Unit 1 Summary:
In this unit students will:

- Make observations about real word happenings.
- Use observations to come to a conclusion about the types of energy used.
- Be able to list the eight forms of energy most used in everyday life.
- Design tests that use multiple sources of energy.
- Collect and graph data found in experiments.
- Build objects that convert energy from one form to another.
- Discuss different types of energy and their efficiency.

Title of Unit:	**Subject Area:**
Energy	Science

Next Generation Science Standards:

4-PS3-2: Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
4-PS3-4: Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.

Students who demonstrate understanding can:

I Can Statements

- I can observe how energy can be transferred from one place to another.
- I can build something that converts energy from one form to another.

Academic Vocabulary
Gravitational Energy
Heat Energy
Electric Energy
Motion Energy
Chemical Energy
Elastic Energy
Light Energy
Sound Energy
CFC
Incandescent
Watt
Lumen
Energized
Un-energized
Transfer
Insulator
Conductor
Machines

Assessments

Formative Riding Bikes Ticket Out The Door Self-Assessment: Collecting Data and Making Conclusions **Common Formative** What is Energy? Quiz Energy Transfer Quiz Consumer Math Assessment	**Summative** Design a Chain Reaction
Lesson Sequence Energy is All Around Energy's Many Forms Energy Transfers in Toys Making Boats Go Heat Energy Transfers Heat Insulators/Conductors Designing a Fair Test Measuring Temperature Accurately Making Line Graphs Energy Efficiency Inventions	**Resources** ***National Geographic*** ***Curriculum Crafter*** ***Science Companion*** ***Readworks.org*** ***Teacherspayteachers.com***

Unit 2 Summary:

In this unit students will:

- Make observations about real word happenings.
- Use observations to come to a conclusion about how electrical objects work.
- Design tests that use batteries as a source and transfer energy.
- Build electric circuits using multiple batteries, wires, switches, bulbs, and other electrical items.
- Discuss different types of circuits, their sources, and their electrical loads.

Title of Unit:	**Subject Area:**
Electricity	Science

Next Generation Science Standards:

4-PS3-2: Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.

Students who demonstrate understanding can:

I Can Statements

- I can observe how energy can be transferred from one place to another.

Academic Vocabulary

Closed Circuit
Open Circuit
Filament
Conductor
Insulator
Electric Current
Energy Transfer
Source
Hazard
Parallel Circuits
Terminal
Schematic
Electric load

Assessments

Formative	**Summative**
Design Safe Gloves for an Electrician Simple Circuit Drawing **Common Formative** Electric Safety Quiz Current Electricity	Design a Circuit
Lesson Sequence	**Resources**
Light a Bulb More Light Connections Circuits for Other Effects Conductors and Insulators Recognizing Electrical Hazards Electrical Circuits Creating A Bulb Holder Circuits and Schematics Building Parallel Circuits Designing and Building Circuits Refining and Demonstrating Circuits	***National Geographic*** ***Curriculum Crafter*** ***Science Companion*** ***Readworks.org*** ***Teacherspayteachers.com***

Unit 3 Summary:
In this unit students will:

- Produce waves using multiple techniques.
- Describe the different parts of a wave and how they move.
- Make observations about real word happenings.
- Use observations to come to a conclusion about how waves work.
- Design tests to move an object using waves.
- Create and demonstrate a communication solution.

Title of Unit:	**Subject Area:**
Waves	Science

Next Generation Science Standards:

4-PS4-1: Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.

4-PS4-3: Generate and compare multiple solutions that use patterns to transfer information.

Students who demonstrate understanding can:

I Can Statements

- I can use waves to move an object.
- I can come up with multiple solutions that use patterns to transfer information. I can compare my solutions.

