Grade 1

# Unit 2: Sound

New Jersey Student Learning Standards

Established 2016-2017
Revised 2018-2019
Revised 2019-2020
Revised 2020-2021
**Revised 2022-2023**

Content Area: Science (NJSLS-S) Grades K - 12
Grade:

Dev. Date:

| Marking Period | Unit Title | Recommended Instructional Days |
|---|---|---|
| Trimester 1 | Sound | 21-25 Days |

| NJSLS - Science: *TItle* | NJSLS - Science: *Performance Expectations* | **Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-S within Unit** |
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| Waves and their Applications in Technologies for Information Transfer | **1-PS4-1**: Plan and conduct investigations to provide evidence that vibrating materials can make sound, and that sound can make materials vibrate.<br><br>**1-PS4-4:** Use tools and materials to design and build a device that uses sound to solve the problem of communicating over a distance. | |
| **FOUNDATION Disciplinary: *Core Idea*** | **FOUNDATION Disciplinary: *Statement*** | |
| **PS4.A:** Waves and Properties<br><br>**PS4,C:** Information Technologies and Instrumentation | • Sound can make matter vibrate, and vibrating matter can make sound.(1-PS4-1)<br><br>• People also use a variety of devices to communicate (send and receive information) over long distances. (1-PS4-4) | **Essential Question/s:**<br>• What is Sound?<br>• How Can We Communicate with Sound?<br><br>**Activity Description:**<br>• Explore the relationship between sound and vibrations.<br>• Compare the volume and the pitch of different sounds.<br>• Investigate how sound makes materials move.<br>• Identify ways people communicate using sound.<br>• Explore how technology is used to help people communicate with sound over distances.<br><br>**Activities:**<br>• Evidence Notebook (ELA)<br>• Unit 2 Project-Explore Sound<br>• Vocabulary Game-Make a Match (ELA)<br>• Hands-On-Activity-Make Something Move with Sound (MA/ART)<br>• Can You Explain It:-Sound Signals |
| **FOUNDATION Science and Engineering Practices:** | **FOUNDATION Science and Engineering** | |

| *Core Idea* | **Practices:** *Statement* | |
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| • Planning and Carrying Out Investigations<br><br>• Constructing Explanations and Designing Solutions | • Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)<br>• Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.<br>• Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (1-PS4-2)<br>• Use tools and materials provided to design a device that solves a specific problem. (1-PS4-4) | • Hands-On Activity-Engineer It-Communicate over Distance (ART/MA)<br>• Take it Further-Careers in Science & Engineering/Sound Engineer<br>• Unit 2 Performance Task-Communicate with Sound<br>• Leveled Readers (ELA)<br><br>**Interdisciplinary Connections: Content NJSLS**<br><br>**Connections to Math:**<br>• **MP.5** Use appropriate tools strategically. (1-PS4-4)<br>• **1.MD.A.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-PS4-4)<br>• **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. (1-PS4-4)<br><br>**Connections to ELA::**<br>• **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. (1-PS4-2)<br>• **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). (1-PS4-1), (1-PS4-2), (1-PS4-3), (1-PS4- 4)<br>• **W.1.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-PS4-1), (1-PS4-2), (1-PS4-3) |
| **FOUNDATION Crosscutting Concepts:** *Core Idea* | **FOUNDATION Crosscutting Concepts:** *Statement* | |
| • Scientific Investigations Use a Variety of Methods | • Science investigations begin with a question. (1-PS4-1)<br>• Scientists use different ways to study the world. (1-PS4-1) | |

| **Social and Emotional Learning:** ***Competencies*** | **Social and Emotional Learning:** ***Sub-Competencies*** | |
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| ● Self-Awareness<br>● Self-Management<br>● Social Awareness<br>● Responsible Decision Making<br>● Relationship Skills | ● Recognize one's feelings and thoughts.<br>● Recognize the skills needed to establish and achieve personal and educational goals.<br>● Recognize and identify the thoughts, feelings, and perspectives of others.<br>● Develop, implement, and model effective problem-solving and critical thinking skills<br>● Utilize positive communication and social skills to interact effectively with others | ● **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. (1-PS4-1), (1-PS4-2), (1-PS4-3) |

| **Assessments (Formative)** ***To show evidence of meeting the standard/s, students will successfully engage within:*** | **Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:*** |
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| **Formative Assessments:**<br>● Unit Pretest<br>● Lesson Check<br>● Unit Review | **Benchmarks:**<br>● District Assessments<br><br>**Summative Assessments:**<br>● Lesson Quizzes<br>● Unit Test |

**Differentiated Student Access to Content:**
**Teaching and Learning *Resources/Materials***

| **Core Resources** | **Alternate Core Resources** ***IEP/504/At-Risk/ESL*** | **ELL Core Resources** | **Gifted & Talented Core Resources** |
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| ● Workbook<br>● Leveled Readers<br>● Hands-on Activities<br>● Interactive Worktext | ● Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method | ● Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual | ● Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate |

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| | (repetition, simple explanations, additional examples, modeling, etc.), modify test content and/or format, allow students to retake<br>● Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed. | directions/prompts when necessary, supplemental materials including use of online bilingual dictionaries, and modified assessment and/or rubric. | authentic components, propose interest-based extension activities, and connect students to related talent development opportunities. |

**Supplemental Resources**

**Technology:**
- HMH Co. Interactive Site
- You Solve It Simulations

**Other:**
- C**areer Education:** Sound Engineer
- **Spotlight on Scientist:** Ludwig van Beethoven

**Differentiated Student Access to Content:**
**Recommended *Strategies & Techniques***

| **Core Resources** | **Alternate Core Resources** ***IEP/504/At-Risk/ESL*** | **ELL Core Resources** | **Gifted & Talented Core** |
|---|---|---|---|
| ● Large group instruction<br>● Small group instruction<br>● Think Pair Share<br>● Cooperative group work<br>● Multimedia presentations | ● Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method (repetition, simple explanations, additional examples, modeling, etc.), modify | ● Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of online bilingual dictionaries, | ● Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect students to related |

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| • K-W-L<br>• Manipulatives<br>• Leveled Readers | test content and/or format, allow students to retake..<br>• Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed.<br>• Students at Risk of School Failure: Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed. | and modified assessment and/or rubric. | talent development opportunities**.** |

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| **NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS** | **Disciplinary Concept: Career Awareness & Planning, Creativity & Innovation, Critical Thinking & Problem Solving, Technology Literacy** | |
| | ***Core Ideas:*** | • Different types of jobs require different knowledge and skills.<br>• Brainstorming can create new, innovative ideas.<br>• Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.<br>• Collaboration can simplify the work an individual has to do and sometimes produce a better product. |
| | ***Performance Expectation/s:*** | • 9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job |

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| | | ● 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).<br>● 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).<br>● 9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).<br>● 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).<br>● 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).<br>● 9.4.2.TL.7: Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2). |
| | **Career Readiness, Life Literacies & Key Skill Practices** | |
| | ● Demonstrate creativity and innovation.<br>● Utilize critical thinking to make sense of problems and persevere in solving them.<br>● Use technology to enhance productivity, increase collaboration and communicate effectively.<br>● Work productively in teams while using cultural/global competence. | |

| New Jersey Legislative Statutes and Administrative Code<br>(place an "X" before each law/statute if/when present within the curriculum map) | | | | | | | | | |
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| | Amistad Law: *N.J.S.A. 18A 52:16A-88* | | Holocaust Law: *N.J.S.A. 18A:35-28* | | LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35* | | Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a* | | Standards in Action: *Climate Change* |