



# Standard #: LAFS.910.RST.1.3

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## General Information

**Subject Area:** English Language Arts

**Grade:** 910

**Strand:** Reading Standards for Literacy in Science and Technical Subjects 6-12

**Idea:** Level 2: Basic Application of Skills & Concepts

**Cluster:** Key Ideas and Details -

**Date Adopted or Revised:** 12/10

**Content Complexity Rating:** [Level 2: Basic Application of Skills & Concepts](#) - [More Information](#)

**Date of Last Rating:** 02/14

**Status:** State Board Approved

## Related Courses

Course Number	Course Title
<a href="#">1200310:</a>	Algebra 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">1200320:</a>	Algebra 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">1200370:</a>	Algebra 1-A (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">1200380:</a>	Algebra 1-B (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">1207310:</a>	Liberal Arts Mathematics (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1206300:</a>	Informal Geometry (Specifically in versions: 2014 - 2015, 2015 and beyond (current))
<a href="#">1206310:</a>	Geometry (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">1206320:</a>	Geometry Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2001350:</a>	Astronomy Solar/Galactic (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2000310:</a>	Biology 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2000320:</a>	Biology 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2000430:</a>	Biology Technology (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2000370:</a>	Botany (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2003350:</a>	Chemistry 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2001310:</a>	Earth/Space Science (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2001320:</a>	Earth/Space Science Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2000380:</a>	Ecology (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2002480:</a>	Forensic Science 1 (Specifically in versions: 2014 - 2015, 2015 - 2017, 2017 - 2022 (current), 2022 and beyond)
<a href="#">2002490:</a>	Forensic Sciences 2 (Specifically in versions: 2014 - 2015, 2015 - 2017, 2017 - 2022 (current), 2022 and beyond)
<a href="#">2002400:</a>	Integrated Science 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2002410:</a>	Integrated Science 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2002420:</a>	Integrated Science 2 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2002430:</a>	Integrated Science 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2000390:</a>	Limnology (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
<a href="#">2003310:</a>	Physical Science (Specifically in versions: 2015 - 2022 (current), 2022 and beyond)
<a href="#">2003320:</a>	Physical Science Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2003600:</a>	Principles of Technology 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2003610:</a>	Principles of Technology 2 (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
<a href="#">2002550:</a>	Solar Energy 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
<a href="#">2002330:</a>	Space Technology and Engineering (Specifically in versions: 2014 - 2015, 2015 - 2018 (course terminated))
<a href="#">2000410:</a>	Zoology (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">1200500:</a>	Advanced Algebra with Financial Applications (Specifically in versions: 2014 - 2015 (course terminated))
<a href="#">2000800:</a>	Florida's Preinternational Baccalaureate Biology 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2002340:</a>	Experimental Science 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2002350:</a>	Experimental Science 2 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0800320:</a>	First Aid and Safety (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)

