



Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Curriculum Development Timeline

School: Township of Ocean Elementary Schools

Course: Science, Grade 2

Department: Science

Board Approval	Supervisor	Notes
February 2009	Jessica Shaw	Born Date
June 2011	Christine Picerno	Revisions
August 2017	Christine Picerno	Revisions
March 2019	Christine Picerno	Review
August 2021	Rich Steckhahn	Alignment to Standards & Revisions
August 2022	Patrick Sullivan	Incorporate State Mandates
August 2024	Patrick Sullivan	Updated to include New State Mandates

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Township of Ocean Pacing Guide			
Week	Marking Period 1	Week	Marking Period 3
1	Independent Relationships in Ecosystems	21	Structure and Properties of Matter
2	Independent Relationships in Ecosystems	22	Structure and Properties of Matter
3	Independent Relationships in Ecosystems	23	Structure and Properties of Matter
4	Independent Relationships in Ecosystems	24	Structure and Properties of Matter
5	Independent Relationships in Ecosystems	25	Structure and Properties of Matter
6	Independent Relationships in Ecosystems	26	Structure and Properties of Matter
7	Independent Relationships in Ecosystems	27	Structure and Properties of Matter
8	Independent Relationships in Ecosystems	28	Structure and Properties of Matter
9	Independent Relationships in Ecosystems	29	Structure and Properties of Matter
10	Independent Relationships in Ecosystems	30	Structure and Properties of Matter
Week	Marking Period 2	Week	Marking Period 4
11	Independent Relationships in Ecosystems	31	Earth Systems and Earth's Place in the Universe
12	Independent Relationships in Ecosystems	32	Earth Systems and Earth's Place in the Universe
13	Independent Relationships in Ecosystems	33	Earth Systems and Earth's Place in the Universe
14	Independent Relationships in Ecosystems	34	Earth Systems and Earth's Place in the Universe
15	Independent Relationships in Ecosystem	35	Earth Systems and Earth's Place in the Universe
16	Independent Relationships in Ecosystem	36	Earth Systems and Earth's Place in the Universe
17	Independent Relationships in Ecosystem	37	Earth Systems and Earth's Place in the Universe
18	Independent Relationships in Ecosystem	38	Earth Systems and Earth's Place in the Universe
19	Structure and Properties of Matter	39	Earth Systems and Earth's Place in the Universe

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

20	Structure and Properties of Matter	40	Earth Systems and Earth's Place in the Universe
----	------------------------------------	----	---

Climate Change: Earth Systems (NJSLS-S: K-2-ETS1-1)

Core Instructional & Supplemental Materials including various levels of Texts

Mystery Science Lessons, Wonders Reading Program, Brain Pop, Pebble Go, PBS Kids, Interactive Games/Demonstrations, and various trade books related to unit topics. See all titles below in Lesson Activities.

Time Frame	18 weeks
Topic	
Independent Relationships in Ecosystems	
Alignment to Standards	
2-LS2-1 - Plan and conduct an investigation to determine if plants need sunlight and water to grow. <i>[Assessment Boundary: Assessment is limited to testing one variable at a time.]</i> 2-LS2-2 - Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants. 2-LS4-1 - Make observations of plants and animals to compare the diversity of life in different habitats. <i>[Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.]</i> <i>[Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]</i> 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.	
Learning Objectives and Activities	
Students will understand that...	

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

- A habitat contains basic needs for an organism to survive (examples: water, food, and shelter).
- Different habitats have many different kinds of living things in them (biodiversity).
- Plants depend on water and light to grow.
- Plants depend on animals for pollination or to move their seeds around.

Activities

Mystery Science

- [Plant Adventures](#)
- [Animal Adventures](#)

Generation Genius

- [Plant Growth Conditions](#)
- [Pollination and Seed Dispersal](#)
- [Biodiversity of Life on Earth](#)

Wonders Connection

- Unit 2- Animal Discoveries

BrainPop Jr

- [Parts of a Plant](#)
- [Plant Adaptations](#)
- [Plant Life Cycle](#)
- [Habitats](#)

PebbleGo

- [What are Plants](#)
- [Parts of a Plant](#)
- [Plant Habitats](#)
- [Adaptations](#)

Video Resources

- [What Do Plants Need](#)
- [Seed Dispersal](#)
- [Diversity of Different Habitats](#)
- [Parts of a Plant](#)
- [Pollination](#)
- [Adaptations](#)
- [Bill Nye- Flowers](#)

