Science 8 Curriculum Revision 2020

Unit 1: Scientific Tools/Metric(SI) System Review

Transfer
Beginning of the year procedures: 2 blocks
Scientific Tools/SI Units/Metric System: 6 blocks

Essential Question(s):
What are some important safety procedures that should be followed in the science lab?
What are the tools used in the lab?
What are the results of the engineering design process?
Why did scientists create the International System of Units (SI)?
What are the appropriate SI units used to identify length, mass and volume?

Vocabulary

Balance	Area
Beaker	Meter
Graduated Cylinder	Volume
Mass	Gram
Liter	

Learning Objectives

Resources
YouTube Video on Lab Safety
Measurement Lab with Equipment
Metric Review Worksheet
Whiteboards

Standards

http://www.nsta.org/docs/SafetyInTheScienceClassroomLabAndField.pdf

Not in NGSS, but essential for students to know and understand prior to beginning coursework

Assessment

Group discussion
Worksheet
Whiteboards
Labs

Interdisciplinary Connections

NJSLS Companion Standards Grades 6-8 (Reading & Writing in Science)
RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
RST.6-8.4. 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 6-8 texts and topics.
RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

21st Century Life and Careers
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP7. Employ valid and reliable research strategies.
CRP11. Use technology to enhance productivity.

Unit 2: Motion and Forces

Transfer
Chapter 1 (Describing Motion): 5 blocks
Chapter 2 (Newton's Laws and Presentations): 10 blocks
Chapter 3/Lesson 1 (Work): 2 blocks

Enduring Understanding
Core concepts and principles of science and use measurement and observation tools to assist in categorizing, representing, and interpreting the natural and designed world.
An object's motion changes if a net force acts on the object.

Essential Question(s):
What are some contact forces and some noncontact forces?
What is the law of universal gravitation?
What are Newton's three laws of motion?
How is motion related to balanced and unbalanced forces?
What effect does inertia have on the motion of an object?
Why don't the forces in a force pair cancel each other?
What is the law of conservation of momentum?

Vocabulary

Reference point	Position	Motion	Displacement
Speed	Constant Speed	Velocity	Instantaneous Speed
Average Speed	Acceleration	Force	Contact Force
Noncontact Force	Gravity	Mass	Weight
Friction	Net Force	Inertia	Balanced Force
Unbalanced Force	Newton's laws	Force Pair	Centripetal Force
Momentum	Work	Law of Conservation of Momentum	

Learning Objectives
Interpret and demonstrate Newton's three laws of motion.
Explain and demonstrate how balanced and unbalanced forces affect the motion of an object.
Explore how an increase in mass affects the force needed to move an object using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.
Determine if weight can change if mass does not change.

Demonstrate the law of conservation of momentum using a Newton's cradle.
Differentiate between contact forces and noncontact forces.
Demonstrate the principle of inertia and how it affects the motion of an object.
Explain why the forces in a force pair do not cancel each other.
Describe the law of universal gravitation and how it affects objects on Earth and objects in space.
**Apply scientific principles of momentum during collisions, inertia, and Newton's laws of motion to design, construct, and test a container that will protect a raw egg during impact.

Resources
iScience Course 3 https://connected.mcgrw-hill.com
Chapters 5, 6, 7, 8 Science Notebook and Reading Essentials
NEWSELA
BrainPOP Videos and Quizzes
Quizlet and Kahoot! - Measurement, Properties and States of Matter
Page Keeley

Standards
LA.RST.6-8 Reading Science and Technical Subjects
LA.WHST.6-8 Writing History, Science and Technical Subjects; Integration of Knowledge and Ideas
6-8.MS-ETS1 Engineering Design
6-8.MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
6-8.MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
6-8.MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.
6-8.MS-ETS1-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.
6-8.MS-PS2-1 Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.
6-8.MS-PS2-2 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.

6-8.MS-PS2-4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.
6-8.MS-PS2-5 Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.
6-8.MS-PS3 Energy
6-8.MS-PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.
6-8.MS-PS3-2 Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.
6-8.MS-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

Assessment
Formative: Position and Motion; Speed, Velocity and Acceleration; Gravity and Friction; Work and Power
Summative: Describing Motion; Newton's Laws Presentations

Interdisciplinary Connections
NJSLS Companion Standards Grades 6-8 (Reading & Writing in Science)
RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
RST.6-8.4. 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 6-8 texts and topics.
RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

21st Century Life and Careers
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.

