

Essex Fells Public School

CURRICULUM & INSTRUCTION

Science

Grade: 1

ABSTRACT

Students are expected to demonstrate grade appropriate proficiency in asking questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, constructing explanations and designing solutions, engaging in argument from evidence, and obtaining, evaluating, and communicating information. Students are expected to use these practices to demonstrate understanding in the disciplines of physical, life and Earth and space sciences. Student performance will be evaluated using a variety of assessments, including teacher-generated tests and quizzes, laboratory activities, homework, research projects, class participation and small group exploration activities.

BOE Approved: 8/12/26

ESSEX FELLS PUBLIC SCHOOLS

Grade 1 Science

Unit of Study: <i>(Pacing Guide - Specify time frame by days or weeks)</i>	Patterns of Change in the Sky: Day and Night; Seasons September/October <i>(5 weeks)</i>	Patterns of Change in the Sky: The Moon; The Sun and Stars October/November <i>(5 weeks)</i>	Characteristics of Living Things: Plant and Animal Parts December/January <i>(5 weeks)</i>
STAGE 1: Desired Results			
Established Goals: Write out complete NJSLS: <i>(Content Specific Standards Only. Only use standards that are applicable to the unit.)</i>	Science: 1-ESS1-2: Make observations at different times of year to relate the amount of daylight to the time of year. Engineering Practices: K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool. K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. Disciplinary Core Ideas: ESS1.B: Earth and the Solar System Seasonal patterns of sunrise and sunset can be observed, described, and	Science: 1-ESS1-1: Use observations of the sun, moon, and stars to describe patterns that can be predicted. Engineering Practices: K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool. K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. Disciplinary Core Ideas: ESS1.A: The Universe and its Stars	Science: 1-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. Disciplinary Core Ideas: LS3.A: Inheritance of Traits - Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. (1- LS3-1) LS3.B: Variation of Traits - Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-LS3-1)

	predicted. (1-ESS1-2) ETS1.A: Defining and Delimiting Engineering Problems • A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2- ETS1-1) • Ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool. (K-2- ETS1-1) • Before beginning to design a solution, it is important to clearly understand the problem. (K-2- ETS1-1) ETS1.B: Developing Possible Solutions • Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions, such as climate change, to other people. (K-2-ETS1-2) ETS1.C: Optimizing the Design Solution • Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3)	• Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. (1-ESS1-1) ETS1.A: Defining and Delimiting Engineering Problems • A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2- ETS1-1) • Ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool. (K-2- ETS1-1) • Before beginning to design a solution, it is important to clearly understand the problem. (K-2- ETS1-1) ETS1.B: Developing Possible Solutions • Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions, such as climate change, to other people. (K-2-ETS1-2) ETS1.C: Optimizing the Design Solution • Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3)	
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Interdisciplinary Connections: Write out complete NJSLS: <i>(Must have at least one standard from one of these areas but may have more):</i> • <i>ELA companion standards;</i> • <i>Standards for Mathematical Practice</i> • <i>Science;</i> • <i>Visual/Performing Arts) - Standard 1;</i> • <i>Comprehensive Health & PE - Standard 2;</i> • <i>Social Studies - Standard 6;</i> • <i>World Languages - Standard 7;</i>	English Language Arts L.1.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and content, choosing flexibly from an array of strategies. Mathematics MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. 1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations to represent the problem. (1-ESS1-2) 1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. (1-ESS1-2)	English Language Arts RI.1.1: Ask and answer questions about key details in a text. RI.1.2: Identify the main topic and retell key details of a text. RI.1.3: Describe the connection between two individuals, events, ideas, or pieces of information in a text. RI.1.4: Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. RI.1.5: Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. RI.1.6: Distinguish between information provided by pictures or other illustrations and information provided by the words in a text. RI.1.7: Use the illustrations and details in a text to describe its key ideas. RI.1.8: Identify the reasons an author gives to support points in a text and explain the application of this information with prompting as needed. RI.1.9: Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures). RI.1.10: With prompting and support, read informational texts at grade level text complexity or above. W.1.2: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide	English Language Arts: RI.1.1: Ask and answer questions about key details in a text. RI.1.2: Identify the main topic and retell key details of a text. RI.1.3: Describe the connection between two individuals, events, ideas, or pieces of information in a text. RI.1.4: Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. RI.1.5: Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. RI.1.6: Distinguish between information provided by pictures or other illustrations and information provided by the words in a text. RI.1.7: Use the illustrations and details in a text to describe its key ideas. RI.1.9: Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures). W.1.2: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. W.1.5: With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers and self-reflection, and add details to strengthen writing and ideas as needed. W.1.7: Participate in shared research and
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		some sense of closure. W.1.5: With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers and self-reflection, and add details to strengthen writing and ideas as needed. W.1.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration of peers. W.1.7: Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). W.1.8: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. SL.1.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. SL.1.2: Ask and answer questions about key details in a text read aloud or information presented orally or through other media. L.1.1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. L.1.2: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. L.1.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and	writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). W.1.8: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. SL.1.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. SL.1.2: Ask and answer questions about key details in a text read aloud or information presented orally or through other media. L.1.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and content, choosing flexibly from an array of strategies. Mathematics MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. 1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.
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		content, choosing flexibly from an array of strategies. Mathematics MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	
Integration of Career Readiness, Life Literacies & Key Skills:: <i>(Must have at least one standard from:</i> • 9.1 Personal Financial Literacy; or • 9.2 Career Awareness, Exploration, Preparation & Training; or • 9.4 Life Literacies & Key Skills)	Career Awareness, Exploration & Training 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). Life Literacies & Key Skills 9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10). 9.4.2.TL.6: Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).	Career Awareness, Exploration & Training 9.4.2.CT.2: Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3). 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). Life Literacies & Key Skills 9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10).	Career Awareness, Exploration & Training 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). Life Literacies & Key Skills 9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10).

