



Science - Kindergarten

Pushes and Pulls (Week 1 - Week 9)

Essential Questions: Science: How does motion affect you? What happens if you push or pull an...

Content: Effects of different strengths Directions of pushes and pulls Change in...

Skills & Learning Targets: Describe the effects of pushing and pulling on the motion of an object....

Resources: Live binder with resources by each standard ~...

Enduring Understandings: Pushes and pulls can have different strengths and directions. Pushing or...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Kindergarten PS2: Motion and...

Academic Vocabulary: Push Pull Force Motion Speed Collide Incline Direction Object Gravity...

Anchoring Events: Science: Why can Sid slide on the wood floor in his socks and not in his...



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[t2_forces_vignette.pdf](http://ehtschoolsstem.weebly.com/uploads/5/4/6/9/54693447/gr._k-t2_forces_v...): http://ehtschoolsstem.weebly.com/uploads/5/4/6/9/54693447/gr._k-t2_forces_v...

<https://drive.google.com/drive/u/0/folders/0B0QTiMeEabOdfmU4NDJQbnFYM25nUS1GaW5nOWk0T09raIBNd2JzeFFkUG5abmRrODIyUHM>: <https://drive.google.com/drive/u/0/folders/0B0QTiMeEabOdfmU4NDJQbnFYM25nUS1...>

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: K-2 Practice 3. Planning and...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Kindergarten K.Forces...

Science K (C) ; Collaboration; District 160 - Science; Kindergarten; Science

Weather and Climate (Week 10 - Week 19)

Essential Questions: Science: How does weather effect your everyday life? What effect does the...

Content: Qualitative observations of the local weather and temperature Scientists...

Skills & Learning Targets: Know how to prepare for severe weather. Make observations to determine the...

Resources: Live binder with resources by each standard ~...

Enduring Understandings: Sunlight warms Earth's surface. Weather is the combination of sunlight, w...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Kindergarten ESS2: Earth's Systems E...

Academic Vocabulary: Sunlight Solar Energy Heating Cooling Reduce Exposure Weather Climate...

Anchoring Events: Science: How does the weather over the year in Minnesota/Chicago compare...



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[t1_vignette.pdf](http://ehtschoolsstem.weebly.com/uploads/5/4/6/9/54693447/gr._k-t1_vignette...): http://ehtschoolsstem.weebly.com/uploads/5/4/6/9/54693447/gr._k-t1_vignette...



[Chicago-Mexico-City-Rain-Precipitation.png](#): Chicago-Mexico-City-Rain-Precipitation.png



[Chicago-Mexico-City-temperature-weather.png](#): Chicago-Mexico-City-temperature-weather.png



[lake michigan average temperature.png](#): lake michigan average temperature.png

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: K-2 Practice 3. Planning and...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Kindergarten K.Weather...

Science K (C) ; Collaboration; District 160 - Science; Kindergarten; Science

Relationships in Ecosystems (Week 20 - Week 28)

Essential Questions: Science: What are the similarities and differences between plants and...

Content: Animals obtain their food from plants or other animals Different kinds of...

Skills & Learning Targets: Show the relationship between plants and animals and the places they live....

Resources: Live binder with resources by each standard ~...

Enduring Understandings: Living things need water, air, and resources from the land, and they live...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Kindergarten LS1: From Molecules to...

Academic Vocabulary: Plant Animal Environment System Water Air Land Resources Natural Resources...

Anchoring Events: Science: Why do animals need to take food in but not plants? Science: Why...



http://ehtschoolsstem.weebly.com/uploads/5/4/6/9/54693447/gr._k_-_t3_animals_vignette.pdf

http://ehtschoolsstem.weebly.com/uploads/5/4/6/9/54693447/gr._k_-_t3_animal...



[Broken Sidewalk.jpg](#): Broken Sidewalk.jpg



[mud running.JPG](#): mud running.JPG

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: K-2 Practice 2.

Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 4. Systems...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Kindergarten...

Science K (C) ; Collaboration; District 160 - Science; Kindergarten; Science

Engineering Design (Week 29 - Week 37)

Essential Questions: Engineering: What do engineers do? How do engineers solve problems using...

Content: The Engineering Design Process Identify a problem Propose a potential...

Skills & Learning Targets: Develop a simple sketch, drawing, or physical model to illustrate how the...

Resources: Live binder with resources by each standard ~...

Enduring Understandings: A situation that people want to change or create can be approached as a...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Kindergarten ETS1: Engineering Design...

Academic Vocabulary: • Questions • Observations • Gather Information • Develop • Improve • Analyze...

Anchoring Events: Engineering: Design and build something to prevent the bunnies (a pop-up...



[http://ngss-k-5-](http://ngss-k-5-ausd.weebly.com/kengineering-design---kindergarten.html)

[ausd.weebly.com/kengineering-design---kindergarten.html...](http://ngss-k-5-ausd.weebly.com/kengineering-design---kindergarten.html)

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: K-2 Practice 1.

Asking...

Crosscutting Concepts:

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Kindergarten...

Science K (C) ; Collaboration; District 160 - Science; Kindergarten; Science

Science – First Grade

LS: Living Things-Structure, Function,Growth, &Dev (Week 1 - Week 12)

*Essential Questions:*Science:How do plants and animals meet their need? How do your senses help...

*Content:*Plant parts and their uses Animal body parts and their uses Adult plants...

*Skills & Learning Targets:*Identify and explain plant parts and describe their uses. Identify and...

Resources:<http://www.livebinders.com/play/play?id=1176282#anchor> Animal survival:...

*Enduring Understandings:*All organisms have external parts. Different animals use their body parts...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 1 LS1: From Molecules to...

*Academic Vocabulary:*Senses Plants Animals External Parts Mimicking Parents Offspring Behaviors...

*Anchoring Events:*Science: How does a cactus survive in the harsh environment of the...

 [Life Science Egg Harbor.pdf](#): Life Science Egg Harbor.pdf Unit Name: Life Science Author: Egg Harbor T...

 [desert-cactus-1.jpg](#): desert-cactus-1.jpg

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: K-2 Practice 6. Constructing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 1. Patterns...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 1 1.Structure,...

[Science 1 \(C\)](#) ; [Collaboration](#); District 160 - Science; Grade 1; Science

LS: Inheritance & Variation of Traits (Week 13 - Week 19)

*Essential Questions:*Science:How are parents and their children similar and different? How do...

*Content:*Similarities and differences between parents and their offspring

*Skills & Learning Targets:*Compare and contrast the similarities and differences between young plants...

Resources:<http://www.livebinders.com/play/play?id=1176282#anchor>...

*Enduring Understandings:*Young animals are very much, but not exactly like, their parents. Plants...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 1 LS3: Heredity: Inheritance and...

*Academic Vocabulary:*Parents Offspring Characteristics

*Anchoring Events:*Science: Why do the puppies not look exactly like their parents?Show the...

 [dog family.jpg](#): dog family.jpg

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: K-2 Practice 6. Constructing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 1. Patterns...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 1 1.Structure,...

[Science 1 \(C\)](#) ; [Collaboration](#); District 160 - Science; Grade 1; Science

ESS: Earth's Place in the Universe (Week 20 - Week 28)

*Essential Questions:*Science:What objects are in the sky and how do they seem to move? What can...

*Content:*Patterns of the moon Patterns of the sun Patterns of the stars Seasonal...

*Skills & Learning Targets:*Predict patterns by observing the sun, moon, and stars. Identify the basic...

Resources:<http://www.livebinders.com/play/play?id=1176282#anchor>...

*Enduring Understandings:*Patterns of the motion of the sun, moon, and stars in the sky can be...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 1 ESS1: Earth's Place in the U...

*Academic Vocabulary:*Sun Moon Stars Sunrise Sunset Daylight Seasons Fall Autumn Winter Spring...

*Anchoring Events:*Science: How and why does your shadow move throughout the...

 [sunandmoon.jpg](#): sunandmoon.jpg

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: K-2 Practice 4. Analyzing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 1. Patterns...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 1 1.Space...