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Activities

- [Celery Experiment](#) All Plants Need Water
- [Photosynthesis](#) How Plants Make food
- [Dispersing Seeds](#)
- [Pollinator](#) Activity Book
- [Pollination Experiment](#)
- [Engineer Your Own Hands on Pollinator](#)
- [Exploring plants- What seed need to grow and seed dispersal](#)

Interactive Websites

- [The Plant Escape](#)
- [How Do Plants Get Pollinated](#)
- [Interactive Plant Biology](#) Multiple sites

Literature Connections

- Carle, E. (2009). "[The Tiny Seed](#)"
- Krauss, R. (1945). "[The Carrot Seed](#)"
- Brown, P. (2009). "[The Curious Garden](#)"
- Pallotta, J. (2010). "[Who Will Plant a Tree?](#)"
- Lawrence, E. (2012). "[From Bird Poop to Wind: How Seeds Get Around](#)"
- Anthony, J. (1997). "[The Dandelion Seed](#)"
- Macken, J. (2008). "[Flip, Float, Fly! Seeds on the Move](#)"
- Ward, J. (2009). "[The Busy Tree](#)"
- Fredericks, A. (2001). "[Under One Rock: Bugs, Slugs and Other Ughs.](#)"
- Fleming, D. (1998). "[In the Small, Small Pond](#)"
- Guiberson, B. (1991). "[Cactus Hotel](#)"
- Rebecca Seiling "[Plant a Seed of Peace](#)"

Research Investigations

- [Kiddle](#)
- [Wonderopolis](#)

Additional Resources

- [Pollinating the Bees Have It](#)
- [Habitat Diversity](#)
- [Quizlet](#) Plants
- [Quizlet](#) Plants and Animals
- [Online Books](#) Plants
- [Pollination Power Lesson](#)

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Assessments

Formative

- Parts of a Plant Quiz
- Plant Life Cycle Quiz
- Brain Pop Plants Quiz

Summative

- Mystery Science Plant Adventure Test

Benchmark

- Engineering Design Process Rubric Assessment 1

Alternative STEM Assessments

- [Celery Experiment](#) All Plants Need Water
- [Dispersing Seeds](#)
- [Pollinator](#) Activity Book
- [Pollination Experiment](#)
- [Engineer Your Own Hands on Pollinator](#)
- [Exploring plants- What seed need to grow and seed dispersal](#)

Interdisciplinary Connections

NJSLS: ELA

- **W.WR.2.5.** Generate questions about a topic and locate related information from a reference source to obtain information on that topic through shared and independent research. (2-LS2-1)
- **W.SE.2.6** Prioritize information provided by different sources on the same topic while gathering ideas and planning to write about a topic.. (2-LS2-1), (K-2-ETS1-1), (K-2-ETS1-3)
- **RI.CR.2.1.** Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers. (K-2-ETS1-1)

NJSLS: Math

- **2.DL.B.4** 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. (2-LS2-2), (K-2-ETS1-1), (K-2-ETS1-3), (K-2-ETS-LS4-1)
- **2.M.A.4** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.(2-LS4-1)

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

NJSLS: Computer Science and Design Thinking

- **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.4:** Make predictions based on data using charts or graphs.

Career Readiness, Life Literacies, and Key Skills

- **9.1.2.CR.1:** Recognize ways to volunteer in the classroom, school and community.

Technology Integration

- **9.4.2.CT.1:** Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem.
- **9.4.2.DC.7:** Describe actions peers can take to positively impact climate change.
- **9.4.2.IML.3:** Use a variety of sources including multimedia sources to find information about topics such as climate change, with guidance and support from adults.

Career Education

- **CRP 4.** SW communicate clearly and effectively and with reason while working with partners on various lab assignments.
- **CRP 8.** SW utilize critical thinking to make sense of problems and persevere in solving them when working on the Celery and Pollination experiments.
- **CRP 11.** SW use technology to enhance productivity by accessing the following sites: [The Plant Escape](#), [How Do Plants Get Pollinated](#) and [Interactive Plant Biology](#).

Time Frame	12 weeks
Topic	
Structure and Properties of Matter	
Alignment to Standards	
2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. <i>[Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.]</i>	

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

2-PS1-2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. *[Clarification Statement: Examples of properties could include, strength, flexibility, hardness, texture, and absorbency.] [Assessment Boundary: Assessment of quantitative measurements is limited to length.]*

2-PS1-3 Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. *[Clarification Statement: Examples of pieces could include blocks, building bricks, or other assorted small objects.]*

2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. *[Clarification Statement: Examples of reversible changes could include materials such as water and butter at different temperatures. Examples of irreversible changes could include cooking an egg, freezing a plant leaf, and heating paper.]*

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.