Integration of Computer Science and Design Thinking: Write out complete NJSLS: <i>(Must have at least one standard from:</i> • 8.1 Computer Science; or • 8.2 Design Thinking)	Computer Science 8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences. 8.1.2.DA.3: Identify and describe patterns in data visualizations. 8.1.2.DA.4: Make predictions based on data using charts or graphs. Design Thinking 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.	Computer Science 8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences. 8.1.2.DA.3: Identify and describe patterns in data visualizations. 8.1.2.DA.4: Make predictions based on data using charts or graphs. Design Thinking 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.	Computer Science 8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences. 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats. 8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device. Design Thinking 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.
21st Century Life and Careers: Career Education: NJSLS: <i>(Only include if a CTE curriculum</i> • 9.3 Career and Technical Education)	N/A	N/A	N/A
Enduring Understandings: <i>(Follow UbD: What big ideas will students know?)</i>	• The rotation of the Earth around the Sun causes day and night. • Earth's orbit and the tilt of Earth on its axis cause the seasons.	• Changes in the amount of reflected light result in the moon's phases. • Stars are hot, glowing balls of gas, made up of mostly hydrogen and helium. The sun is the star at the center of our solar system.	• All living things share certain characteristics: organization, growth, reproduction, the need for food, excretion of waste, respiration, and the ability to respond to stimuli. • Nonliving things do not grow and change, or need food, air, or water to survive. • Plant parts help plants live and grow in different environments. • Structures such as the roots, stem,

			and leaf are necessary for carrying out vital processes for growth and survival. Others, such as seeds and flowers, are not necessary for the individual plant to live and grow but they are necessary to ensure that plants survive by reproducing more of their kind.
Essential Questions: <i>(Follow UbD best practices in the creation of questions)</i>	1. What causes the pattern of day and night? 2. What causes the seasons? 3. How does the sun impact how we live?	1. Why does the moon seem to change? 2. How can you describe the Sun and the stars?	1. How are living and nonliving things different? 2. How do different parts of a plant help it live?
STAGE 2: Evidence			
Assessment & Evidence: <i>(By what criteria will performances of understanding be judged? Include:</i> 1. <i>Formative,</i> 2. <i>Summative,</i> 3. <i>Alternative - Performance/Project)</i> 4. <i>Benchmark)</i>	Formative Assessments • Class Discussions • Cooperative Learning Activities that students complete in class where the teacher can assess an individual or group • Exit Tickets • In-class Assignments • Inquiry Evaluations • Labs/Quizzes • Strategic Questioning -higher order questions require more in-depth thinking by students. • Teacher Observations • Think - Pair -Share - students discuss with peers their answer to a teacher posed question. The teacher moves around the classroom to listen to various discussions, gaining valuable insight into levels of understanding	Formative Assessments • Class Discussions • Cooperative Learning Activities that students complete in class where the teacher can assess an individual or group • Exit Tickets • In-class Assignments • Inquiry Evaluations • Labs/Quizzes • Strategic Questioning -higher order questions require more in-depth thinking by students. • Teacher Observations • Think - Pair -Share - students discuss with peers their answer to a teacher posed question. The teacher moves around the classroom to listen to various discussions, gaining valuable insight into levels of understanding	Formative Assessments • Class Discussions • Cooperative Learning Activities that students complete in class where the teacher can assess an individual or group • Exit Tickets • In-class Assignments • Inquiry Evaluations • Labs/Quizzes • Strategic Questioning -higher order questions require more in-depth thinking by students. • Teacher Observations • Think - Pair -Share - students discuss with peers their answer to a teacher posed question. The teacher moves around the classroom to listen to various discussions, gaining valuable insight into levels of understanding

	Summative Assessments ● Culminating experiment ● Draw a Picture - students draw a picture to explain a topic (4 seasons of the year, characteristics of day/night, etc.) Benchmark Assessments ● Multiple Choice Assessment administered at the end of marking periods Alternative Assessments ● Oral Presentations ● Questions for Comprehension ● Performance Tasks ● Self-Assessment	Summative Assessments ● Culminating experiment ● Draw a Picture - students draw a picture to explain a topic (4 seasons of the year, characteristics of day/night, etc.) Benchmark Assessments ● Multiple Choice Assessment administered at the end of marking periods Alternative Assessments ● Oral Presentations ● Questions for Comprehension ● Performance Tasks ● Self-Assessment	Summative Assessments ● Culminating experiment ● Draw a Picture - students draw a picture to explain a topic (4 seasons of the year, characteristics of day/night, etc.) Benchmark Assessments ● Multiple Choice Assessment administered at the end of marking periods Alternative Assessments ● Oral Presentations ● Questions for Comprehension ● Performance Tasks ● Self-Assessment
STAGE 3: Learning Plan			
Learning Activities/Content: <i>(What is the core content of this unit? What performance tasks/ activities will students do? What skills will students know? Include content that adheres to NJ Administrative Code and Statutes:</i> ● <i>Amistad Law</i> ● <i>Holocaust Law</i> ● <i>LGBTQ/Disabilities Law</i>	● Students will identify whether where they live has daytime or nighttime and why, and whether it is daytime or nighttime on the other side of Earth and why. ● Students will understand that Earth revolves around the Sun. That, in addition to Earth's tilt, causes the seasons. Potential Activities: ● Vocabulary Review: sun, daytime, nighttime, rotate, planet, season, spring, summer, fall, winter ● Explore how light shining toward an object from different angles affects the length and direction of the shadow cast by	● Students will discover that the changes in the amount of reflected light result in the Moon's phases. ● Students will be able to use observations to describe the Sun and stars. ● Vocabulary Review: moon, phases, position, star ● Draw to show what the Moon looks like in the night sky. ● Create a model to show the pattern of how the Moon appears to change. ● Observe how the Moon changes during the month. ● Illustrate the phases of the	● Students will be able to explain the differences between living and nonliving things. ● Vocabulary Review: living, nonliving, flower, seed, stem, leaves, roots, nutrient, fruit ● Explain the differences between living and nonliving things. ● Investigate what seeds need to grow and whether rocks grow. "how-to" list that describes how to care for a living thing. ● Explain plant parts and structure. ● Examine and compare the parts of two different plants. ● Research plants that live in different environments. ● Create a model of a plant.