[Science 1 \(C\)](#) ; [Collaboration](#); District 160 - Science; Grade 1; Science

PS: Wave-Sound Properties (Week 29 - Week 33)

*Essential Questions:*Science:What happens when materials vibrate? How does sound travel from...

*Content:*Explain that sound makes materials vibrate and vibrating materials make...

*Skills & Learning Targets:*Recognize and describe that sound is produced by vibrating objects and the...

Resources:<http://www.livebinders.com/play/play?id=1176282#anchor...>

*Enduring Understandings:*Sound can make matter vibrate, and vibrating matter can make sound. Things...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 1 PS4: Waves and Their...

*Academic Vocabulary:*Vibrating Sound Energy Matter Communication Technology

*Anchoring Events:*Science: Why do windows shake on a building when my car radio volume is...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: K-2 Practice 3. Planning and...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 2. Cause and...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 1 1.Waves: Light...

Science 1 (C); Collaboration; District 160 - Science; Grade 1; Science

PS: Waves-Light (Week 34 - Week 37)

*Essential Questions:*Science:What happens when there is no light? How does light travel and...

*Content:*Light is needed to see Light travels in a straight beam Mirrors redirect a...

*Skills & Learning Targets:*Explain that objects can be seen only when illuminated. Explain what...

Resources:<http://www.livebinders.com/media/get/MTAzNDUwMzM=...>

*Enduring Understandings:*Objects can be seen if light is available to illuminate them or if they...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 1 PS4: Waves and Their...

*Academic Vocabulary:*Observations Illumination External Light Source Sound Vibrate Illuminate...

*Anchoring Events:*Science: When a person stays in the sun too long they can get a suntan....

 sunshade.jpg: sunshade.jpg

 sunglasses.jpg: sunglasses.jpg

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: K-2 Practice 6. Constructing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 2. Cause and...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 1 1.Waves: Light...

Science 1 (C); Collaboration; District 160 - Science; Grade 1; Science

Science – Second Grade

Interdependent Relationships in Ecosystems (Week 1 - Week 12)

Essential Questions: Science: What does a plant need in order to survive and thrive? How do...

Content: Insects or animals are needed to pollinate many kinds of plants...

Skills & Learning Targets: Carry out an investigation and collect data that shows what plants and...

Resources: Live Binder <http://www.livebinders.com/play/play?id=1179140#anchor> Life...

Enduring Understandings: Plants depend upon certain things in order to grow and change. Plants...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 2 LS2: Ecosystems: Interactions,...

Academic Vocabulary: • Plants • Water • Sunlight • Seed Dispersal • Pollination • Mimic • Animals • Hab...

Anchoring Events: Science: Why are some plants growing in my rain...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: K-2 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 2...

[Science 2 \(C\)](#) ; [Collaboration](#); District 160 - Science; Grade 2; Science

Matter & Its Interactions (Week 13 - Week 24)

Essential Questions: Science: What causes change in our physical world? How are materials...

Content: Different kinds of materials exist and many of them can be either solid or...

Skills & Learning Targets: Collaboratively develop an investigation plan and describe the evidence...

Resources: Live Binder <http://www.livebinders.com/play/play?id=1179140#anchor>...

Enduring Understandings: Matter can be described and classified by its observable properties...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 2 PS1: Matter and Its...

Academic Vocabulary: • Solid • Liquid • Strength • Flexibility • Hardness • Texture • Absorbency • Mat...

Anchoring Events: Science: What happens to an object when it is heated or...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: K-2 Practice 3. Planning and...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 2 2. Structure and...

[Science 2 \(C\)](#) ; [Collaboration](#); District 160 - Science; Grade 2; Science

Earth's Systems (Week 25 - Week 37)

Essential Questions: Science: How can I investigate our world? What causes change in our...

Content: Change is everywhere around us Land is composed of rocks and soil Water...

Skills & Learning Targets: Compare and contrast Earth events that occur quickly and slowly and...

Resources: Live Binder <http://www.livebinders.com/play/play?id=1179140#anchor>...

Enduring Understandings: Wind and water can change the shape of the land. Maps show where things...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 2 ESS1: Earth's Place in the U...

Academic Vocabulary: • Volcanoes • Earthquakes • Erosion • Weathering • Timescale • Map • Land • Water...

Anchoring Events: Science: How are weathering and erosion...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: K-2 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: K-2 Crosscutting Statements 7. Stability...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 2 2. Earth's S...

[Science 2 \(C\)](#) ; [Collaboration](#); District 160 - Science; Grade 2; Science

Science – Third Grade

Weather and Climate (Week 1 - Week 5)

Essential Questions: Science: What is typical weather in different parts of the world and during...

Content: Climate describes a variety of typical weather conditions in different...

Skills & Learning Targets: Explain and recognize how weather changes and patterns are used to predict...

Resources: Storm surge <http://scijinks.jpl.nasa.gov/storm-surge/> Watching Weather...

Enduring Understandings: Scientists record patterns of the weather across different times and areas...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 3 ESS2: Earth's Systems ESS2.D: W...

Academic Vocabulary: Climate Temperature Clouds Precipitation Wind Direction Weather Water...

Anchoring Events: Science: How does the weather and climate in Lagos Nigeria compare to the...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 4. Analyzing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 3 3.Weather and...

Science 3 (C); Collaboration; District 160 - Science; **Grade 3**; Science

Motion and Interactions (Week 6 - Week 9)

Essential Questions: Science: How do equal and unequal forces on an object affect the object?...

Content: Evidence of balanced and unbalanced forces of motions Object's motion can...

Skills & Learning Targets: Investigate and describe the effects of balanced and unbalanced forces on...

Resources: Magnetism <http://www.resa.net/curriculum/curriculum/science/professionaldeve...>

Enduring Understandings: Each force acts on one particular object and has both strength and a...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 3 PS2: Motion and Stability:...

Academic Vocabulary: Forces Motions Magnitude Velocity Balanced Unbalanced Distant Patterns

Anchoring Events: Science: How and why does the top "float" in the air above the magnet?...



https://www.wardsci.com/www.wardsci.com/images/Gr_3_motion_probe.pdf: https://www.wardsci.com/www.wardsci.com/images/Gr_3_motion_probe.pdf

Motion and Forces-Third Grade Unit Plan (1).docx: Motion and Forces-Third Grade Unit Plan (1).docx Motion and Forces &...

FORCES INTERACTIONS 3.pdf: FORCES INTERACTIONS 3.pdf Forces and Interactions 3rd Grade Unit T...
Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 3. Planning and...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 3 3.Forces and...

Science 3 (C); Collaboration; District 160 - Science; **Grade 3**; Science

Motion and Interactions Part 2 (Week 10 - Week 14)

Essential Questions: Science: How do equal and unequal forces on an object affect the object?...

Content: Balanced and imbalanced motion of an object Cause and effect relationships...

Skills & Learning Targets: Use evidence to recognize that magnets attract certain kinds of other...

Resources: Balanced and unbalanced...

Enduring Understandings: Objects in contact exert forces on each other. Electric and magnetic...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 3 PS2: Motion and Stability:...

Academic Vocabulary: Forces Interactions Magnetic force Properties Motion Stability Cause...

Anchoring Events: Science: How and why does the top "float" in the air above the...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 1. Asking...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 3 3.Forces and...

Science 3 (C); Collaboration; District 160 - Science; **Grade 3**; Science

Engineering (Week 15 - Week 19)

*Essential Questions:*Science:How do equal and unequal forces on an object affect the object?...

*Content:*Specific ideas about magnets Multiple solutions to a problem based on the...

*Skills & Learning Targets:*Engage in arguments from evidence to determine a criteria for success and...

*Resources:*Toys with moving...

*Enduring Understandings:*Define a simple design problem that can be solved by applying scientific...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 3 PS2: Motion and Stability:...

*Academic Vocabulary:*Scientific Ideas Magnets Design Material Time Cost Solution Criteria...

*Anchoring Events:*Engineering: Design a process to create a prototype toy with moving...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 1. Asking...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Connections to Engineering,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 3 3.Forces and...

Science 3 (C); Collaboration; District 160 - Science; **Grade 3**; Science

Life Cycles and Traits (Week 20 - Week 28)

*Essential Questions:*Science:How do organisms vary in their traits? How are plants, animals,...