Learning Objectives and Activities

Students will understand that...

- Matter exists as different substances that have various observable properties.
- Properties such as strength, flexibility, hardness, texture, and absorbency determine the purpose of matter.
- Some materials experience permanent changes when heated or cooled, while others have changes that are reversible.
- Matter can exist in various forms, both solid and liquid, depending on the temperature.
- A great variety of objects can be built up from a small set of pieces.

Activities

Mystery Science

- [Material Magic](#)

Generation Genius

- [Solids, Liquids and Gases](#)
- [Classification of Materials](#)
- [Material Properties and Purposes](#)
- [Heating and Cooling](#)

BrainPop Jr

- [Heating](#)
- [Properties of Matter](#)

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

- [Physical and Chemical Changes](#)

PebbleGo

- [What is Matter?](#)
- [Materials/Properties](#)
- [Properties of Materials](#)
- [Supporting a Scientific Opinion](#)

Video Resources

- Structure and Properties of Matter:
 - [Classify Matter by Characteristic](#)
 - [Disassemble small pieces to make a larger object.](#)
 - [Heating and Cooling of Water](#)

Interactive Games and Activities

- [Matter song to Farmer in the Dell](#)
- [Matter Game](#)
- [Changes in Matter Games and Videos](#)

States of Matter Resources

- [Chem for Kids - States of Matter](#)
- [Live Science - Properties of Matter](#)
- [Easy Science for Kids - States of Matter](#)
- [Khan Academy - States of Matter](#)

Research Investigations

- [Wonderopolis](#)
- [Kiddle](#)

Literature Connections

- [Change It!: Solids Liquids Gases and You \(Primary Physical Science\)](#) by Adrienne Mason
- [What's the Matter in Mr. Whiskers' Room?](#) by Michael Elsohn Ross
- [Solids, Liquids, And Gases \(Rookie Read-About Science\)](#) by Ginger Garrett

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

- What Is the World Made Of? All About Solids, Liquids, and Gases
(Let's-Read-and-Find-Out Science, Stage 2) by Kathleen Weidner Zoehfeld & Paul Meisel
- It Does Matter!: Different States of Matter (For Kiddie Learners) by Baby Professor
- Changing States: Solids, Liquids, and Gases (Do It Yourself) by Will Hurd

Visual Arts/Kinesthetic Learning- Acting: In the classroom students should act out each state of matter.

- **Solid-** students should be close to one another and moving very little
- **Liquid-** students should hold hands and spread out further filling the container(classroom). Show students that if you break a link (their arms) it will reattach when they flow back into one another.
- **Gas-** students should be moving quickly around the classroom bouncing off one another and the walls.

Assessments

Formative

- Brain Pop Jr: Easy Interactive Quiz
- Kahoot Matter Review
- Matter Properties Sample Test

Summative

- Turtle Diary Test
- Quizlet Interactive Solid, Liquid and Gas Test
- Mystery Science Insulation and Conduction Test
- Phases of Matter Test
- States of Matter Project/Rubric

Benchmark

- Engineering Design Process Rubric Assessment 2

Alternative Assessments

- [What is Matter? - PebbleGo](#)
- [Materials/Properties - PebbleGo](#)
- [Properties of Materials - PebbleGo](#)

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Interdisciplinary Connections

NJSLS: ELA

- **RI.CR.2.1.** Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers. (2-PS1-4)
- **RI.IT.2.3.** Describe connections between a series of historical events, scientific ideas or concepts, or steps in a sequence within a text. (2-PS1-4)
- **W.AW.2.1.** With prompts and support, write opinion pieces to present an idea with reasons and information. (2-PS1-4)

NJSLS: Math

- **2.DL.B.4** 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.(2-PS1-1), (2-PS1-2), (K-2-ETS1-3)
- **2.DL.A.1** Understand that people collect data to answer questions. Understand that data can vary. (**2-PS1-2**)

NJSLS: Computer Science and Design Thinking

- **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.4:** Make predictions based on data using charts or graphs.

Career Readiness, Life Literacies, and Key Skills

Technology Integration

- **9.4.2.TL.4:** Navigate a virtual space to build context and describe the visual content.
- **9.4.2.TL.5:** Describe the difference between real and virtual experiences.