	the object. - Investigate how the length and direction of their shadow changes during the day. - Communicate that the Sun appears to move across the sky, and that this is a pattern. - Investigate how sunrise, sunset, and weather in different places around the world change. - Use what they have learned to show how some trees change at different times of the year. DEI Activities - Diversity and Inclusion statute (N.J.S.A. 18A:35-4.36a) 2.1.5.EH.3: Identify different feelings and emotions that people may experience and how they might express these emotions (e.g., anger, fear, happiness, sadness, hopelessness, anxiety). 2.1.5.SSH.3: Demonstrate ways to promote dignity and respect for all people (e.g. sexual orientation, gender identity and expression, race, ethnicity, socio-economic status, differing ability, immigration status, family configuration). - Encourage all students to share observations and ideas. - Explore how people around the world experience different weather and climates. - Recognize that communities adapt to weather in different ways. - Respect different ideas and perspectives while working together.	Moon in order, showing a pattern. - Use observations to describe the Sun and stars. - Gather and record data about how the position of the Sun and the temperature change during the day. - Observe how the size of an object appears different with distance. - Observe and draw objects they observe in the night sky. DEI Activities - Diversity and Inclusion statute (N.J.S.A. 18A:35-4.36a) 2.1.5.EH.3: Identify different feelings and emotions that people may experience and how they might express these emotions (e.g., anger, fear, happiness, sadness, hopelessness, anxiety). 2.1.5.SSH.3: Demonstrate ways to promote dignity and respect for all people (e.g. sexual orientation, gender identity and expression, race, ethnicity, socio-economic status, differing ability, immigration status, family configuration). - Encourage all students to share ideas and participate in discussions. - Connect this idea to people by discussing how each person is unique and contributes something special to a classroom or community - Respect different perspectives while working together to solve problems. Amistad Law (N.J.S.A. 18A:52-16A-88) 6.1.2.CivicsDP.3: Explain how historical symbols, monuments and holidays reflect	DEI Activities - Diversity and Inclusion statute (N.J.S.A. 18A:35-4.36a) 2.1.5.EH.3: Identify different feelings and emotions that people may experience and how they might express these emotions (e.g., anger, fear, happiness, sadness, hopelessness, anxiety). 2.1.5.SSH.3: Demonstrate ways to promote dignity and respect for all people (e.g. sexual orientation, gender identity and expression, race, ethnicity, socio-economic status, differing ability, immigration status, family configuration). - Work collaboratively to solve engineering challenges. - Encourage all students to share ideas, ask questions, and contribute to group projects. - Design solutions that are safe, accessible, and useful for everyone. - Recognize that people from different cultures, backgrounds, and abilities contribute to science, engineering, and innovation. - Respect different ideas and perspectives while working together. Amistad Law (N.J.S.A. 18A:52-16A-88) 6.1.2.CivicsDP.3: Explain how historical symbols, monuments and holidays reflect the shared values, principles, and beliefs of the American identity. 6.1.2.HistorySE.1: Use examples of regional folk heroes, stories, and/or songs and make inferences about how they have
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	Amistad Law (N.J.S.A. 18A:52-16A-88) 6.1.2.CivicsDP.3: Explain how historical symbols, monuments and holidays reflect the shared values, principles, and beliefs of the American identity. 6.1.2.HistorySE.1: Use examples of regional folk heroes, stories, and/or songs and make inferences about how they have contributed to the development of a culture's history. • Learn about diverse meteorologists, environmental scientists, and conservationists. • Recognize that people from diverse backgrounds contribute to science and environmental stewardship. Holocaust Law (N.J.S.A. 18A:35-28) 6.2.2.D.2 Recognize real people and fictional characters who have demonstrated responsible leadership and citizenship and identify the characteristics that have made them good examples. • Practice kindness, cooperation, and responsibility while working with classmates. • Demonstrate empathy and respect through collaborative investigations and classroom discussions.	the shared values, principles, and beliefs of the American identity. 6.1.2.HistorySE.1: Use examples of regional folk heroes, stories, and/or songs and make inferences about how they have contributed to the development of a culture's history. • Learn about diverse environmentalists, conservationists, scientists, and community leaders. • Recognize that people from many cultures contribute to protecting natural resources and caring for the environment. • Discuss how communities work together to improve the places where they live. Holocaust Law (N.J.S.A. 18A:35-28) 6.2.2.D.2 Recognize real people and fictional characters who have demonstrated responsible leadership and citizenship and identify the characteristics that have made them good examples. • Practice kindness, cooperation, and responsibility while caring for the environment. • observe and discuss patterns in the sky, such as day and night and the apparent movement of the sun • Work together respectfully to solve environmental challenges and help the community.	contributed to the development of a culture's history. • Recognize that people from many cultures and backgrounds contribute to engineering and innovation. • Discuss how engineering helps improve communities and solve everyday problems. Holocaust Law (N.J.S.A. 18A:35-28) 6.2.2.D.2 Recognize real people and fictional characters who have demonstrated responsible leadership and citizenship and identify the characteristics that have made them good examples. • Practice kindness, cooperation, and respect while working with classmates. • Discuss how every part of a living thing has a purpose and contributes to the whole. • Demonstrate empathy, fairness, and teamwork while solving problems together.
Resources: <i>(Include names of texts and all online resources)</i>	• Amplify: Spinning Earth: Investigating Patterns in the Sky • ▶ Measuring the distance of th... • A Day on Earth	• Amplify: Spinning Earth: Investigating Patterns in the Sky • Read aloud <i>The Moon Book</i> by Gail Gibbons	• Amplify: Animal and Plant Defenses • ▶ Living Things – Plants and ... • ▶ What Is a Living Thing? - C...