*Content:*Unique life cycles Inherited traits from parents and that variations of...

*Skills & Learning Targets:*Use evidence to determine how organisms have different and unique life...

*Resources:*Life...

*Enduring Understandings:*Reproduction is essential to the continued existence of every kind of...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 3 LS1: From Molecules to...

*Academic Vocabulary:*Life cycles Inherited traits Heredity Organism Environmental traits...

*Anchoring Events:*Science: How can traits be easily-observable genetically compared to other...

 HumanTraits.pdf: HumanTraits.pdf Name _____ Date _____ ...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2.

Developing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 1. Patterns...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 3 3.Inheritance...

Science 3 (C); Collaboration; District 160 - Science; **Grade 3**; Science

Environmental Impacts (Week 29 - Week 37)

*Essential Questions:*Science:How are plants, animals, and environments of the past similar or...

*Content:*Environmental changes, that affect characteristics, temperature and other...

*Skills & Learning Targets:*Investigate how environmental changes affect a place's physical...

Resources:<http://www.learner.org/jnorth/tm/oriole/BuildNest.html><http://nestwatch.org/>...

*Enduring Understandings:*When the environment changes in ways that affect a place's physical c...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 3 LS2: Ecosystems: Interactions,...

*Academic Vocabulary:*Environments Physical characteristics Temperature Organisms Resources...

*Anchoring Events:*Science: Why is the environment important for survival in different...

 Animals-and-their-environment---how-do-they-survive.pdf: Animals-and-their-environment---how-do-they-survive.pdf LIFE AND LIV...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 4.

Analyzing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 2. Cause and...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 3...

Science 3 (C); Collaboration; District 160 - Science; **Grade 3**; Science

Science – Fourth Grade

Waves (Week 1 - Week 9)


Essential Questions: Science: What are waves and what are some things they can do? How do waves...

Content: Waves can be made in water by disturbing the surface Waves can differ in...

Skills & Learning Targets: Develop a model of waves. Develop a model to reflect light.

Resources: <http://www.agiweb.org/education/NASA/tr/invest/activities/LightsCameraActio...>

 [4th Grade Energy and Waves Teachers Guide NGSS \(1\).pdf](#): 4th Grade_Energy and Waves_Teachers Guide_NGSS (1).pdf Energy ...

 [Grade 4 PHYSICS Sound MBI Unit UW \(1\).pdf](#): Grade 4_PHYSICS_Sound MBI Unit_UW (1).pdf Sound Energy Unit Grade 4...

 [Grade 4 NGSS DCIs.docx](#): Grade 4 NGSS DCIs.docx Structure, Function, and Information P...

 [Morse Code Activity.pdf](#): Morse Code Activity.pdf Morse Code Messaging Every kids loves the i...

 [WavesLesson5full.docx](#): WavesLesson5full.docx Waves Lesson #5: Sound and C...

Enduring Understandings: Waves, which are regular patterns of motion, can be made in water by...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 4 PS4: Waves and Their...

Academic Vocabulary: Amplitude Electromagnetic waves Non-periodic waves Wave Wavelength

Anchoring Events: Science: How does a double rainbow...

 [Double-Rainbow-Photo.jpg](#): Double-Rainbow-Photo.jpg

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 4 4.Waves...

[Science 4 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 4**; Science

Energy (Week 10 - Week 19)


Essential Questions: Science: What is energy and how is it related to motion? How is energy...


Content: Energy can be transferred in various ways and between objects The faster...

Skills & Learning Targets: Communicate that energy has the ability to create change. Identify the...

Resources: https://www.youtube.com/watch?v=Atnjo7dD_bA&nohtml5=Falsehttps://www.yo...

 [4th Grade Energy and Waves Teachers Guide NGSS.pdf](#): 4th Grade_Energy and Waves_Teachers Guide_NGSS.pdf Energy ...

 [energy - grades 3-4 d alderson 20150520 142552 18.doc](#): energy_-_grades_3-4_d_alderson_20150520_142552_18.doc Science Lesson P...

 [energy_ps3b lesson.doc](#): energy_ps3b lesson.doc Sir Fossil Fuel is Looking for H...

 [Grade 4 PHYSICS Circuits MBI Unit UW.pdf](#): Grade 4_PHYSICS_Circuits MBI Unit_UW .pdf Circuits Unit R...

Enduring Understandings: The faster a given object is moving, the more energy it possesses. Energy...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 4 PS3: Energy PS3.A: Definitions...

Academic Vocabulary: Energy Mechanical energy Light energy Electrical energy Sound energy...

Anchoring Events: Science: Why would a flashlight eventually stop working if it were...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 1. Asking...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 5. Energy...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 4 4.Energy...

[Science 4 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 4**; Science


Earth's Systems (Week 20 - Week 28)

Essential Questions: Science: How can water, ice, wind and vegetation change the land? What...

Content: Rock formations reveal changes over time Rainfall helps shape the land and...

Skills & Learning Targets: Analyze Earth materials such as rocks, soils, and water found in the...

Resources:<http://www.agiweb.org/education/NASA/tr/invest/activities/OurMissiontoPlane...>

 [WhoDunit.pdf](#): WhoDunit.pdf Who Dunit? and the Law of Superposition 2-5 Lisa Wald, ...

 [This_Dynamic_Planet-Teaching_Companion_Packet.pdf](#): This_Dynamic_Planet-Teaching_Companion_Packet.pdf THIS DYNAMIC PLANET: A ...

 [RockCycle.pdf](#): RockCycle.pdf Name _____ Date ____

*Enduring Understandings:*Local, regional, and global patterns of rock formations reveal changes...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 4 ESS1: Earth's Place in the U...

*Academic Vocabulary:*Weathering Precipitation Recycle Soil renewable resources Erosion...


*Anchoring Events:*Science: How did this strange rock formation get this...

 [Strange-Rock-Formations-03.jpg](#): Strange-Rock-Formations-03.jpg

 [Ring of Fire.jpeg](#): Ring of Fire.jpeg

 [world_volcanoes.png](#): world_volcanoes.png

 [the_wave_rock_formation.jpg](#): the_wave rock formation.jpg

 [earthquake_proof_bldg.doc](#): earthquake proof bldg.doc Earthquake Tower Challenge 100 p...

 [plate-tectonics.jpg](#): plate-tectonics.jpg

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 3. Planning and...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 1. Patterns...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 4 4.Energy...

[Science 4 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 4**; Science

Structure Function & Information (Week 29 - Week 37)

*Essential Questions:*Science:How do internal and external structures support the survival,...

*Content:*Plants and animals have structures Sense receptors help process...

*Skills & Learning Targets:*Carry out investigations to study that living organisms have certain...

Resources:https://www.nps.gov/cany/learn/education/upload/FifthGrade_PlantAdaptations...

 [animal_and_plant_survival_via_interdependence.jpg](#): animal and plant survival via interdependence.jpg

*Enduring Understandings:*Plants and animals have both internal and external structures that serve...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 4 LS1: From Molecules to...

*Academic Vocabulary:*Living test Non-living communicate Life cycle criteria Adaptation...

*Anchoring Events:*Science: Why can the Venus Flytrap move? (or why does a venus flytrap...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 1. Asking...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 4. Systems...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 4 4.Structure,...

[Science 4 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 4**; Science

Science – Fifth Grade

Structure and Properties of Matter (Week 1 - Week 2)

*Essential Questions:*What are things made of? How do relevant relationships between particles...

*Content:*Matter of any type can be subdivided into particles that are too small to...

*Skills & Learning Targets:*describe matter as being made up of smaller particles/pieces of matter....

Resources:<http://www.livebinders.com/play/play?id=1179154>

 [5th Grade - Combined Lessons 1-4.pdf](#): 5th Grade - Combined Lessons 1-4.pdf Structure and Properties of M...

*Enduring Understandings:*All living and nonliving things are composed of matter having...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 PS1: Matter and Its...

*Academic Vocabulary:*Matter Atoms Particles Molecules Elements Solids Liquids Gases Volume...

*Anchoring Events:*Science: How does the motion of the molecules determine whether a...