CRP7. Employ valid and reliable research strategies.
CRP11. Use technology to enhance productivity.

Unit 3: Energy and Matter

Transfer
Chapter 5 (Energy and Energy Resources): 7 blocks
Chapter 6 (Thermal Energy): 8 blocks
STEM: Design an Insulated Container: 1 block
STEM: Egg Drop Project: 6 blocks Project must include analysis of results and working to design the best project design - Think like engineers - Test until failure
STEM: Roller Coaster Project: 3 blocks
Chapter 7 (Foundations of Chemistry): 7 blocks
Chapter 8 (States of Matter): 7 blocks

Enduring Understanding
Energy causes change by affecting the movement and position of objects. Energy can be transformed from one form to another and transferred from object to object.
Thermal energy can be transferred by conduction, radiation, and convection. Thermal energy also can be transformed into other forms of energy.
As matter changes from one state to another, the distances and the forces between the particles change, and the amount of thermal energy in the matter changes.
An atom is the smallest unit of an element and is made mostly of empty space. It contains a tiny nucleus surrounded by an electron cloud.
Elements can join together by sharing, transferring, or pooling electrons to make chemical compounds.
Atoms are neither created nor destroyed in chemical reactions. Energy can be released when chemical bonds form or absorbed when chemical bonds are broken.

Essential Question(s):
What is energy and how is it used?
What are the different forms of energy?
What is the law of conservation of energy?
In what ways can energy be transformed?
How are temperature and energy related?
How do heat and thermal energy differ?
What is the effect of having a small specific heat?
What happens to a material when it is heated?
In what ways can thermal energy be transferred?
What physical changes and energy changes occur as matter goes from one state to another?

How do particles move in solids, liquids, and gases?
How are the forces between particles different in solids, liquids, and gases?
How is temperature related to particle motion?
How are temperature and thermal energy different?
How does the kinetic molecular theory describe the behavior of a gas?
How is Boyle's law different from Charles' law?

Vocabulary

Energy	Kinetic Energy	Potential Energy	Work
Mechanical Energy	Thermal Energy	Electric Energy	Sound Energy
Radiant Energy	Nuclear Energy	Friction	Fossil Fuel
Law of Conservation of Energy		Nonrenewable Resource	
Renewable Resource		Thermal Energy	Temperature
Heat	Radiation	Conduction	Conductor
Insulator	Specific Heat	Convection	Thermal Contraction
thermal Expansion	Matter	Atom	Physical Property
Mass	Density	Solubility	Physical Change
Chemical Property	Chemical Change	Solid	Liquid
Gas	Viscosity	Surface Tension	Vapor
Kinetic Energy	Temperature	Thermal Energy	Vaporization
Evaporation	Condensation	Sublimation	Deposition

Learning Objectives

Differentiate between properties of solids, liquids, and gases by using a model of matter that is composed of tiny particles (atoms) in motion.
Illustrate particle motion in a solid, liquid, gas, and plasma.
Contrast the forces between the particles in a solid, liquid, and gas.
Explain and demonstrate how surface tension and viscosity are unique to liquids.
Describe changes of state as related to the addition or removal of thermal energy.
Create a non-Newtonian fluid.
Explain how the kinetic molecular theory describes the behavior of a gas.
Describe how temperature, pressure, and volume are related in Boyle's law.
Distinguish Boyle's law from Charles' law.
Explain Aristotle and Democritus' role in the atomic theory.
Describe Dalton's atomic theory.
Illustrate various atomic models, such as Thomson, Bohr, and the modern atomic models.
Identify evidence that a chemical reaction has occurred

**Apply scientific principles of momentum during collisions, inertia, and Newton's laws of motion to design, construct, and test a container that will protect a raw egg during impact.