	• Sunrise to Sunset • BrainPopJr-seasons • Next Generation Science Standards Interactive Read Alouds • Learn360 • Generation Genius	• https://jr.brainpop.com/science/space/mars/ • https://jr.brainpop.com/science/space/solarsystem/ • https://jr.brainpop.com/science/space/sun/ • Next Generation Science Standards Interactive Read Alouds • Learn360 • Generation Genius	• https://jr.brainpop.com/science/plants/partsofaplant/ • https://jr.brainpop.com/science/plants/plantadaptations/ • Next Generation Science Standards Interactive Read Alouds • <i>What Do You Do with a Tail Like That?"</i> by Steve Jenkins • <i>What If You Had Animal Hair?</i> <i>What If You Had Animal Feet?</i> <i>What If You Had Animal Teeth?</i> By Sandra Markle
Differentiation: <i>(What type of differentiated instruction will be used for each of the following subgroups:</i> 1. <i>Special Education</i> 2. <i>English Language Learners (ELLs)</i> 3. <i>At Risk/BSI</i> 4. <i>Gifted & Talented/Advanced</i> 5. 504)	Special Education • Individualized Education Plans (IEPs) • Exemplars of varied performance levels • Multi-media presentations • Consultation with CST • Manipulatives • Scaffolded Lessons • Guided note-taking • Study Guides • Modified homework • Use of the inclusion teacher to re-instruct in flexible small groups for the struggling learner • Use of alternate assessments English Language Learners (ELLs) • Dictionaries • Mnemonic devices • Visual aids • Modeling • Provide notes to students as needed in native language • Cultural responsiveness	Special Education • Individualized Education Plans (IEPs) • Exemplars of varied performance levels • Multi-media presentations • Consultation with CST • Manipulatives • Scaffolded Lessons • Guided note-taking • Study Guides • Modified homework • Use of the inclusion teacher to re-instruct in flexible small groups for the struggling learner • Use of alternate assessments English Language Learners (ELLs) • Dictionaries • Mnemonic devices • Visual aids • Modeling • Provide notes to students as needed in native language • Cultural responsiveness	Special Education • Individualized Education Plans (IEPs) • Exemplars of varied performance levels • Multi-media presentations • Consultation with CST • Manipulatives • Scaffolded Lessons • Guided note-taking • Study Guides • Modified homework • Use of the inclusion teacher to re-instruct in flexible small groups for the struggling learner • Use of alternate assessments English Language Learners (ELLs) • Dictionaries • Mnemonic devices • Visual aids • Modeling • Provide notes to students as needed in native language • Cultural responsiveness

	● Group students with others of different learning levels and abilities. ● Non-verbal assessments Students At-Risk (BSI) ● Build Background Knowledge ● Leveled Text ● Verbal and question reflections ● Scaffolded Lessons ● Small Group Instruction ● Tiered Assignments ● Interactive maps ● Jigsaw groups ● Vocabulary Self-Collection Strategy ● Graphic organizers ● Use of technology for class assignments and homework ● Discuss material verbally and also periods of quiet reflection. Gifted and Talented (Advanced) Students: ● Project Based Learning ● Flexible grouping ● Open-ended and informative writing ● Internet based research ● Open-ended responses ● Curriculum Compacting ● Advanced problems to extend the critical thinking skills of advanced learner ● Supplemental reading material for independent study ● Tiered assignments 504 Plans ● Preferential seating.	● Group students with others of different learning levels and abilities. ● Non-verbal assessments Students At-Risk (BSI) ● Build Background Knowledge ● Leveled Text ● Verbal and question reflections ● Scaffolded Lessons ● Small Group Instruction ● Tiered Assignments ● Interactive maps ● Jigsaw groups ● Vocabulary Self-Collection Strategy ● Graphic organizers ● Use of technology for class assignments and homework ● Discuss material verbally and also periods of quiet reflection. Gifted and Talented (Advanced) Students: ● Project Based Learning ● Flexible grouping ● Open-ended and informative writing ● Internet based research ● Open-ended responses ● Curriculum Compacting ● Advanced problems to extend the critical thinking skills of advanced learner ● Supplemental reading material for independent study ● Tiered assignments 504 Plans ● Preferential seating.	● Group students with others of different learning levels and abilities. ● Non-verbal assessments Students At-Risk (BSI) ● Build Background Knowledge ● Leveled Text ● Verbal and question reflections ● Scaffolded Lessons ● Small Group Instruction ● Tiered Assignments ● Interactive maps ● Jigsaw groups ● Vocabulary Self-Collection Strategy ● Graphic organizers ● Use of technology for class assignments and homework ● Discuss material verbally and also periods of quiet reflection. Gifted and Talented (Advanced) Students: ● Project Based Learning ● Flexible grouping ● Open-ended and informative writing ● Internet based research ● Open-ended responses ● Curriculum Compacting ● Advanced problems to extend the critical thinking skills of advanced learner ● Supplemental reading material for independent study ● Tiered assignments 504 Plans ● Preferential seating.
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	- Extended time on tests and assignments. - Reduced homework or classwork. - Verbal, visual, or technology aids. - Modified textbooks - Oral assessments	- Extended time on tests and assignments. - Reduced homework or classwork. - Verbal, visual, or technology aids. - Modified textbooks - Oral assessments	- Extended time on tests and assignments. - Reduced homework or classwork. - Verbal, visual, or technology aids. - Modified textbooks - Oral assessments
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Unit of Study: <i>(Pacing Guide - Specify time frame by days or weeks)</i>	Characteristics of Living Things: Plant and Animal Parts <i>February/March</i> <i>(5 weeks)</i>	Light Energy <i>March/April</i> <i>(5 weeks)</i>	Sound Energy; Using Energy to Communicate <i>May/June</i> <i>(5 weeks)</i>
STAGE 1: Desired Results			
Established Goals: Write out complete NJSLS: <i>(Content Specific Standards Only. Only use standards that are applicable to the unit.)</i>	Science: 1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs Disciplinary Core Ideas: LS3.A: Inheritance of Traits - Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. (1-LS3-1) LS3.B: Variation of Traits - Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-LS3-1)	Science: 1-PS4-2: Make observations to construct an evidence-based account that objects can be seen only when illuminated. 1-PS4-3: Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. Engineering Practices: K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. Disciplinary Core Ideas:	Science: 1-PS4-1: Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. 1-PS4-4: Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. Engineering Practices: K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool. K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it