Career Education

Time Frame

10 weeks

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Topic

Earth Systems and Earth's Place in the Universe

Alignment to Standards

2-ESS1-1 - Use information from several sources to provide evidence that Earth events can occur quickly or slowly. *[Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.] [Assessment Boundary: Assessment does not include quantitative measurements of timescales.]*

2-ESS2-1 - Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. *[Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.]*

2-ESS2-2 - Develop a model to represent the shapes and kinds of land and bodies of water in an area. *[Assessment Boundary: Assessment does not include quantitative scaling in models.]*

2-ESS2-3 - Obtain information to identify where water is found on Earth and that it can be solid or liquid

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.

Learning Objectives and Activities

Students will understand that...

- Some events happen very quickly such as volcanic explosions and earthquakes; others, such as the erosion of rocks, occur very slowly over a time period much longer than one can observe.
- Wind and water can change the shape of land.
- Humans have designed multiple solutions to slow or prevent wind or water from changing the shape of the land, such as dikes, windbreaks, and using shrubs, grass, and trees.

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

- Maps show where things are located, including the shapes and kinds of land and water in any area.
- Water is found in oceans, rivers, lakes and ponds.
- Water exists as solid ice and in liquid form.
- How water, air and the sun play a role in climate change.

Activities

Mystery Science

- [Work of Water](#)

Generation Genius

- [Timescale of Earth's Events](#)
- [Changing the Shape of Land](#)
- [Maps of Landforms](#)
- [Oceans, Lakes and Rivers](#)

NASA Climate Kids

[Energy](#)

BrainPop Jr

- [Slow Land Changes](#)
- [Fast Land Changes](#)
- [Landforms](#)
- [The Water Cycle](#)

PebbleGo

- [Lakes, Rivers, Oceans](#)
- [Landforms](#)

Video Resources

- [Fast Moving Changes to Earth](#)
- [Shape of the Land](#)
- [Sources of Water](#)
- [The Water Bodies](#)
- [Water and Its Uses](#)
- [Exploring Landforms and Bodies of Water](#)
- [Landforms of the Earth](#)
- [Landforms StudyJam](#)

Interactive Games and Activities

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

- [Landforms](#)

Research Investigations

- [Wonderopolis](#)
- [Kiddle](#)

Literature Connections

Changes on Earth

- The Dirt on Dirt Paperback – February 1, 2008 by Paulette Bourgeois
- The Magic School Bus Science Chapter Book #15: Voyage to the Volcano Aug 1, 2003 by Judith Stamper and John Speirs
- Volcano: The Eruption and Healing of Mount St. Helens Mar 31, 1993 by Patricia Lauber
- Earthquake in the Early Morning (Magic Tree House #24) (Magic Tree House (R)) Jul 24, 2001 by Mary Pope Osborne and Sal Murdocca

Wind and Water

- Erosion: Changing Earth's Surface (Amazing Science) Sep 1, 2006 by Robin Koontz and Matthew Harrad
- Landforms:
- U.S. Landforms (True Books) Mar 2012 by Dana Meachen Rau and Wolfinger, James, Ph.D.
- Extreme Planet: Carsten Peter's Adventures in Volcanoes, Caves, Canyons, Deserts, and Beyond! (National Geographic Kids) Oct 13, 2015 by Carsten Peter and Glen Phelan

Hands On Activities

- [Develop a model to represent shapes and kind of land and kinds of bodies of water.](#)
- [Changes on Earth Lab](#)
- [Mapping Landforms](#)
- [Landform Sort](#)
- [Developing Models of Land and Water](#)

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Cross-Curricular Connections

- **Music:** [Landforms Song](#)
- **Art:** [Constructing Landforms](#); [Diorama Project Directions and Sample](#)

Teacher Resources:

- [Slideshare Presentation: Land and Water Forms](#)
- [Bodies of Water Anchor Chart](#)
- [How Earth Changes](#)
- [Bodies of Water Study Cards](#)
- [Project Rubrics](#)

Assessments

Formative

- Landforms of the Earth Interactive Quiz
- Water and Landforms Quiz

Summative

- Mystery Science Floated Down the River Test
- Developing Models of Land and Water
- Landform Diorama Project Rubrics

Benchmark

- Engineering Design Process Rubric Assessment 3

Alternative STEM Assessments

- **Develop a model to represent shapes and kind of land and kinds of bodies of water.** (class project to show how the model of the landforms and bodies of water was built) - [Sample](#)
- [Changes on Earth Lab](#)
- [Mapping Landforms](#)
- [Landform Sort](#)
- [Developing Models of Land and Water](#)

