15880) Assess the reasonableness of solutions.

Mathematicians who assess the reasonableness of solutions:

* Estimate to discover possible solutions.
* Use benchmark quantities to determine if a solution makes sense.
* Check calculations when solving problems.
* Verify possible solutions by explaining the methods used.
* Evaluate results based on the given context.

**Clarifications:**  
Teachers who encourage students to assess the reasonableness of solutions:

* Have students estimate or predict solutions prior to solving.
* Prompt students to continually ask, “Does this solution make sense? How do you know?”
* Reinforce that students check their work as they progress within and after a task.
* Strengthen students’ ability to verify solutions through justifications.

[MA.K12.MTR.7.1:](https://www.cpalms.org/PreviewStandard/Preview/15881) Apply mathematics to real-world contexts.

Mathematicians who apply mathematics to real-world contexts:

* Connect mathematical concepts to everyday experiences.
* Use models and methods to understand, represent and solve problems.
* Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency.

**Clarifications:**  
Teachers who encourage students to apply mathematics to real-world contexts:

* Provide opportunities for students to create models, both concrete and abstract, and perform investigations.
* Challenge students to question the accuracy of their models and methods.
* Support students as they validate conclusions by comparing them to the given situation.
* Indicate how various concepts can be applied to other disciplines.

[ELA.K12.EE.1.1:](https://www.cpalms.org/PreviewStandard/Preview/15201) Cite evidence to explain and justify reasoning.

**Clarifications:**  
K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing.

2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations.

4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they’ve directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor.

6-8 Students continue with previous skills and use a style guide to create a proper citation.

9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.

[ELA.K12.EE.2.1:](https://www.cpalms.org/PreviewStandard/Preview/15202) Read and comprehend grade-level complex texts proficiently.

**Clarifications:**  
See [Text Complexity](https://cpalmsmediaprod.blob.core.windows.net/uploads/docs/standards/best/la/appendixb.pdf) for grade-level complexity bands and a text complexity rubric.

[ELA.K12.EE.3.1:](https://www.cpalms.org/PreviewStandard/Preview/15203) Make inferences to support comprehension.

**Clarifications:**  
Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like “Why is the girl smiling?” or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.

[ELA.K12.EE.4.1:](https://www.cpalms.org/PreviewStandard/Preview/15204) Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.

**Clarifications:**  
In kindergarten, students learn to listen to one another respectfully.

In grades 1-2, students build upon these skills by justifying what they are thinking. For example: “I think \_\_\_\_\_\_\_\_ because \_\_\_\_\_\_\_.” The collaborative conversations are becoming academic conversations.

In grades 3-12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.

[ELA.K12.EE.5.1:](https://www.cpalms.org/PreviewStandard/Preview/15205) Use the accepted rules governing a specific format to create quality work.

**Clarifications:**  
Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.

[ELA.K12.EE.6.1:](https://www.cpalms.org/PreviewStandard/Preview/15206) Use appropriate voice and tone when speaking or writing.

**Clarifications:**  
In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.

[ELD.K12.ELL.SC.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/8643) English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

[ELD.K12.ELL.SI.1:](http://www.cpalms.org/Public/PreviewStandard/Preview/8640) English language learners communicate for social and instructional purposes within the school setting.