		PS4.B: Electromagnetic Radiation • Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2) • Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (1-PS4-3)	function as needed to solve a given problem. K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. Disciplinary Core Ideas: PS4.A: Wave Properties • Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1) PS4.C: Information Technologies and Instrumentation • People also use a variety of devices to communicate (send and receive information) over long distances. (1-PS4-4)
Interdisciplinary Connections: Write out complete NJSLS: <i>(Must have at least one standard from one of these areas but may have more):</i> • <i>ELA companion standards;</i> • <i>Standards for Mathematical Practice</i> • <i>Science;</i> • <i>Visual/Performing Arts) - Standard 1;</i> • <i>Comprehensive Health & PE - Standard 2;</i> • <i>Social Studies - Standard 6;</i>	English Language Arts RI.1.1: Ask and answer questions about key details in a text. RI.1.2: Identify the main topic and retell key details of a text. RI.1.3: Describe the connection between two individuals, events, ideas, or pieces of information in a text. RI.1.4: Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. RI.1.5: Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. RI.1.6: Distinguish between information provided by pictures or other illustrations	ELA Companion RI.1.1: Ask and answer questions about key details in a text. RI.1.2: Identify the main topic and retell key details of a text. RI.1.3: Describe the connection between two individuals, events, ideas, or pieces of information in a text. RI.1.4: Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. RI.1.5: Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. RI.1.6: Distinguish between information provided by pictures or other illustrations	ELA Companion RI.1.1: Ask and answer questions about key details in a text. RI.1.2: Identify the main topic and retell key details of a text. RI.1.3: Describe the connection between two individuals, events, ideas, or pieces of information in a text. RI.1.4: Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. RI.1.5: Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. RI.1.6: Distinguish between information provided by pictures or other illustrations

• *World Languages - Standard 7;*

and information provided by the words in a text.

RI.1.7: Use the illustrations and details in a text to describe its key ideas.

RI.1.9: Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

W.1.2: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

W.1.5: With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers and self-reflection, and add details to strengthen writing and ideas as needed.

W.1.7: Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).

W.1.8: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

SL.1.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

SL.1.2: Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

L.1.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and

and information provided by the words in a text.

RI.1.7: Use the illustrations and details in a text to describe its key ideas.

RI.1.8: Identify the reasons an author gives to support points in a text and explain the application of this information with prompting as needed.

RI.1.9: Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

W.1.2: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

W.1.7: Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).

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W.1.2: Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

W.1.5: With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers and self-reflection, and add details to strengthen writing and ideas as needed.

W.1.7: Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).

W.1.8: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

SL.1.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

SL.1.2: Ask and answer questions about key details in a text read aloud or

	content, choosing flexibly from an array of strategies. Mathematics MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. 1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. 1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-LS3-1)	content, choosing flexibly from an array of strategies. Mathematics MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. 1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	information presented orally or through other media. L.1.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and content, choosing flexibly from an array of strategies. Mathematics MP.2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. 1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object. 1.MD.A.2 Express the length of an object as a whole number of length units, by layering multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.
Integration of Career Readiness, Life Literacies & Key Skills: Write out complete NJSLS: <i>(Must have at least one standard from:</i> ● 9.1 Personal Financial Literacy; or ● 9.2 Career Awareness,	Career Awareness, Exploration & Training 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). Life Literacies & Key Skills 9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10).	Career Awareness, Exploration & Training 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). Life Literacies & Key Skills 9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10).	Career Awareness, Exploration & Training 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a). 9.4.2.CT.2: Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3). 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive). Life Literacies & Key Skills 9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10).

Exploration, Preparation & Training; or ● 9.4 Life Literacies & Key Skills)			
Integration of Computer Science and Design Thinking: Write out complete NJSLS: <i>(Must have at least one standard from:</i> ● 8.1 Computer Science; or ● 8.2 Design Thinking)	Computer Science 8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences. 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats. 8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device. Design Thinking 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process. 8.2.2.ITH.5: Design a solution to a problem affecting the community in a collaborative team and explain the intended impact of the solution.	Computer Science 8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences. 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats. 8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device. 8.1.2.DA.4: Make predictions based on data using charts or graphs. Design Thinking 8.2.2.ED.1: Communicate the function of a product or device. 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.	Computer Science 8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences. 8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats. 8.1.2.DA.2: Store, copy, search, retrieve, modify, and delete data using a computing device. 8.1.2.DA.4: Make predictions based on data using charts or graphs. Design Thinking 8.2.2.ED.1: Communicate the function of a product or device. 8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. 8.2.2.ED.3: Select and use appropriate tools and materials to build a product using the design process.
21st Century Life/Careers: Career Education: Write out complete NJSLS: <i>(Only include if a CTE curriculum</i> ● 9.3 Career and Technical Education)	N/A	N/A	N/A