Resources

iScience Course 3 https://connected.mcgrw-hill.com

Chapters 5, 6, 7, 8 Science Notebook and Reading Essentials
NEWSELA
BrainPOP Videos and Quizzes
Quizlet and Kahoot! - Measurement, Properties and States of Matter
Page Keeley

Standards

LA.RST.6-8 Reading Science and Technical Subjects
LA.WHST.6-8 Writing History, Science and Technical Subjects; Integration of Knowledge and Ideas
6-8.MS-ETS1 Engineering Design
6-8.MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
6-8.MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
6-8.MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.
6-8.MS-ETS1-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.
6-8.MS-PS2-1 Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.
6-8.MS-PS2-2 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.
6-8.MS-PS2-4 Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.
6-8.MS-PS2-5 Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.
6-8.MS-PS3 Energy

6-8.MS-PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.
6-8.MS-PS3-2 Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.
6-8.MS-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.
SCI.6-8.MS-PS1-1.PS1.A.2 Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals).
SCI.6-8.MS-PS1-2.PS1.B.1 Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.
SCI.6-8.MS-PS1-4.PS1.A.1 Gases and liquids are made of molecules or inert atoms that are moving about relative to each other.
SCI.6-8.MS-PS1-4.PS1.A.2 In a liquid, the molecules are constantly in contact with others; in a gas, they are widely spaced except when they happen to collide. In a solid, atoms are closely spaced and may vibrate in position but do not change relative locations.
SCI.6-8.MS-PS1-4.PS1.A.3 The changes of state that occur with variations in temperature or pressure can be described and predicted using these models of matter.

Assessment
Formative: Labs - Insulation Virtual and Hands-On; Minor Assessments
Summative: Roller Coaster Project; Egg Drop Project; Major Assessments

Interdisciplinary Connections
NJSLS Companion Standards Grades 6-8 (Reading & Writing in Science)
RST.6-8.1. Cite specific textual evidence to support analysis of science and technical texts.
RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
RST.6-8.4. 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 6-8 texts and topics.
RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.
NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

21st Century Life and Careers
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP7. Employ valid and reliable research strategies.
CRP11. Use technology to enhance productivity.
Technology
8.2.12.D.6 Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.
8.2.8.E.1

Unit 4: Properties and Interactions of Matter

Transfer
Chapter 9 (Understanding the Atom): 5 blocks
Chapter 10 (The Periodic Table): 4 blocks
Periodic Table Project: 4 blocks

Enduring Understanding
An atom is the smallest unit of an element and is made mostly of empty space. It contains a tiny nucleus surrounded by an electron cloud.
Elements can join together by sharing, transferring, or pooling electrons to make chemical compounds.
Atoms are neither created nor destroyed in chemical reactions. Energy can be released when chemical bonds form or absorbed when chemical bonds are broken.

Essential Question(s):
What are atoms and what are they made of?
How would you describe the size of an atom?
How has the atomic model changed over time?
How does a neutral atom change when its number of protons, electrons, and neutrons changes?
Why do atoms gain, lose, or share electrons?
How do elements differ from the compounds they form?
What are some signs that a chemical reaction might have occurred?
What happens to atoms during a chemical reaction?
What happens to the total mass in a chemical reaction?
Why do chemical reactions always involve a change in energy?
What is the difference between an endothermic and an exothermic reaction?
What factors can affect the rate of a chemical reaction?

Vocabulary

Atom	Electron	Nucleus	Proton
Neutron	Electron Cloud	Atomic Number	Mass Number
Periodic Table	Group	Period	Metal
Luster	Ductility	Malleability	Alkali Metal
Nonmetal	Halogen	Noble Gas	Metalloid
Alkaline Earth Metal	Transition Element		

Learning Objectives

Explain Aristotle and Democritus' role in the atomic theory.
Describe Dalton's atomic theory.
Illustrate various atomic models, such as Thomson, Bohr, and the modern atomic models.
Identify evidence that a chemical reaction has occurred.
Analyze what happens to the atoms and total mass in a chemical reaction.
Differentiate between endothermic and exothermic reactions.
Explain how catalysts can affect the rate of a chemical reaction.

Resources

iScience Course 3 https://connected.mcgrw-hill.com
Chapters 9 & 10 Science Notebook and Reading Essentials
NEWSELA
BrainPOP Videos and Quizzes
Quizlet and Kahoot!
Page Keeley

Standards

LA.RST.6-8 Reading Science and Technical Subjects
LA.WHST.6-8 Writing History, Science and Technical Subjects; Integration of Knowledge and Ideas
6-8.MS-ETS1 Engineering Design
6-8.MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
6-8.MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
6-8.MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.
6-8.MS-ETS1-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.
SCI.6-8.MS-PS1-1.PS1.A.1 Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms.
SCI.6-8.MS-PS1-1.PS1.A.2 Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals).