 <https://www.brainpop.com/matterandchemistry/statesofmatter>:<https://www.brainpop.com/matterandchemistry/statesofmatter>

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 3. Scale,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Structure and...

Science 5 (C) ; Collaboration; District 160 - Science; **Grade 5**; Science


Structure & Properties of Matter (Week 1 - Week 9)


*Essential Questions:*Science:When matter changes, does its weight change? Can new substances be...

*Content:*Matter of any type can be subdivided into particles that are too small to...

*Skills & Learning Targets:*Develop a model to describe that matter is made of particles too small to...

Resources:<http://www.livebinders.com/play/play?id=1179154><http://www.inquiryinaction.o...>

 [5th Grade - Combined Lessons 1-4.pdf](#): 5th_Grade_-_Combined_Lessons_1-4.pdf Structure and Properties of M...

 [5_Bowring_ChemistryofSoap_1011.pdf](#): 5_Bowring_ChemistryofSoap_1011.pdf Bay Area Scientists in Schools P...

*Enduring Understandings:*All living and nonliving things are composed of matter having...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 PS1: Matter and Its...

*Academic Vocabulary:*Matter Particles Gases Weight Conserved Heating Cooling Mixing Substances...

*Anchoring Events:*Science: How did they get the balloon inside the water...

 [balloon in water bottle.jpg](#): balloon in water bottle.jpg

 [Mixture Lesson Data Table.docx](#): Mixture Lesson Data Table.docx BEFORE Combining Materials Observe a...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 2. Cause and...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Structure and...

Science 5 (C) ; Collaboration; District 160 - Science; **Grade 5**; Science

Matter & Energy in Organisms & Ecosystems (Week 10 - Week 19)

*Essential Questions:*Science:How does matter cycle through ecosystems? Where does the energy in...

*Content:*The energy released from food was once energy from the sun that was...

*Skills & Learning Targets:*Explain how plants use carbon dioxide and water to grow. Describe how...

Resources:https://www.teachengineering.org/view_activity.php?url=collection/cub_/acti...

*Enduring Understandings:*Energy flows and matter recycles through an ecosystem. Food provides...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 LS1: From Molecules to...

*Academic Vocabulary:*Plants Energy Sunlight Air (carbon dioxide) Water Producer Consumer...

*Anchoring Events:*Science: How do plants acquire the nutrients and water they need for...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 4. Systems...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Matter and...

Science 5 (C) ; Collaboration; District 160 - Science; **Grade 5**; Science

Structure and Properties of Matter #2 (Week 3 - Week 4)

*Essential Questions:*When matter changes, does its weight change?

*Content:*The amount (weight) of matter is conserved when it changes form, even in...

*Skills & Learning Targets:*provide evidence that matter is conserved even though it changes state....

Resources:<http://www.livebinders.com/play/play?id=1179154>

*Enduring Understandings:*Structure and Properties of Matter The amount (weight) of matter is...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 PS1: Matter and Its...

Academic Vocabulary:• Weight• Conserved• Heating • Cooling• Mixing• Substances

*Anchoring Events:*Science: Why do certain substances (sodium carbonate and castor oil) smell...



<https://www.schooltube.com/video/ea7dae4437c240958f92/Bill%20Nye%20The%20Science%20Guy%20Phases%20of%20Matter>

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 5. Using...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 3. Scale,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Structure and...

Science 5 (C) ; Collaboration; District 160 - Science; **Grade 5**; Science

Structure and Properties of Matter #3 (Week 5 - Week 6)

*Essential Questions:*How do you identify and describe things?

*Content:*Matter has mass and takes up space. Density equals mass divided by volume.

*Skills & Learning Targets:*compare and contrast different materials based on their properties. design...

Resources:<http://www.livebinders.com/play/play?id=1179154>

*Enduring Understandings:*Structure and Properties of MatterMeasurements of a variety of properties...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 PS1: Matter and Its...

*Academic Vocabulary:*Weight Hardness Reflectivity Conductor Insulator Solubility

*Anchoring Events:*Science: What happens when you put styrofoam into acetone? Engineering:...



<http://www.teachertube.com/user/channel/Leathersm?playlist-id=44>:<http://www.teachertube.com/user/channel/Leathersm?playlist-id=44>

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 3. Planning and...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 3. Scale,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Structure and...

Science 5 (C) ; Collaboration; District 160 - Science; **Grade 5**; Science

Space Systems: Stars & the Solar System (Week 20 - Week 28)

*Essential Questions:*Science:How do lengths and directions of shadows or relative lengths of...

*Content:*The gravitational force of Earth acting on an object near Earth's surface p...

*Skills & Learning Targets:*Recognize and describe how the regular and predictable motions of the...

Resources:<http://www.livebinders.com/play/play?id=1179154><http://www.uen.org/core/dispatch>



TheInverseSquareLawofLight_Final.pdf: TheInverseSquareLawofLight_Final.pdf The relationship between distance a...

*Enduring Understandings:*The Earth is part of a solar system, made up of distinct parts, which have...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS1: Earth's Place in the U...

*Academic Vocabulary:*Star Planet Satellite /moon Distance Gravity Gravitational force Earth's c...

*Anchoring Events:*Science: Why is it light out when I wait for the bus to go to school in...



sunrise.jpg: sunrise.jpg

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 4. Analyzing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 1. Patterns...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Space...

Science 5 (C) ; Collaboration; District 160 - Science; **Grade 5**; Science

Earth's Systems (Week 29 - Week 33)

*Essential Questions:*Science:How much water can be found on different places on Earth? How do...

*Content:*Earth's major systems are the geosphere (solid and molten rock, soil, and s...

*Skills & Learning Targets:*Describe and graph the amounts of fresh and salt water in various...

Resources:<https://www.nps.gov/zion/learn/education/classrooms/upload/Fifth-pre-and-po...>

 [OurMissiontoPlanetEarth.pdf](#): OurMissiontoPlanetEarth.pdf Educational Product Teachers Grades K...

 [ElementaryGLOBE_EarthSystemsActivity2_en.pdf](#): ElementaryGLOBE_EarthSystemsActivity2_en.pdf

 [ElementaryGLOBE_EarthSystemsActivity3_en.pdf](#): ElementaryGLOBE_EarthSystemsActivity3_en.pdf

 [ElementaryGLOBE_EarthSystemsActivity1_en.pdf](#): ElementaryGLOBE_EarthSystemsActivity1_en.pdf

 [Volcanoes-5-8.pdf](#): Volcanoes-5-8.pdf Module 1 Volcanoes: Local hazard, global i...

 [WaterWaterAlmostEverywhere-k-4.pdf](#): WaterWaterAlmostEverywhere-k-4.pdf Module 2 Water, water almost e...

*Enduring Understandings:*The Earth and Earth materials, as we know them today, have developed over...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS2: Earth's Systems ESS2.A: E...

*Academic Vocabulary:*Geosphere Biosphere Hydrosphere Atmosphere Ecosystems Climate Fresh Water...

*Anchoring Events:*Science: How can animals live off...

 <http://science-edu.larc.nasa.gov/ozonegarden/>:<http://science-edu.larc.nasa.gov/ozonegarden/> -- SEARCH NASA Welcome...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 3. Scale,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Earth's S...

Science 5 (C) ; [Collaboration](#); District 160 - Science; **Grade 5**; Science

Chemical Reactions (Week 7 - Week 9)

*Essential Questions:*How do things change? What causes change?

*Content:*Chemical change

*Skills & Learning Targets:*conduct an experiment to discover if new substances are created when two...

Resources:<http://www.livebinders.com/play/play?id=1179154>

*Enduring Understandings:*Chemical ReactionsWhen two or more different substances are mixed, a new...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 PS1: Matter and Its...

*Academic Vocabulary:*Weight Hardness Reflectivity Conductor Insulator Solubility Combustibility...

*Anchoring Events:*Science: What happens when you put styrofoam into acetone?

 <http://betterlesson.com/community/document/2882985/bill-nye-the-science-guy-chemical-reactions-full-episode-youtube-mp4>:

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 3. Planning and...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 2. Cause and...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Structure and...