Enduring Understandings: <i>(Follow UbD: What big ideas will students know?)</i>	- The animal kingdom can be divided into two groups: those with backbones, called <i>vertebrates</i>, and those without backbones, called <i>invertebrates</i>. - Animals and plants have parts that protect them or capture and convey information needed for growth and survival.	- Light is one kind of energy we get from the Sun and one we can detect with our eyes. - Shadows form when an object obstructs the path of light. - Some materials block light, while other materials allow light to pass through them. - In order to see anything, light must reflect off of the object and enter the eye.	- Energy is required to make matter vibrate, which in turn, can make different sounds. When we hear sounds, our eardrums are responding to sound waves—moving air that is set in motion when an object vibrates. Any vibrating object can set off sound waves. - Sound can change in volume and pitch. - People use tools to send and receive information over long distances, including devices that use light (traffic lights, neon signs, sirens, etc.) and sound (speaking, clapping, school bells, etc.). - Communication has changed over time and new communication technologies help people solve problems.
Essential Questions: <i>(Follow UbD best practices in the creation of questions)</i>	- How do the parts of plants and animals help them live and grow? - How do people use ideas from plants/ animals to solve problems? - How are plant and animal parts alike and different?	- What is light, and where does it come from? - How does light make shadows? - How does light move through different materials? - How does light bounce off different objects?	- How is sound made? - How does sound change? - How do we use light and sound to communicate?
STAGE 2: Evidence			
Assessment & Evidence: <i>(By what criteria will performances of understanding be judged? Include:</i>	Formative Assessments - Class Discussions - Cooperative Learning Activities that students complete in class where the teacher can assess an individual or	Formative Assessments - Class Discussions - Cooperative Learning Activities that students complete in class where the teacher can assess an individual or	Formative Assessments - Class Discussions - Cooperative Learning Activities that students complete in class where the teacher can assess an individual or

1. Formative, 2. Summative, 3. Alternative - Performance/Project) 4. Benchmark)	group - Exit Tickets - In-class Assignments - Inquiry Evaluations - Labs/Quizzes - Strategic Questioning -higher order questions require more in-depth thinking by students. - Teacher Observations - Think - Pair -Share - students discuss with peers their answer to a teacher posed question. The teacher moves around the classroom to listen to various discussions, gaining valuable insight into levels of understanding Summative Assessments - Culminating experiment - Draw a Picture - students draw a picture to explain a topic (4 seasons of the year, characteristics of day/night, etc.) Benchmark Assessments - Multiple Choice Assessment administered at the end of marking periods Alternative Assessments - Oral Presentations - Questions for Comprehension - Performance Tasks - Self-Assessment	group - Exit Tickets - In-class Assignments - Inquiry Evaluations - Labs/Quizzes - Strategic Questioning -higher order questions require more in-depth thinking by students. - Teacher Observations - Think - Pair -Share - students discuss with peers their answer to a teacher posed question. The teacher moves around the classroom to listen to various discussions, gaining valuable insight into levels of understanding Summative Assessments - Culminating experiment - Draw a Picture - students draw a picture to explain a topic (4 seasons of the year, characteristics of day/night, etc.) Benchmark Assessments - Multiple Choice Assessment administered at the end of marking periods Alternative Assessments - Oral Presentations - Questions for Comprehension - Performance Tasks - Self-Assessment	group - Exit Tickets - In-class Assignments - Inquiry Evaluations - Labs/Quizzes - Strategic Questioning -higher order questions require more in-depth thinking by students. - Teacher Observations - Think - Pair -Share - students discuss with peers their answer to a teacher posed question. The teacher moves around the classroom to listen to various discussions, gaining valuable insight into levels of understanding Summative Assessments - Culminating experiment - Draw a Picture - students draw a picture to explain a topic (4 seasons of the year, characteristics of day/night, etc.) Benchmark Assessments - Multiple Choice Assessment administered at the end of marking periods Alternative Assessments - Oral Presentations - Questions for Comprehension - Performance Tasks - Self-Assessment
STAGE 3: Learning Plan			