SCI.6-8.MS-PS1-2.PS1.B.1 Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.
SCI.6-8.MS-PS1-4.PS1.A.1 Gases and liquids are made of molecules or inert atoms that are moving about relative to each other.
SCI.6-8.MS-PS1-4.PS1.A.2 In a liquid, the molecules are constantly in contact with others; in a gas, they are widely spaced except when they happen to collide. In a solid, atoms are closely spaced and may vibrate in position but do not change relative locations.
SCI.6-8.MS-PS1-4.PS1.A.3 The changes of state that occur with variations in temperature or pressure can be described and predicted using these models of matter.

Assessment
Formative: Minor Assessments
Summative: Periodic Table Project; Major Assessments

Interdisciplinary Connections
NJSLS Companion Standards Grades 6-8 (Reading & Writing in Science)
RST.6-8.1. Cite specific textual evidence to support analysis of science and technical texts.
RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
RST.6-8.4. 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 6-8 texts and topics.
RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.
NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

21st Century Life and Careers

CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP7. Employ valid and reliable research strategies.
CRP11. Use technology to enhance productivity.
Technology
8.2.12.D.6 Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.
8.2.8.E.1

Unit 5: Waves

Transfer
Chapter 15 (Waves): 8 blocks
Chapter 16 (Sound): 7 blocks
Chapter 17 (Electromagnetic Waves): 7 blocks
Chapter 18 (Light): 7 blocks

Enduring Understanding
Waves carry matter as they travel from one place to another.
Sound waves can travel where there is no matter and travel fastest in gases.
When light waves strike a mirror, they change direction.
Light waves travel at the same speed in all materials.
Warm objects emit radiation, but cool objects do not.
The color of an object depends on the light that strikes it.

Essential Question(s):
How do waves transfer energy?
What is the difference between mechanical and electromagnetic waves?
What are the major properties of waves?
How are sound waves produced?
Why does the speed of sound waves vary in different materials?
How do your ears enable you to hear sound?
Why do objects appear a certain color?
What are the key differences between opaque, translucent and transparent objects?
How do the size of a wave and frequency of a wave relate?
How are a wave's energy and wavelength related?

Vocabulary

Wave	Mechanical Wave	Medium	Transverse Wave
Crest	Longitudinal Wave	Trough	Compression
Rarefaction	Electromagnetic Wave	Amplitude	Wavelength
Frequency	Absorption	Transmission	Reflection
Refraction	Law of Reflection	Diffraction	Interference
Sound Wave	Vibration	Medium	Intensity
Pitch	Doppler Effect	Resonance	Echo
Reverberation	Acoustics	Echolocation	Sonar
Radiant Energy	Radio Wave	Microwave	Infrared Wave
Electromagnetic Spectrum		UV Wave	X-Ray

Gamma Ray	GPS	Light	Transparent
Translucent	Opaque		

Learning Objectives

Differentiate between sound and light waves.
Describe how waves travel.
Compare and contrast the different types of waves on the electromagnetic spectrum.

Resources

iScience Course 3 https://connected.mcgrw-hill.com
Chapters 15, 16, 17, 18 Science Notebook and Reading Essentials
NEWSELA
BrainPOP Videos and Quizzes
Quizlet and Kahoot!
Page Keeley

Standards

LA.RST.6-8 Reading Science and Technical Subjects
LA.WHST.6-8 Writing History, Science and Technical Subjects; Integration of Knowledge and Ideas
6-8.MS-ETS1 Engineering Design
6-8.MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
6-8.MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
6-8.MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.
6-8.MS-ETS1-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.
MS-PS4-1 Waves and their Applications in Technologies for Information Transfer
Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.
MS-PS4-2 Waves and their Applications in Technologies for Information Transfer
Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
MS-PS4-3 Waves and their Applications in Technologies for Information Transfer

Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.

Assessment
Formative: Minor Assessments
Summative: Major Assessments

Interdisciplinary Connections
NJSLS Companion Standards Grades 6-8 (Reading & Writing in Science)
RST.6-8.1. Cite specific textual evidence to support analysis of science and technical texts.
RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
RST.6-8.4. 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 6-8 texts and topics.
RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.
NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

21st Century Life and Careers
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP7. Employ valid and reliable research strategies.
CRP11. Use technology to enhance productivity.
Technology
8.2.12.D.6 Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.
8.2.8.E.1