Science 5 (C) ; [Collaboration](#); District 160 - Science; **Grade 5**; Science

Types of Interactions (Week 10 - Week 11)

*Essential Questions:*Why do objects fall down?

*Content:*Force is needed to move masses under different conditions. Friction,...

*Skills & Learning Targets:*observe the force of gravity on objects around me design an experiment...

Resources:<http://www.livebinders.com/play/play?id=1179154><http://static.nsta.org/files...>

*Enduring Understandings:*The gravitational force of Earth acting on an object near Earth's surface p...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 PS2: Motion and Stability:...

*Academic Vocabulary:*Force Gravity Gravitational Force Earth's Core Friction Magnetism

*Anchoring Events:*Science: If I drop something, why does it always fall towards Earth?

 <http://www.neok12.com/video/Gravitation/zX04624c537c794054520073.htm>:<http://www.neok12.com/video/Gravitation/zX04624c537c794054520073.htm>

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 7. Engaging in...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 2. Cause and...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Space...

Science 5 (C) ; [Collaboration](#); District 160 - Science; **Grade 5**; Science


Engineering (Week 34 - Week 37)


*Essential Questions:*Science:What is human-environment interaction? What does the environment...

*Content:*Effects that people have made on the environment Ways people and...

*Skills & Learning Targets:*Explain ways to protect the Earth's resources. Learn different ways c...

Resources:<http://pmm.nasa.gov/education/lesson-plans/water-conservation><http://www.ear...>

 [UrbanChanges4-5.pdf](#): UrbanChanges4-5.pdf Overview In this five-part lesson, students discover ...
*Enduring Understandings:*Human activities have had major effects on the environment. People are...
*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS3: Earth and Human Activity...
*Academic Vocabulary:*Earth's resources Agriculture Industry Environment Engineering design C...
*Anchoring Events:*Science: Why is recycling so important to life on...
*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 1. Asking...
*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 4. Systems...
*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Earth's S...

[Science 5 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 5**; Science

Energy (Week 12 - Week 13)

*Essential Questions:*What helps us maintain life? How is energy transferred? How does matter...
*Content:*Energy flows and matter recycles through an ecosystem. Plants acquire...
*Skills & Learning Targets:*create a model that shows the flow of energy in an ecosystem. explain how...
Resources:<http://www.livebinders.com/play/play?id=1179154><http://www.dec.ny.gov/docs/r...>
*Enduring Understandings:*The energy released from food was once energy from the sun. Food provides...
*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 PS3: Energy PS3.D: Energy in...
*Academic Vocabulary:*Energy Food Sun Light Growth Repair Motion Warmth
*Anchoring Events:*Science: Why do different foods provide my body different amounts of...
*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...
*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 5. Energy...
*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Matter and...

[Science 5 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 5**; Science

Matter and Energy (Week 14 - Week 15)

*Essential Questions:*Where does the energy in food come from and what is it used for?
*Content:*Air and water provide plants their material for growth.
*Skills & Learning Targets:*explain how plants use carbon dioxide and water to grow.
Resources:<http://www.livebinders.com/play/play?id=1179154>
*Enduring Understandings:*Plants acquire their material for growth chiefly from air and water.
*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 LS1: From Molecules to...
*Academic Vocabulary:*Plants Energy Sunlight Air (carbon dioxide) Water Producer
*Anchoring Events:*Science: How do plants acquire the nutrients and water they need for...

 http://www.bbc.co.uk/bitesize/ks3/science/organisms_behaviour_health/food_chains/revision/1/:<http://www.bbc.co.uk/bitesize/>

 <https://www.youtube.com/watch?v=3pD68uxRLkM>:<https://www.youtube.com/watch?v=3pD68uxRLkM> Skip navigation Upload

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 7. Engaging in...
*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 5. Energy...
*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Matter and...

[Science 5 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 5**; Science

Ecosystems (Week 16 - Week 18)

*Essential Questions:*How do living and nonliving things interact with one another? How does...
*Content:*Some animals eat plants for food and other animals eat the animals that...
*Skills & Learning Targets:*create a model that shows how matter moves through plants, animals,...
Resources:<http://www.livebinders.com/play/play?id=1179154><http://scholarworks.gvsu.edu...>
*Enduring Understandings:*The food of almost any kind of animal can be traced back to plants....
*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 LS2: Ecosystems: Interactions,...
*Academic Vocabulary:*Plants Energy Sunlight Air (carbon dioxide) Water Producer Consumer...
*Anchoring Events:*Science: How is matter that is not food changed by plants into food that...
*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...
*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 4. Systems...
*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Matter and...

[Science 5 \(C\)](#); [Collaboration](#); District 160 - Science; **Grade 5**; Science

The Universe and its Stars (Week 19 - Week 21)

Essential Questions: Why does our sun appear brighter than other stars?

Content: Stars range greatly in their distance from Earth

Skills & Learning Targets: explain why our Sun appears brighter than other stars.

Resources: <http://www.livebinders.com/play/play?id=1179154>

Enduring Understandings: The sun is a star that appears larger and brighter than other stars...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS1: Earth's Place in the U...

Academic Vocabulary: Star Planet Satellite /Moon Distance

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 7. Engaging in...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 3. Scale,...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Space...

[Science 5 \(C\)](#); [Collaboration](#); District 160 - Science; **Grade 5**; Science

Earth and the Solar System (Week 22 - Week 24)

Essential Questions: How do lengths and directions of shadows or relative lengths of day and...

Content: The orbit of Earth around the sun The orbit of the moon around Earth The...

Skills & Learning Targets: identify patterns in the length and direction of shadows. explain why day...

Resources: <http://www.livebinders.com/play/play?id=1179154>

Enduring Understandings: The orbits of Earth around the sun and of the moon around Earth, together...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS1: Earth's Place in the U...

Academic Vocabulary: Day Night Earth's Axis Earth's Orbit Moon's Orbit Shadows

Anchoring Events: Science: Why is it light out when I wait for the bus to go to school in...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 4. Analyzing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Space...

[Science 5 \(C\)](#); [Collaboration](#); District 160 - Science; **Grade 5**; Science

Earth Materials and Systems (Week 25 - Week 27)

Essential Questions: What are the major systems of the Earth? How do the geosphere,...

Content: The major systems of Earth are the geosphere, hydrosphere, and biosphere...

Skills & Learning Targets: explain how the ocean affects ecosystems, landform shapes and /or climate...

Resources: <http://www.livebinders.com/play/play?id=1179154>

Enduring Understandings: Earth's major systems are the geosphere (solid and molten rock, soil, and s...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS2: Earth's Systems ESS2.A: E...

Academic Vocabulary: Geosphere Biosphere Hydrosphere Atmosphere Ecosystems Climate

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 4. Systems...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Earth's S...

[Science 5 \(C\)](#); [Collaboration](#); District 160 - Science; **Grade 5**; Science

Water in Earth's Surface (Week 28 - Week 29)

Essential Questions: How much water can be found in different places on Earth?

Content: Most of Earth's available water is found in the ocean Most fresh water is...

Skills & Learning Targets: describe and graph the amounts of fresh and salt water in various...

Resources: <http://www.livebinders.com/play/play?id=1179154>


Enduring Understandings: Nearly all of Earth's available water is in the ocean. Most fresh water is ...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS2: Earth's Systems ESS2.C: T...

Academic Vocabulary: Fresh Water Salt Water Oceans Glaciers Ground Water Streams Lakes Wetlands

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 3-5 Practice 5. Using...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 3. Scale,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Earth's S...
Science 5 (C) ; **Collaboration**; District 160 - Science; **Grade 5**; Science

Human Impacts on Earth's Systems (Week 30 - Week 31)

*Essential Questions:*What is human-environment interaction? What does the environment do for...

*Content:*The effects that people have made on the environment Ways people and...

*Skills & Learning Targets:*explain ways to protect the Earth's resources. learn different ways c...

Resources:<http://www.livebinders.com/play/play?id=1179154>

*Enduring Understandings:*Human activities in agriculture, industry, and everyday life have had...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 ESS3: Earth and Human Activity...

*Academic Vocabulary:*Earth's Resources Agriculture Industry Environment renewable resources n...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 8. Obtaining,...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Crosscutting Statements 4. Systems...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 5.Earth's S...