Learning Activities/Content: <i>(What is the core content of this unit? What performance tasks/ activities will students do? What skills will students know? Include content that adheres to NJ Administrative Code and Statutes:</i> • <i>Amistad Law</i> • <i>Holocaust Law</i> • <i>LGBTQ/Disabilities Law</i>	• Students will be able to explain the differences between living and nonliving things. • Vocabulary Review: living, nonliving, flower, seed, stem, leaves, roots, nutrient, fruit • Venn Diagram for living and nonliving things. • Investigate what seeds need to grow and whether rocks grow. • Research what living things need and write a “how-to” list that describes how to care for a living thing. • Explain plant parts and structure. • Examine and compare the parts of two different plants. • Research plants that live in different environments. • Create a model of a plant. DEI Activities - Diversity and Inclusion statute (N.J.S.A. 18A:35-4.36a) 2.1.5.EH.3: Identify different feelings and emotions that people may experience and how they might express these emotions (e.g., anger, fear, happiness, sadness, hopelessness, anxiety). 2.1.5.SSH.3: Demonstrate ways to promote dignity and respect for all people (e.g. sexual orientation, gender identity and expression, race, ethnicity, socio-economic status, differing ability, immigration status, family configuration). • Work collaboratively during investigations and engineering challenges.	• Students will be able to explain what light is and how light affects shadows. • Students will learn that light is one kind of energy we get from the Sun and one we can detect with our eyes. • Vocabulary Review: light, shadow, materials, transparent, opaque, translucent, mirror, reflect • Discover that shadows are created when solid objects block light and that the shape of the shadow is the same shape as the object. • Plan an investigation to show how shadows change size during the course of a day. • Determine how light travels through different materials. • Observe that all objects are made of transparent, translucent, or opaque materials, or a combination of them, and how the materials are used. • Observe different materials in school that are transparent, translucent, and opaque. • Plan an investigation to discover what materials light passes through. • Explain the effect of mirrors on the path of light. • Explore how light travels before and after it hits different objects. • Students will plan and conduct an investigation to discover if light passes through a mirror. • Students will investigate how light	• Students will discover that energy is required to make matter vibrate, which in turn, can make different sounds. • Vocabulary Review: sound, energy, vibrate, matter, waves, volume, pitch, communicate, electricity, receiver, transmitter • Explain how sound can make matter vibrate, and that vibrating matter can make sound. • Observe vibration and explore how it relates to sound • Design and create an instrument that will make sound. • Explain that sound can change in volume or pitch. • Observe the relationship between how loud a sound is and sound waves. • Listen to different instruments at various volumes, and observe how the sound waves radiate from the instruments at each volume. • Observe that the louder the sound, the bigger the sound waves and the farther the sound waves travel. • Observe how their vocal cords vibrate as they make sounds of different pitch and volume. • Identify which objects communicate using sound, light, or both light and sound. • Investigate how sound affects salt on a plastic-wrapped bowl.
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	• Encourage all students to share ideas, predictions, and observations. • Recognize that scientists and engineers from diverse backgrounds contribute to solving problems. • Respect different approaches and ideas while working together. • Design solutions that are safe and accessible for everyone. Amistad Law (N.J.S.A. 18A:52-16A-88) 6.1.2.CivicsDP.3: Explain how historical symbols, monuments and holidays reflect the shared values, principles, and beliefs of the American identity. 6.1.2.HistorySE.1: Use examples of regional folk heroes, stories, and/or songs and make inferences about how they have contributed to the development of a culture's history. • Learn about diverse inventors, engineers, and scientists who have improved transportation, technology, and everyday life. • Recognize that people from many cultures contribute to engineering and scientific innovation. • Discuss how engineering helps solve problems in communities. Holocaust Law (N.J.S.A. 18A:35-28) 6.2.2.D.2 Recognize real people and fictional characters who have demonstrated responsible leadership and citizenship and identify the characteristics that have made them good examples.	can illuminate an object. DEI Activities - Diversity and Inclusion statute (N.J.S.A. 18A:35-4.36a) 2.1.5.EH.3: Identify different feelings and emotions that people may experience and how they might express these emotions (e.g., anger, fear, happiness, sadness, hopelessness, anxiety). 2.1.5.SSH.3: Demonstrate ways to promote dignity and respect for all people (e.g. sexual orientation, gender identity and expression, race, ethnicity, socio-economic status, differing ability, immigration status, family configuration). • Work collaboratively to investigate and solve problems. • Encourage all students to share ideas and observations. • Discuss how, just as a light can help someone see in the darkness, kindness and courage can help others during difficult times. • Recognize that scientists and engineers come from many cultures, backgrounds, and experiences. • Respect different ideas and work together to design Amistad Law (N.J.S.A. 18A:52-16A-88) 6.1.2.CivicsDP.3: Explain how historical symbols, monuments and holidays reflect the shared values, principles, and beliefs of the American identity. 6.1.2.HistorySE.1: Use examples of regional folk heroes, stories, and/or songs and make inferences about how they have	• Explain how light and sound can be used to communicate over a distance and how people use a variety of devices to send and receive information. • Identify which objects communicate using sound, light, or both light and sound. • Investigate how the length of string affects sound between paper cups. • Explain how communication has changed over time and how new communication technologies help people solve problems. • Investigate how a megaphone affects sound. • Demonstrate how megaphones focus sound waves to help sound reach across distance. DEI Activities - Diversity and Inclusion statute (N.J.S.A. 18A:35-4.36a) 2.1.5.EH.3: Identify different feelings and emotions that people may experience and how they might express these emotions (e.g., anger, fear, happiness, sadness, hopelessness, anxiety). 2.1.5.SSH.3: Demonstrate ways to promote dignity and respect for all people (e.g. sexual orientation, gender identity and expression, race, ethnicity, socio-economic status, differing ability, immigration status, family configuration). • Solve a problem at school by designing a device that uses
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	● Practice kindness, cooperation, and respect while participating in engineering challenges. ● Encourage teamwork and include everyone's ideas. ● Demonstrate fairness, empathy, and responsibility during collaborative investigation	contributed to the development of a culture's history. ● Recognize that people from many cultures contribute to scientific discoveries and engineering innovations. ● Discuss how communities around the world use sunlight in different ways. Holocaust Law (N.J.S.A. 18A:35-28) 6.2.2.D.2 Recognize real people and fictional characters who have demonstrated responsible leadership and citizenship and identify the characteristics that have made them good examples. ● Practice kindness, cooperation, and respect while working with classmates	light, sound, or both to communicate ● Encourage all students to share observations and ideas. ● Respect different perspectives and work together to solve problems. Amistad Law (N.J.S.A. 18A:52-16A-88) 6.1.2.CivicsDP.3: Explain how historical symbols, monuments and holidays reflect the shared values, principles, and beliefs of the American identity. 6.1.2.HistorySE.1: Use examples of regional folk heroes, stories, and/or songs and make inferences about how they have contributed to the development of a culture's history. ● Learn about diverse scientists, environmentalists, and conservationists. ● Discuss how communities work together to care for living things and the environment. Holocaust Law (N.J.S.A. 18A:35-28) 6.2.2.D.2 Recognize real people and fictional characters who have demonstrated responsible leadership and citizenship and identify the characteristics that have made them good examples. ● Demonstrate empathy and respect for living things and classmates during collaborative activities. ● Reinforce inclusion, fairness, and teamwork through shared investigations.
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Resources: <i>(Include names of texts and all online resources)</i>	• Amplify- Animal and Plant Defenses • Next Generation Science Standards Interactive Read Alouds • Learn360 • Generation Genius • Mystery Science • Scholastic News • Science Spin • Brainpopjr- Part of a plant • Brainpopjr- Plant Adaptations • <i>Why Do Plants Have Seeds?</i> By Celeste Bishop	• Amplify- Light and Sound • Next Generation Science Standards Interactive Read Alouds • Brainpopjr-Energy/Light • Learn360 • Generation Genius • Mystery Science • Scholastic News • Science Spin • Assessing Light Knowledge • <i>What Are Sound Waves</i> by Robin Johnson • <i>Sounds All Around</i> by Wendy Pfeffer	• Amplify- Light and Sound • Next Generation Science Standards Interactive Read Alouds • Brainpopjr-Energy/Sound • Learn360 • Generation Genius • Mystery Science • Scholastic News • Science Spin • Energy All Around Us: Light, Heat, and Sound • <i>What Vibrates</i> by John Erickson
Differentiation: <i>(What type of differentiated instruction will be used for each of the following subgroups:</i> 1. <i>Special Education</i> 2. <i>English Language Learners (ELLs)</i> 3. <i>At Risk/BSI</i> 4. <i>Gifted & Talented/Advanced</i> 5. <i>504</i>)	Special Education • Individualized Education Plans (IEPs) • Exemplars of varied performance levels • Multi-media presentations • Consultation with CST • Manipulatives • Scaffolded Lessons • Guided note-taking • Study Guides • Modified homework • Use of the inclusion teacher to re-instruct in flexible small groups for the struggling learner • Use of alternate assessments English Language Learners (ELLs) • Dictionaries	Special Education • Individualized Education Plans (IEPs) • Exemplars of varied performance levels • Multi-media presentations • Consultation with CST • Manipulatives • Scaffolded Lessons • Guided note-taking • Study Guides • Modified homework • Use of the inclusion teacher to re-instruct in flexible small groups for the struggling learner • Use of alternate assessments English Language Learners (ELLs) • Dictionaries	Special Education • Individualized Education Plans (IEPs) • Exemplars of varied performance levels • Multi-media presentations • Consultation with CST • Manipulatives • Scaffolded Lessons • Guided note-taking • Study Guides • Modified homework • Use of the inclusion teacher to re-instruct in flexible small groups for the struggling learner • Use of alternate assessments English Language Learners (ELLs) • Dictionaries