Academic Vocabulary
Wave Length
Oscillate
Amplitude
Trough
Crest
Wave Train
Vibrate
Wave Source
Wave Medium
Wave Break
Morse Code
Light Wave
Sound Wave
Water Wave

Assessments	
Formative Wave in a Puddle Worksheet Ribbon on a Rope Worksheet Wave Story Worksheet Dancing Pepper Worksheet **Common Formative** Amplitude and Wavelength Quiz Different Kinds of Waves Quiz	**Summative** Communication Solution Final Project
Lesson Sequence What are Waves? Wave Behavior Wave Shape Using Models in Science Observing and Describing Deep and Shallow Water Waves Sound Travels in Waves Exploring and Communication Solution Refining a Communication Solution Demonstrating a Communication Solution	**Resources** ***National Geographic*** ***Curriculum Crafter*** ***Science Companion*** ***Readworks.org*** ***Teacherspayteachers.com***

Unit 4 Summary:

In this unit students will:

- Make observations about the human body.
- Create a model to describe the inner and outer workings of the human body, plants, and animals.
- Discuss the different adaptations animals and plants have to help them survive and thrive.

Title of Unit:	**Subject Area:**
Human Body in Motion / Structures of Living Things	Science

Next Generation Science Standards:

4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

4-LS1-2: Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways

Students who demonstrate understanding can:

I Can Statements

- I can construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- I can use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

Academic Vocabulary

Joints
Pivot Joint
Ball-and-Socket Joint
Hinge Joint
Digestive System
Mouth
Esophagus
Small Intestine
Large Intestine
Salivary Glands
Stomach
Rectum
Liver
Gall Bladder
Pancreas
Cartilage
Marrow
Spongy Bone
Compact Bone
Fat
Red Muscle
Calcium
Cells
Muscles
Organ
Tissue
Blood Vessel
Muscular System
Limb
Nervous System
Circulatory System
Respiratory System
Ribs
Diaphragm
Lungs
Inhale
Exhale
Adaptations

Assessments

Formative	**Summative**
Feeding Muscles Cells What Bone Cells Need Comparing Cells A Trip to the Natural History Museum On Your Mark, Get Set, Go! How Does that Arm Move? **Common Formative** What's Inside the Human Body	Body Quiz
Lesson Sequence	**Resources**
How Do We Move? Where Do Bones Move? How Our Muscles Get the Nutrients They Need Poetry in Motion Inside Bones Working Muscles Building Blocks Moving Our Bones How Our Muscles Know When to Move Moving Quickly to Prevent Harm Delivering What Muscles Need Breathing Hard for Our Muscles	***Curriculum Crafter*** ***Science Companion*** ***The Science Penguin*** ***The Happy Scientist*** ***OpenEd.com*** ***Teacherspayteachers.com***

Unit 5 Summary:

In this unit students will:

- Make observations about our changing Earth.
- Generate and compare solutions for people to reduce their impact on the Earth.
- Observe and measure effects of weathering and erosion.
- Analyze and interpret data using maps of Earth's features.

Title of Unit:	**Subject Area:**
Our Changing Earth	Science

Next Generation Science Standards:

4-ESS1-1: Identify evidence from patterns in rock formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time.

4-ESS2-1: Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.

4-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features.

4-ESS3-1: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

4-ESS3-2: Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

Students who demonstrate understanding can:

I Can Statements

- I can identify evidence from patterns in rock formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time.
- I can make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
- I can analyze and interpret data from maps to describe patterns of Earth's features.
- I can obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.
- I can generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

Academic Vocabulary
Alpine Glaciers
Continental Glaciers
Abrade
Erode
Moraines
Erratic
Weathering
Erosion
Abrasion
Deposition

Assessments

Formative	**Summative**
Building Sand Castles Worksheet Glacial Landforms Explaining Mountain Formations Ticket Out The Door for Reading Passages	Looking for Changes: Part 2 iMovie: Why and how should people reduce their impact on the Earth?
Lesson Sequence	**Resources**
Looking for Changes: Part 1 Looking at Landforms Shaping Rocks Wind Deposits Dunes Rivers Shape the Land Rivers Shape the Land in Different Ways Abrasion Wears Down Rock Weathering Breaks Down Rock Glaciers Carve Land Touring Landforms Plate Movements Volcanoes Looking for Changes: Part 2	***Curriculum Crafter*** ***Science Companion*** ***The Science Penguin*** ***The Happy Scientist*** ***OpenEd.com*** ***Teacherspayteachers.com***