Science 5 (C) ; **Collaboration**; District 160 - Science; **Grade 5**; Science

Engineering Problems (Week 32 - Week 33)

*Essential Questions:*How can we find possible solutions to problems?

*Content:*Solutions for solving problems by using limited materials and resources

*Skills & Learning Targets:*given scientific information about a situation or phenomena, define a...

Resources:<http://www.livebinders.com/play/play?id=1179154>

*Enduring Understandings:*Possible solutions to a problem are limited by available materials and...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 ETS1: Engineering Design...

*Academic Vocabulary:*Engineering Design Criteria Constraints

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 1. Asking...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Connections to Engineering,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 3-5.Engineering...

Science 5 (C) ; **Collaboration**; District 160 - Science; **Grade 5**; Science

Developing Solutions (Week 34 - Week 35)

*Essential Questions:*Why is it important to research a problem before designing a solution? How...

*Content:*Information from different investigations that will help define a problem...

*Skills & Learning Targets:*use grade appropriate information/research to define a problem generating...

Resources:<http://www.livebinders.com/play/play?id=1179154>

*Enduring Understandings:*Research on a problem should be carried out before beginning to design a...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 ETS1: Engineering Design...

*Academic Vocabulary:*Engineering Design Criteria Constraints

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 6. Constructing...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 3-5 Connections to Engineering,...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: Grade 5 3-5.Engineering...

Science 5 (C) ; **Collaboration**; District 160 - Science; **Grade 5**; Science

Optimizing the Design (Week 36 - Week 37)

*Essential Questions:*Why do we repeat tests on a design or experiment?

*Content:*Elements of the design that need to be improved Different solutions that...

*Skills & Learning Targets:*test, refine and finalize design solutions to problems. is improved by...

Resources:<http://www.livebinders.com/play/play>

*Enduring Understandings:*Tests are often designed to identify failure points or difficulties, which...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: Grade 5 ETS1: Engineering Design...

Academic Vocabulary: Engineering Design Criteria Constraints

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 3-5 Practice 3. Planning and...

Crosscutting Concepts:

Science 5 (C); **Collaboration**; **District 160 - Science; Grade 5; Science**

Science – Sixth Grade

Structure & Properties of Matter (Week 1 - Week 5)

Essential Questions: Science: How can energy be transferred from one object or system to...

Content: Different types of atoms Structure of molecules Movement of atoms in...

Skills & Learning Targets: Identify the relevant components of simple and extended molecules and...

Resources: <https://www.teachingchannel.org/videos/cross-discipline-lesson-achievehttps...>

Enduring Understandings: Substances are made from different types of atoms, which combine with one...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS1: Matter and Its Interactions...


Academic Vocabulary: Molecule Atom Solid Liquid Gas Crystals Matter Thermal energy Kinetic...

Anchoring Events: Science: Why does the railroad tanker implode after steam...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Chemical Reactions (Week 6 - Week 11)

Essential Questions: Science: How can a substance be identified? How do I know if a chemical...

Content: Atomic and molecular structure Physical and chemical properties Molecular...

Skills & Learning Targets: Identify elements according to physical and chemical properties (e.g.,...

Resources: <http://www.thesciencehouse.org/k-12-educators/countertop-chemistry/ziptop-b...>

Enduring Understandings: Substances are made of atoms and molecules Each pure substance has...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS1: Matter and Its Interactions...

Academic Vocabulary: Physical properties Chemical properties Mass Energy Atomic and molecular...

Anchoring Events: Science: Did we make gold? ("gold" pennies demo: students work to figure...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Engineering Design (Week 12 - Week 13)

Essential Questions: Science: How can a substance be identified? How do I know if a chemical...

Content: Chemical reactions with thermal energy Thermal energy project design...

Skills & Learning Targets: Undertake a design project to construct, test, and modify a device that...

Resources: <http://www.themakeyourownzone.com/2013/01/5-ways-to-make-homemade-ice-packs...>


 Design a Cold Pack.pdf: Design a Cold Pack.pdf

Enduring Understandings: Some chemical reactions release energy, others store energy. A solution...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS1: Matter and Its Interactions...

Academic Vocabulary: Chemical reactions Thermal energy Constraints

Anchoring Events: Engineering: Design a cold...

 Chemistry of Hot and Cold Packs Lab.doc: Chemistry_of_Hot_and_Cold_Packs_Lab.doc The Chemistry of Hot and Cold P...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 6. Constructing...

Constructing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 5. Energy...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Matter & Energy in Organisms (Week 14 - Week 18)

Essential Questions: Science: How can one explain the ways cells contribute to the function of...

Content: Plants and the process of photosynthesis Chemical processes in which...

Skills & Learning Targets: Articulate a statement that relates the given phenomenon to a scientific...

Resources: <http://sciencenetlinks.com/lessons/nutrition-1-food-and-the-digestive-syste...>

Enduring Understandings: Plants, algae (including phytoplankton), and many microorganisms use the...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 LS1: From Molecules to Organisms:...

Academic Vocabulary: Algae Phytoplankton Microorganism Photosynthesis Cellular respiration...

Anchoring Events: Science: After eating a hamburger, how does my body make use of the...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 5. Energy...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Life Science...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Matter, Energy & Interactions in Ecosystems (Week 19 - Week 23)

Essential Questions: Science: How does a system of living and non-living things operate to meet...

Content: Organisms and environmental interactions for survival Competition for...

Skills & Learning Targets: Organize the given data (e.g., using tables, graphs, and charts) to allow...

Resources: <https://flores-rea.wikispaces.com/Case+3+%26+5+-+Rabbits+and+Lynx><http://www...>

Enduring Understandings: Organisms, and populations of organisms, are dependent on their...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 LS2: Ecosystems: Interactions,...

Academic Vocabulary: Biotic Abiotic Population Symbiosis Parasitism Mutualism Commensalism...

Anchoring Events: Science: Why do rats overrun a bamboo forest in India every 48...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Life Science...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Engineering Design #2 (Week 24 - Week 25)

Essential Questions: Science: How does a system of living and non-living things operate to meet...

Content: Changes in biodiversity and its influence on human resources, and...

Skills & Learning Targets: Evaluate competing design solutions for maintaining biodiversity and...

Resources: <http://all-about-water-filters.com/africas-water-crisis-what-the-world-does...>

Enduring Understandings: Changes in biodiversity can influence humans' resources, such as food, e...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 LS2: Ecosystems: Interactions,...


Academic Vocabulary: Biodiversity Criteria Constraints

Anchoring Events: Engineering: Design a purification system for Flint, MI (or Chicago) that...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 7. Engaging in...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 7. Stability...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Life Science...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Weathering, Erosion & Deposition (Week 26 - Week 31)

Essential Questions: Science: How do the materials in and on Earth's crust change over time? How ...

Content: Energy and matter cycling in Earth's processes and the resulting changes...

Skills & Learning Targets: Develop a model to describe the cycling of Earth's materials and the flow o...

Resources: Earth's Systems powerpoint:...

Enduring Understandings: All Earth processes are the result of energy flowing and matter cycling...


Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 ESS2: Earth's Systems ESS2.A: E...

*Academic Vocabulary:*Erosion Weathering Compaction Cementation Melting and cooling Heat and...
*Anchoring Events:*Science: Why are there so many different colors and shape formation in the...
*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...
*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 5. Energy...
*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: MS Earth & Space...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Rock Strata & Fossils (Week 32 - Week 37)

*Essential Questions:*Science:How do people figure out that the Earth and life on Earth have...
*Content:*Earth's history interpreted through rock strata, geologic time scale, and...
*Skills & Learning Targets:*Analyze layers of older rock to identify what the Earth was like in the...
Resources:<http://science.nationalgeographic.com/science/prehistoric-world/prehistoric...>
*Enduring Understandings:*The geologic time scale interpreted from rock strata provides a way to...
*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: 6-8 ESS1: Earth's Place in the U...
*Academic Vocabulary:*Intrusion Extrusion Index fossils Horizontal Superposition Relative...
*Anchoring Events:*Science: What change has occurred over...
*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 6-8 Practice 6. Constructing...
*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 3. Scale,...
*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: MS Earth & Space...