	• Mnemonic devices • Visual aids • Modeling • Provide notes to students as needed in native language • Cultural responsiveness • Group students with others of different learning levels and abilities. • Non-verbal assessments Students At-Risk (BSI) • Build Background Knowledge • Leveled Text • Verbal and question reflections • Scaffolded Lessons • Small Group Instruction • Tiered Assignments • Interactive maps • Jigsaw groups • Vocabulary Self-Collection Strategy • Graphic organizers • Use of technology for class assignments and homework • Discuss material verbally and also periods of quiet reflection. Gifted and Talented (Advanced) Students: • Project Based Learning • Flexible grouping • Open-ended and informative writing • Internet based research • Open-ended responses • Curriculum Compacting • Advanced problems to extend the critical thinking skills of advanced learner	• Mnemonic devices • Visual aids • Modeling • Provide notes to students as needed in native language • Cultural responsiveness • Group students with others of different learning levels and abilities. • Non-verbal assessments Students At-Risk (BSI) • Build Background Knowledge • Leveled Text • Verbal and question reflections • Scaffolded Lessons • Small Group Instruction • Tiered Assignments • Interactive maps • Jigsaw groups • Vocabulary Self-Collection Strategy • Graphic organizers • Use of technology for class assignments and homework • Discuss material verbally and also periods of quiet reflection. Gifted and Talented (Advanced) Students: • Project Based Learning • Flexible grouping • Open-ended and informative writing • Internet based research • Open-ended responses • Curriculum Compacting • Advanced problems to extend the critical thinking skills of advanced learner	• Mnemonic devices • Visual aids • Modeling • Provide notes to students as needed in native language • Cultural responsiveness • Group students with others of different learning levels and abilities. • Non-verbal assessments Students At-Risk (BSI) • Build Background Knowledge • Leveled Text • Verbal and question reflections • Scaffolded Lessons • Small Group Instruction • Tiered Assignments • Interactive maps • Jigsaw groups • Vocabulary Self-Collection Strategy • Graphic organizers • Use of technology for class assignments and homework • Discuss material verbally and also periods of quiet reflection. Gifted and Talented (Advanced) Students: • Project Based Learning • Flexible grouping • Open-ended and informative writing • Internet based research • Open-ended responses • Curriculum Compacting • Advanced problems to extend the critical thinking skills of advanced learner
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	• Supplemental reading material for independent study • Tiered assignments 504 Plans • Preferential seating. • Extended time on tests and assignments. • Reduced homework or classwork. • Verbal, visual, or technology aids. • Modified textbooks • Oral assessments	• Supplemental reading material for independent study • Tiered assignments 504 Plans • Preferential seating. • Extended time on tests and assignments. • Reduced homework or classwork. • Verbal, visual, or technology aids. • Modified textbooks • Oral assessments	• Supplemental reading material for independent study • Tiered assignments 504 Plans • Preferential seating. • Extended time on tests and assignments. • Reduced homework or classwork. • Verbal, visual, or technology aids. • Modified textbooks • Oral assessments
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