<a href="#">0107410:</a>	Film 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0107420:</a>	Film 2 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0107440:</a>	Visual Technology 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0107450:</a>	Visual Technology 2 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0108310:</a>	Creative Photography 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0108320:</a>	Creative Photography 2 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0110300:</a>	Printmaking 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0110310:</a>	Printmaking 2 (Specifically in versions: 2014 - 2015, 2015 - 2020 (course terminated))
<a href="#">0113300:</a>	Architectural Design and Drawing 1 (Specifically in versions: 2014 - 2015, 2015 - 2019 (course terminated))
<a href="#">0113310:</a>	Architectural Design and Drawing 2 (Specifically in versions: 2014 - 2015, 2015 - 2019 (course terminated))
<a href="#">0300380:</a>	Dance Choreography/Performance 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0400410:</a>	Technical Theatre Design & Production 1 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0400420:</a>	Technical Theatre Design & Production 2 (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">7912060:</a>	Access Informal Geometry (Specifically in versions: 2014 - 2015 (course terminated))
<a href="#">7912070:</a>	Access Liberal Arts Mathematics (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2019, 2019 and beyond (current))
<a href="#">7912080:</a>	Access Algebra 1A (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2019, 2019 and beyond (current))
<a href="#">7912090:</a>	Access Algebra 1B (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2019, 2019 and beyond (current))
<a href="#">7920015:</a>	Access Biology 1 (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 and beyond (current))
<a href="#">7920020:</a>	Access Earth/Space Science (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 and beyond (current))
<a href="#">7920025:</a>	Access Integrated Science 1 (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 and beyond (current))
<a href="#">2000315:</a>	Biology 1 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2000500:</a>	Bioscience 1 Honors (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">2002405:</a>	Integrated Science 1 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2020 (course terminated))
<a href="#">2002425:</a>	Integrated Science 2 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2020 (course terminated))
<a href="#">0400407:</a>	Technical Theatre: Design and Production for Scenery and Props (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0400408:</a>	Technical Theatre: Design and Production for Lighting and Sound (Specifically in versions: 2014 - 2015, 2015 - 2020 (course terminated))
<a href="#">0400409:</a>	Technical Theatre: Design and Production for Costume, Makeup, and Hair (Specifically in versions: 2014 - 2015, 2015 - 2022 (current), 2022 and beyond)
<a href="#">0400700:</a>	Musical Theatre 1 (Specifically in versions: 2014 - 2015, 2015 - 2020, 2020 - 2022 (current), 2022 and beyond)
<a href="#">0400710:</a>	Musical Theatre 2 (Specifically in versions: 2014 - 2015, 2015 - 2020, 2020 - 2022 (current), 2022 and beyond)
<a href="#">0400720:</a>	Musical Theatre 3 (Specifically in versions: 2014 - 2015, 2015 - 2020, 2020 - 2022 (current), 2022 and beyond)
<a href="#">1200315:</a>	Algebra 1 for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2022, 2022 and beyond)
<a href="#">0108370:</a>	Digital Art Imaging 1 (Specifically in versions: 2014 - 2015, 2015 - 2022, 2022 and beyond)
<a href="#">0108380:</a>	Digital Art Imaging 2 (Specifically in versions: 2014 - 2015, 2015 - 2022, 2022 and beyond)
<a href="#">1200375:</a>	Algebra 1-A for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 and beyond)
<a href="#">1206315:</a>	Geometry for Credit Recovery (Specifically in versions: 2014 - 2015, 2015 - 2022, 2022 and beyond)
<a href="#">7912100:</a>	Fundamental Algebraic Skills (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
<a href="#">7912105:</a>	Fundamental Consumer Mathematics (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
<a href="#">7912110:</a>	Fundamental Explorations in Mathematics 1 (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
<a href="#">7912115:</a>	Fundamental Explorations in Mathematics 2 (Specifically in versions: 2013 - 2015, 2015 - 2017 (course terminated))
<a href="#">1207300:</a>	Liberal Arts Mathematics 1 (Specifically in versions: 2014 - 2015, 2015 and beyond)
<a href="#">7912065:</a>	Access Geometry (Specifically in versions: 2015 and beyond)
<a href="#">7912075:</a>	Access Algebra 1 (Specifically in versions: 2014 - 2015, 2015 - 2018, 2018 - 2019, 2019 and beyond)
<a href="#">2003836:</a>	Florida's Preinternational Baccalaureate Physics 1 (Specifically in versions: 2015 - 2022, 2022 and beyond)
<a href="#">2003838:</a>	Florida's Preinternational Baccalaureate Physics 2 (Specifically in versions: 2015 and beyond)
<a href="#">7920022:</a>	Access Physical Science (Specifically in versions: 2016 - 2018, 2018 and beyond)
<a href="#">1200387:</a>	Mathematics for Data and Financial Literacy (Specifically in versions: 2016 - 2022, 2022 and beyond)
<a href="#">2001330:</a>	Meteorology Honors (Specifically in versions: 2016 - 2019, 2019 - 2022, 2022 and beyond)

## Related Resources

### Lesson Plans

Name	Description
<a href="#">Citizen Science:</a>	Citizen science is a critical component to many different scientific studies, and gives citizen scientists the opportunity to better understand the research and the process. In some studies, citizen scientists assist in major scientific discoveries that can change or create legislature. Students will participate in ongoing citizen science projects to learn more about the scientific method.
<a href="#">Solutions are Everywhere:</a>	Students will look at similar solutes and create solutions with them. They will compare and contrast them and record their observations.
<a href="#">The Role of Oceans in Climate Change:</a>	Students will use multiple hands-on activities, videos, and text resources to evaluate the ocean's influence on global climate change. Student engagement and investigation are the focus of this lesson with the intent of increasing rigor and creating global citizens. The summative assessment focuses on student application of their new knowledge to answer a scientific question; students present their findings in various mediums.