Science 6 (C) ; Collaboration; District 160 - Science; **Grade 6**; Science

Science – Seventh Grade

Forces (Week 1 - Week 7)

Essential Questions: Science: How can one describe physical interactions between objects and...

Content: For any pair of interacting objects the force exerted by the first object...

Skills & Learning Targets: Provide evidence that the change in an object's motion is due to either: a...

Resources: <http://www.discovery.com/tv-shows/other-shows/videos/time-warp-gauss-gun/ht...>

Enduring Understandings: For any pair of interacting objects, the force exerted by the first object...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS2: Motion and Stability: Forces...

Academic Vocabulary: Newton's Third Law of Motion Newton's First Law of Motion Newton's Second...

Anchoring Events: Science: How does a magnetic canon (gaussian gun)...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 1. Asking...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

Science 7 (C) ; Collaboration; District 160 - Science; **Grade 7**; Science

Engineering Design (Week 8 - Week 9)

Essential Questions: Science: How can one describe physical interactions between objects and...

Content: Motion of two colliding objects Constraints of a design problem Potential...

Skills & Learning Targets: Describe a problem that can be solved through the development of an...

Resources: <https://www.teachengineering.org/https://www.curiositymachine.org/units/htt...>

Enduring Understandings: There are systematic processes for evaluating solutions with respect to...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS2: Motion and Stability: Forces...

Academic Vocabulary: Constraints Design Redesign Problem Solve Solution

Anchoring Events: Science: What impact does technology have on society in 2016, compared to...

 [social impact of technology.jpg](#): social impact of technology.jpg

 [Technology impact on society.png](#): Technology impact on society.png

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 1. Asking...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

Science 7 (C) ; Collaboration; District 160 - Science; **Grade 7**; Science

Energy (Week 10 - Week 16)

Essential Questions: Science: How can energy be transferred from one object or system to...

Content: Relationships of kinetic energy to the mass Different amounts of potential...

Skills & Learning Targets: Identify that thermal energy is transferred from hotter objects to colder...

Resources: <http://study.com/academy/lesson/mass-and-energy-description-and-interchange...>

Enduring Understandings: Motion energy is properly called kinetic energy; it is proportional to the...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS3: Energy PS3.A: Definitions of...

Academic Vocabulary: Energy Potential Energy Kinetic Energy Chemical Energy Electrical Energy...

Anchoring Events: Science: Why does the smaller boy fly backwards when he is hit with the...

 [vertical velocity.jpg](#): vertical velocity.jpg

 [Energy Transfer_Engineering Catapults.pdf](#): Energy Transfer_Engineering...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 3. Scale,...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

Science 7 (C) ; Collaboration; District 160 - Science; **Grade 7**; Science

Engineering Design #2 (Week 17 - Week 18)

Essential Questions: Science: How can energy be transferred from one object or system to...

Content: Motion of two colliding objects Constraints of a design problem Potential...

Skills & Learning Targets: Describe a problem that can be solved through the development of an...

Resources: <https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&a...>

Enduring Understandings: Temperature is a measure of the average kinetic energy of particles of...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS3: Energy PS3.B: Conservation of...

Academic Vocabulary: Constraints Design Redesign Problem solve Solution

Anchoring Events: Engineering: How does the constraints of a design problem effect...

 [Popcorn Party.pdf](#): Popcorn...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 1. Asking...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 5. Energy...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

Science 7 (C) ; Collaboration; District 160 - Science; **Grade 7**; Science


Cells & Growth (Week 19 - Week 25)

Essential Questions: Science: How can one explain the ways cells contribute to the function of...

Content: Living things are made of cells Parts of cells contribute to the function...

Skills & Learning Targets: Analyze and interpret data for patterns in the fossil record that document...

Resources: <https://prezi.com/ldwi1ugty0jg/living-things-are-made-up-of-units-called-ce...>

 [StructFunctCellOrganSHO_0.docx](#): StructFunctCellOrganSHO_0.docx Structure and Function of Cells, Organs a...

 [StructFunctCellOrganTN.docx](#): StructFunctCellOrganTN.docx Teacher Notes for Structure and F...

 [Cells to Tissues to Organs.pdf](#): Cells to Tissues to...

 [Insane in the Membrane.pdf](#): Insane in the...

Enduring Understandings: All living things are made up of cells, which is the smallest unit that...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 LS1: From Molecules to Organisms:...

Academic Vocabulary: tissue organ organ system function structure cellular respiration...

Anchoring Events: Science: Why did Jennifer Strange die from a water drinking...

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2.

Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Life Science...

Science 7 (C) ; Collaboration; District 160 - Science; **Grade 7**; Science

Seasons & Space (Week 26 - Week 31)

Essential Questions: Science: What is Earth's place in the universe? What makes up our solar s...

Content: Model of the Earth-sun-moon system Patterns of lunar phases, eclipses of...

Skills & Learning Targets: Develop and use a model of the Earth-sun-moon system Develop and use a...


Resources: http://www.windows2universe.org/the_universe/uts/earth2.html<http://oceanser...>

 [Phases Of The Moon.pdf](#): Phases Of The...

 [Seasons & Tides.pdf](#): Seasons &...

 [Lunar Phases.pdf](#): Lunar...

 [Mass Versus Weight_ Travel to Other Planets.pdf](#): Mass Versus Weight_ Travel to Other...

 [Gravity.pdf](#): Gravity.pdf 5/12/2016 BetterLesson Gravity Ryan K...


 [Lunar Lollipops.pdf](#): Lunar...

Enduring Understandings: Patterns of the apparent motion of the sun, the moon, and stars in the sky...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 ESS1: Earth's Place in the U...

Academic Vocabulary: Cycle Phases Eclipses Seasons Galaxies Solar Systems

Anchoring Events: Science: How can we see the sun and the moon at the same time? Engineering:...

 [Gravity.pdf](#): Gravity.pdf 5/12/2016 BetterLesson Gravity Ryan K...


 [Solar-Eclipse-2.jpg](#): Solar-Eclipse-2.jpg

 [sun and moon.jpg](#): sun and moon.jpg

Science & Engineering Practices:NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Crosscutting Concepts:NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 1. Patterns...

Performance Expectation:NGSS: Science Performance Expectations(2013) NGSS: MS Earth & Space...

[Science 7 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 7**; Science

Weather & Climate (Week 32 - Week 37)

Essential Questions:Science:How does water influence weather, circulate in the oceans, and...

Content:Movement of water in the atmosphere Changes in weather conditions Unequal...

Skills & Learning Targets:Describe the phenomenon under investigation, which includes the...

Resources:https://www.youtube.com/watch?v=_sayCU1TNyghhttp://www.earthsciweek.org/clas...

 [BetterLesson - What is Climate and What Causes it to Change .pdf](#): BetterLesson - What is Climate and What Causes it to...

 [BetterLesson - Heat and Pressure in the Atmosphere .pdf](#): BetterLesson - Heat and Pressure in the...

 [BetterLesson - Earth's Changing Climate.pdf](#): BetterLesson - Earth's Changing...

 [BetterLesson - Interactions Within Earth's Atmosphere.pdf](#): BetterLesson - Interactions Within Earth's...

 [global conveyor belt.jpg](#): global conveyor belt.jpg

Enduring Understandings:The complex patterns of the changes and the movement of water in the...

Standards & Benchmarks:NGSS: Disciplinary Core Ideas NGSS: 6-8 ESS2: Earth's Systems ESS2.C: The R...

Academic Vocabulary:Atmosphere Landforms Temperature Coriolis effect Convention cycle

Anchoring Events:Science: How would you describe the reaction between the warm water and...

 [weather map.gif](#): weather map.gif

 [global temperature graph.jpg](#): global temperature graph.jpg

Science & Engineering Practices:NGSS: Science and Engineering Practices NGSS: 6-8 Practice 1. Asking...

Crosscutting Concepts:NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 2. Cause and...

Performance Expectation:NGSS: Science Performance Expectations(2013) NGSS: MS Earth & Space...