Interdisciplinary Connections

NJSLS: ELA

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

- **RI.CR.2.1.** Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers. (2-ESS1-1), (K-2-ETS1-1)
- **RI.MF.2.6.** Explain how specific illustrations and images (e.g., a diagram showing how a machine works) contribute to and clarify a text. Climate Change Example: Students may read an informational text on volcanoes and describe how illustrations help them understand what happens during a volcanic eruption. (2-ESS2-2)
- **RI.IT.2.3.** Describe connections between a series of historical events, scientific ideas or concepts, or steps in a sequence within a text. (2-ESS1-1)
- **W.WR.2.5.** Generate questions about a topic and locate related information from a reference source to obtain information on that topic through shared and independent research.. (2-ESS1-1) (2-ESS2-3)
- **W.SE.2.6** Prioritize information provided by different sources on the same topic while gathering ideas and planning to write about a topic. (2-ESS1-1), (K-2-ETS1-1), (K-2-ETS1-3)

NJSLS: Math

- **2.DL.B.4** 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. Climate Change Example: Students may draw a bar graph having single-unit scale to represent a data set about a climate change related issue in their school, such as food waste, recycling, reusing and/or reducing the consumption of goods. (K-2-ETS1-1), (K-2-ETS1-3)
- **2.DL.A.2** Identify what could count as data (e.g., visuals, sounds, numbers). (K-2-ETS1-1)

NJSLS: Computer Science and Design Thinking

- **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.4:** Make predictions based on data using charts or graphs.

Career Readiness, Life Literacies, and Key Skills

Technology Integration

- **9.4.2.CI.1:** Demonstrate openness to new ideas and perspectives.
- **9.4.2.IML.1:** Identify a simple search term to find information in a search engine or digital resource.

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

Career Education

- **CRP 4.** SW communicate clearly and effectively and with reason within the Mystery Science labs.
- **CRP 6.** SW demonstrate creativity and innovation while completing the following [STEM activity](#)
- **CRP 8.** SW utilize critical thinking to make sense of problems and persevere in solving them while working on the following Mystery Science lessons:
 - [Mystery # 1: If You Floated Down a River...](#)
 - [Mystery # 2: Why Is There Sand At The Beach?](#)
 - [Mystery # 3: What Is Strong Enough To Make A Canyon?](#)

Modifications (ELL, Special Education, At Risk Students, Gifted & Talented, & 504 Plans)

ELL:

- Work toward longer passages as skills in English increase
- Use visuals
- Introduce key vocabulary before lesson
- Teacher models reading aloud daily
- Provide peer tutoring
- Use of Bilingual Dictionary
- Guided notes and/or scaffold outline for written assignments
- Provide students with English Learner leveled readers.

Supports for Students With IEPs:

- Allow extra time to complete assignments or tests
- Guided notes and/or scaffold outline for written assignments
- Work in a small group
- Allow answers to be given orally or dictated
- Use large print books, Braille, or books on CD (digital text)
- Follow all IEP modifications

At-Risk Students:

- Guided notes and/or scaffold outline for written assignments
- Introduce key vocabulary before lesson
- Work in a small group
- Lesson taught again using a differentiated approach
- Allow answers to be given orally or dictated

Home of the Spartans!
#spartanlegacy





Township of Ocean Schools

Assistant Superintendent
Office of Teaching and Learning

SPARTAN MISSION:

Meeting the needs of all students with a proud tradition of academic excellence.

DEPARTMENT : Science

COURSE : Grade 2

- Use visuals / Anchor Charts
- Leveled texts according to ability

Gifted and Talented:

- Create an enhanced set of introductory activities (e.g. advance organizers, concept maps, concept puzzles)
- Provide options, alternatives and choices to differentiate and broaden the curriculum
- Organize and offer flexible small group learning activities
- Provide whole group enrichment explorations
- Teach cognitive and methodological skills
- Use center, stations, or contracts
- Organize integrated problem-solving simulations
- Propose interest-based extension activities
- Expose students to beyond level texts.

Supports for Students With 504 Plans:

- Follow all the 504 plan modifications
- Text to speech/audio recorded selections
- Amplification system as needed
- Leveled texts according to ability
- Fine motor skill stations embedded in rotation as needed
- Modified or constrained spelling word lists
- Provide anchor charts with high frequency words and phonemic patterns

Home of the Spartans!
#spartanlegacy

