Grade 2

Unit 5: Changes to Earth's Surface

New Jersey Student Learning Standards

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

Trimester	Unit Title	Recommended Instructional Days
3	Changes to Earth's Surface	30 - 40 Days

NJSLS - Science: *TItle*	NJSLS - Science: *Performance Expectations*	
2-ESS1 - Earth's Place in the Universe 2-ESS2 - Earth's Systems	**2-ESS1-1** Use information from several sources to provide evidence that Earth events can occur quickly or slowly. **2-ESS2-1** Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. **SEP:** Constructing Explanations and Designing Solutions **DCI: ESS2.A** Earth Materials and Systems **DCI: ESS1.**C The History of Planet Earth **DCI: ETS1.C** Optimizing the Design Solution **CCC:** Stability and Change **CCC:** Influence of Engineering, Technology, and Science on Society and the Natural World **CCC:** Science Addresses Questions About the Natural and Material World	**Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-S within Unit**
FOUNDATION Disciplinary:	**FOUNDATION Disciplinary:**	

Core Idea	***Statement***	
ESS1.C: The History of Planet Earth	Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)	**<u>Essential Question/s:</u>** ● What changes on Earth happen slowly? ● What changes on Earth happen quickly? ● How can we prevent wind and water from changing land? **<u>Climate Change</u>** Investigate how wind erosion impacts the land and possible solutions Investigate how erosion affects coastal beaches There is a connection between Climate Change and all of these weather phenomena that can cause changes to Earth's surface: ● Drought ● Extreme Heat ● Extreme Precipitation ● Hurricanes ● Tornadoes ● Wildfires **<u>Activity Description</u>**: **<u>Unit Phenomenon Model</u>** ● Erosion (Unit 5 Project) ● Take it Further ● Model Quick Changes on Earth ● Engineer It-Prevent Water from Changing Land ● You Solve It (Preventing Wind Erosion) *Collaboration opportunities in this unit: Build on Prior Knowledge (pp. 225,245,265),Small Groups (239,260,276) Think, Pair, Share (p.253), Cultivating New Questions (pp. 241,261,277), Jigsaw (p. 230,270)
FOUNDATION **Science and Engineering Practices:** ***Core Idea***	**FOUNDATION** **Science and Engineering Practices:** ***Statement***	
Constructing Explanations and Designing Solutions	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. Make observations from several sources to construct an evidence based account for natural phenomena. (2-ESS1-1)	
FOUNDATION **Crosscutting Concepts:** ***Core Idea***	**FOUNDATION** **Crosscutting Concepts:** ***Statement***	
Stability and Change	Things may change slowly or rapidly. (2-ESS1-1)	
Social and Emotional Learning: ***Competencies***	**Social and Emotional Learning:** ***Sub-Competencies***	

• Responsible Decision-Making • Relationship Skills • Self-Management • Social Awareness • Self Awareness	• Develop, implement, and model effective problem-solving and critical thinking skills • Utilize positive communication and social skills to interact effectively with others • Recognize the skills needed to establish and and achieve personal and educational goals • Demonstrate an understanding of the need for mutual respect when viewpoints differ. • Demonstrate an awareness of the expectations for social interactions in a variety of settings	**Materials and Equipment:** HMH Equipment Kits, Online Simulations, Leveled Readers, Workbook,Online Simulations, Evidence Notebook, Equipment Kits, Leveled Readers **Interdisciplinary Connections: Content:** ***NJSLS*** **Connections to Math** **MP.2:** Reason abstractly and quantitatively; **MP.4:** Model with mathematics; **MP.5:** Use appropriate tools strategically; **2.MD.B.5**: Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g.,by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. Connections to **Language Arts** **RI.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. **W.2.7** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations) **W.2.8:** Recall information from experiences or gather information from provided sources to answer a question. **SL.2.2** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. **SL.2.5** Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. **W.2.6** With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. **W.2.7** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations)

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:***
Formative Assessments: ● Interactive worktext (280-281) ● Apply What You Know ● Lesson Check ● Evidence Notebook **Alternative Assessments** ● Performance Assessment (back of assessment guide) ● Unit Project ● You Solve It (Digital only)	**Benchmarks:** ● Performance-Based Assessment (End of Module Test/End of Year Test) ● District Assessments **Summative Assessments:** ● Lesson quiz ● Interactive Worktext (Unit 5 Review pp. 282-284) ● Self Check ● 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**
● Workbook ● Leveled Readers ● Hands-on Activities ● Interactive Worktext	● 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 test content and/or format, allow students to retake ● Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide	● Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of an online bilingual dictionary, and modified assessment and/or rubric	● 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 talent development opportunities.

	individual instruction as needed, modify assessments and/or rubrics, repeat instructions as needed.		

Supplemental Resources

Technology:

- HMH Co. Interactive Site
- You Solve It Simulations

Career Education: Farming, Volcanologist, Geotechnical Engineers

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 • Small group instruction • Think Pair Share • Cooperative group work • Multimedia presentations • K-W-L • Manipulatives • Leveled Readers **MTSS:** • Model how to identify vocabulary terms	• 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 test content and/or format • allow students to retake tests for additional credit • provide additional times and preferential seating as needed	• 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 dictionary • modified assessment and/or rubric.	• Create an enhanced set of introductory activities • integrate active teaching/learning opportunities • incorporate authentic components • propose interest-based extension activities such as advanced research on geotechnical engineering and the different areas in which geotechnical engineers work. • connect students to related talent development opportunities.

within text. ● Discuss how to locate definition within the text, noting that some definitions will need to be inferred based on images as well as text.			● review, restate and repeat directions ● provide study guides ● break assignments into segments of shorter tasks.		

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	**Disciplinary Concept: Creativity & Innovation/Critical Thinking & Problem Solving / Technology Literacy**	
	Core Ideas:	● Different types of jobs require different knowledge and skills. ● Brainstorming can create new, innovative ideas. ● Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem. ● 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 ● 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). ● 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a). ● 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). ● 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). ● 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. • Utilize critical thinking to make sense of problems and persevere in solving them. • Use technology to enhance productivity, increase collaboration and communicate effectively. • Work productively in teams while using cultural/global competence.

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)									
x	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*	x	Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*	x	Standards in Action: *Climate Change*