[Science 7 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 7**; Science

Science – Eighth Grade

Physical Waves (Week 1 - Week 10)

Essential Questions: Science What are the characteristic properties of waves and how can they be...

Content: Electric and magnetic (electromagnetic) forces can be attractive...

Skills & Learning Targets: Identify the characteristics of a simple mathematical wave model of a...

Resources: <https://www.youtube.com/watch?v=rRZT7xO5KN4> <https://www.youtube.com/watch?v=...>

 [dissapearing gold fish.jpg](#): dissapearing gold fish.jpg

 [MS-PS4-3_Teaching EM waves used in communication technologies.pdf](#): MS-PS4-3_Teaching EM waves used in communication technologies.pdf

Enduring Understandings: A simple wave has a repeating pattern with a specific wavelength,...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 PS4: Waves and Their Applications...

Academic Vocabulary: Angle of reflection Angle of incidence Amplitude modulated Amplification...

Anchoring Events: Science: Why was the singer able to shatter the glass with his...

 [inverted rainbow.jpg](#): inverted rainbow.jpg

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 1. Patterns...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Physical Science...

[Science 8 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 8**; Science

Genetics (Week 11 - Week 20)

Essential Questions: Science How do organisms grow, develop, and reproduce? How does genetic...

Content: Genetic factors as well as local conditions affect the growth of the adult...

Skills & Learning Targets: Describe or compare how different organisms have mechanisms that work in a...

Resources: <http://www.dailymail.co.uk/news/article-2123050/Look-The-black-white-twins-...>

Enduring Understandings: Genetic factors as well as local conditions affect the growth of the adult...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 LS1: From Molecules to Organisms:...

Academic Vocabulary: Genetic correlation Quantitative trait loci Phenotypic correlation...

Anchoring Events: Science: Why is there such a significant difference in the appearance of...

 [black-and-white-twins-1.jpg](#): black-and-white-twins-1.jpg

 [090303-twin-babies-02.jpg](#): 090303-twin-babies-02.jpg

 [genetic-engineering-16-638.jpg](#): genetic-engineering-16-638.jpg

Science & Engineering Practices: NGSS: Science and Engineering Practices NGSS: 6-8 Practice 2. Developing...

Crosscutting Concepts: NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 2. Cause and...

Performance Expectation: NGSS: Science Performance Expectations(2013) NGSS: MS Life Science...

[Science 8 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 8**; Science

Natural Selection/Evolution (Week 21 - Week 27)

Essential Questions: Science How do organisms grow, develop, and reproduce? How does genetic...

 [Icefish_BirhandDeath_Student.pdf](#): Icefish_BirhandDeath_Student.pdf The Making of the Fittest: The Birth a...

 [Icefish_BirhandDeath_Teacher.pdf](#): Icefish_BirhandDeath_Teacher.pdf The Making of the Fittest: The Birth a...

Content: Natural selection leads to the predominance of certain traits in a...

Skills & Learning Targets: Create a timeline that illustrates the geologic time scale and the major...

Resources: <http://www.dnadarwin.org/casestudies/10/FILES/Mammoths...>

Enduring Understandings: Animals engage in characteristic behaviors that increase the odds of...

Standards & Benchmarks: NGSS: Disciplinary Core Ideas NGSS: 6-8 LS1: From Molecules to Organisms:...

Academic Vocabulary: Absolute dating Analogous structure Ancestor Artificial selection...

Anchoring Events: Science: Why does the bird behave this...

 [Jellyfish.jpg](#): Jellyfish.jpg

 [fossil.jpg](#): fossil.jpg

 [bird beaks.jpg](#): bird beaks.jpg

 [giraffe-evolution.png](#): giraffe-evolution.png

Science & Engineering Practices:NGSS: Science and Engineering Practices NGSS: 6-8 Practice 4. Analyzing...

Crosscutting Concepts:NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 1. Patterns...

Performance Expectation:NGSS: Science Performance Expectations(2013) NGSS: MS Life Science...

[Science 8 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 8**; Science

Plate Tectonics & Hazards (Week 28 - Week 31)

Essential Questions:ScienceHow does the movement of tectonic plates impact the surface of...

Content:The geologic time scale inter operated from rock strata provides a way to...

Skills & Learning Targets:Create a timeline that illustrates the geologic time scale and the major...

Resources:<http://www.earthsciweek.org/classroom-activities/a-model-of-three-faultshtt...>

Enduring Understandings:The planet's systems interact over scales that range from microscopic to g...

Standards & Benchmarks:NGSS: Disciplinary Core Ideas NGSS: 6-8 ESS2: Earth's Systems ESS2.A: E...

Academic Vocabulary:Crustal plate Tectonics Plate tectonics Hadean eon Subduction Archaean...

Anchoring Events:Science: Why aren't there many Earthquakes in Illinois?Science: Which...

 [US-FAULT-LINES.jpg](#): US-FAULT-LINES.jpg


 [surface weathing.jpg](#): surface weathing.jpg

 [pangea.jpg](#): pangea.jpg

Science & Engineering Practices:NGSS: Science and Engineering Practices NGSS: 6-8 Practice 4. Analyzing...

Crosscutting Concepts:NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 1. Patterns...

Performance Expectation:NGSS: Science Performance Expectations(2013) NGSS: MS Earth & Space...

[Science 8 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 8**; Science

Human Impact (Week 32 - Week 35)

Essential Questions:ScienceHow can natural hazards be predicted? How do human activities...

Content:Maps of ancient land and water patterns, based on investigations of rocks...

Skills & Learning Targets:Recognize that fossils provide important evidence relating to changes in...

Resources:<http://www.earthsciweek.org/classroom-activities/a-paste-with-tastehttp://w...>

 [radioactive reindeer.jpg](#): radioactive reindeer.jpg

Enduring Understandings:Human activities have significantly altered the biosphere, sometimes...

Standards & Benchmarks:NGSS: Disciplinary Core Ideas NGSS: 6-8 ESS3: Earth and Human Activity...

Academic Vocabulary:Acid rain Biodegradable Conservation Desalination Environment Geothermal...

Anchoring Events:Science: Why are houses next to Lake Michigan starting to fall off the...

 [house falling.jpg](#): house falling.jpg

 [earthquake.jpg](#): earthquake.jpg

 [tornado.jpg](#): tornado.jpg

 [human population.jpg](#): human population.jpg

Science & Engineering Practices:NGSS: Science and Engineering Practices NGSS: 6-8 Practice 4. Analyzing...

Crosscutting Concepts:NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 1. Patterns...

Performance Expectation:NGSS: Science Performance Expectations(2013) NGSS: MS Earth & Space...

[Science 8 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 8**; Science

Engineering (Week 36 - Week 37)

Essential Questions:ScienceHow do human activities affect Earth systems? EngineeringHow are...

*Content:*Changes to Earth's environment Human activities have altered Earth's...

*Skills & Learning Targets:*Describe how catastrophic changes that have taken place on the Earth's s...

Resources:<http://www.lib.niu.edu/2001/ihy010452.html><http://www.citylab.com/politics/2...>

*Enduring Understandings:*Human activities have significantly altered the biosphere, sometimes...

*Standards & Benchmarks:*NGSS: Disciplinary Core Ideas NGSS: 6-8 ESS3: Earth and Human Activity...

*Academic Vocabulary:*Analysis Axle Balance Calculation Communication Control Conversion Energy...

*Anchoring Events:*Science: What damage is done from pollution?Engineering: Design a...

 [polluted ocean.png](#): polluted ocean.png

 [Design Your Society Lesson.pdf](#): Design Your Society...

 [Create A Society PPT.pptx](#): Create A Society PPT.pptx slide1: Create A Society The D...

 [Pollution Lab Stations.pdf](#): Pollution Lab...

*Science & Engineering Practices:*NGSS: Science and Engineering Practices NGSS: 6-8 Practice 1. Asking...

*Crosscutting Concepts:*NGSS: Crosscutting Concepts NGSS: 6-8 Crosscutting Statements 2. Cause and...

*Performance Expectation:*NGSS: Science Performance Expectations(2013) NGSS: MS Earth & Space...

[Science 8 \(C\)](#) ; [Collaboration](#); District 160 - Science; **Grade 8**; Science