<a href="#">Gluva-Glop:</a>	This is a rework of the lab creating "Silly Putty" from a traditional cookbook lab to an inquiry based lesson. A situational story is read to the class and students are then challenged to create the "lost" substance. Students are provided the raw materials but not given exact amounts. Through multiple trials, students experiment with ways to come up with a sample that closely resembles the one provided at the beginning of the lesson.
<a href="#">Prokaryote and Eukaryote Microscope Activity:</a>	This activity incorporates the use of microscopes to show actual cells that are examples of both eukaryotes and prokaryotes.
<a href="#">Ramp It Up:</a>	Using inquiry techniques, students, working in groups, are asked to design and conduct experiments to test the Law of Conservation of Energy and the Law of Conservation of Momentum. Upon being provided with textbooks, rulers, measuring tapes, stopwatches, mini-storage containers, golf balls, marbles, rubber balls, steel balls, and pennies, they work cooperatively to implement and revise their hypotheses. With limited guidance from the teacher, students are able to visualize the relationships between mass, velocity, height, gravitational potential energy, kinetic energy, and total energy as well as the relationships between mass, velocity, and momentum.
<a href="#">Heating Curve of Water:</a>	The lesson is inquiry based, asking students to investigate phase changes and kinetic molecular theory. They are to measure and graph the heating of water while correctly analyzing how the particles kinetic energy changes through each phase change.
<a href="#">Forced To Learn:</a>	Using inquiry techniques, students, working in groups, are asked to design and conduct an experiment to test Newton's Second Law of Motion. Upon being provided with textbooks, rulers, measuring tapes, mini-storage containers, golf balls, marbles, rubber balls, steel balls, and pennies they work cooperatively to implement and revise their hypotheses. With limited guidance from the teacher, students are able to visualize the direct relationships between force and mass; force and acceleration; and the inverse relationship between mass and acceleration.
<a href="#">Introduction to Acids &amp; Bases: what are they and how do we as scientists measure them?:</a>	A hands-on, lab-based introduction to the pH scale and the characteristics of acids and bases.
<a href="#">Riding the Roller Coaster of Success:</a>	Students compete with one another to design and build a roller coaster from insulation tubing and tape that will allow a marble to travel from start to finish with the lowest average velocity. In so doing, students learn about differences between distance and displacement, speed and velocity, and potential and kinetic energy. They also examine the Law of Conservation of Energy and concepts related to force and motion.
<a href="#">Classifying the Universe: What is matter and how do we as scientists categorize it?:</a>	This is a hands-on lesson teaching what matter is and the differences between pure substances (elements and compounds) and mixtures (heterogeneous and homogeneous).
<a href="#">Chemical Reaction Rates: Inquiry on Affecting Factors:</a>	Chemical reaction rates can differ when different factors are present. The lesson focuses on the main rate changing contributors: temperature, concentration, surface area, and catalysts. Students are intended to learn through several inquiry based lab stations with minimal teacher guidance. The labs are of thought and observational base with little complexity in construction.
<a href="#">Got You Covered!:</a>	Students will develop a procedure for selecting car covers to protect the fleet of vehicles used by the Everywhere Sales Corporation. They will use a given data table to consider the attributes of several different brands of car covers, analyze their strengths and weaknesses, and then rank and weight the attributes according to their level of importance. The procedure will be written out in detail and a rationale provided to advise the company which car cover(s) should be used.
<a href="#">The Election Resource:</a>	This lesson is designed for students who enrolled in an elementary statistics or math for college readiness class who are at the stage of collecting and analyzing data. In their algebra 1 class, they were introduced to statistical topics such as line of best-fit and equation of a line as they relate to real-world meaning.
<a href="#">This is not Heart to Learn:</a>	This lesson is about the heart and how it functions. The student will be able to diagram the flow of blood through the heart. The student will also be able to demonstrate how blood pressure is measured and how it can change under various physiological conditions.
<a href="#">Corn Conundrum:</a>	The Corn Conundrum MEA provides students with an agricultural problem in which they must work as a team to develop a procedure to select the best variety of corn to grow under drier conditions predicted by models of global climate change. Students must determine the most important factors that make planting crops sustainable in restricted climate conditions for the client. The main focus of this MEA is manipulating factors relating to plant biology, including transpiration and photosynthesis.
<a href="#">Can You Read My Mind?:</a>	This engaging activity is a fun game requiring a teacher to team up with a student and provide insider information before the activity begins. The team will cleverly involve the rest of the class in a guessing game where students must apply logic and their understanding of variables to devise questions aimed at figuring out the trick, which allows the chosen student and the teacher to always know what the other is thinking! The concept of changing one variable at a time is critical to making progress in this game of reasoning and observation.
<a href="#">Turning Tires Model Eliciting Activity:</a>	The Turning Tires MEA provides students with an engineering problem in which they must work as a team to design a procedure to select the best tire material for certain situations. The main focus of the MEA is applying geometric concepts through modeling.
<a href="#">Shake it up:</a>	Students will model molecular motion with everyday materials (shaker bottles) then associate their model/actions to the phase transitions of water while graphing its heat curve from data collected during a structured inquiry lab.

## Professional Development

Name	Description
	<p><b>Click "View Site" to open a full-screen version.</b></p> <p>By the end of this module, teachers should be able to:</p> <ul style="list-style-type: none"> <li>Name the key instructional shifts in English Language Arts and Literacy</li> </ul>

[Cultivating Literacy: Reading Skills and Standards:](#)

- Label the College and Career Readiness, also known as CCR, anchor standards for Reading
- Use the language of the Reading Standards for Literacy in Science and Technical Subjects to identify what students should know and be able to do
- Arrange and sequence the Reading Standards for Literacy in Science and Technical Subjects
- Distinguish the changes in rigor as a Reading standard progresses from one grade band to the next

This is Module 1 of 4 in the series, "Literacy across the Content Areas: Reading and Writing to Build Content Knowledge."

Teaching Idea

Name	Description
<a href="#">The Birthday Paradox:</a>	The exercise detailed in this resource poses a paradox regarding birthdays. The question raised: how large does a group have to be in order to have a 50% or better probability that two or more people in the group share the same birthday? Intuitions about probability are challenged as students use their calculators to simulate random values to represent the birthdays and reach an answer.