
Fifth Grade Science

Curriculum Guide

Dunmore School District

Dunmore, PA



**Dunmore School District
Curriculum Guide**

Fifth Grade Science

Prerequisite:

- Completion of fourth grade

Course Description:

The Fifth Grade Science course will explore a variety of areas within the field of science including earth, space, and physical sciences through the use of reading, research, discussion, participation in group and individual projects, and utilization of the scientific research process and experiments. The year begins with exploring how to protect Earth's resources to prepare the students for PP&L's Think Energy presentation. The rest of the Earth science unit involves learning about the water we have on earth, weather, the makeup of the Earth and how it is constantly evolving and changing. We move to discovering our place in the solar system and how it affects us on Earth then on to matter and its properties with the phase and changes certain substances undergo. The year concludes with exploration of Newton's Laws.

Special Education:

After a student has been evaluated and found to be eligible for specially designed instruction under one of the 13 disability categories, an individualized education plan will be developed to help the student succeed through a more intense intervention program. Special Education is the practice of educating students in a way that addresses their individual differences and needs. The purpose of special education is to provide equal access to education for children ages birth through 21 by providing specialized services that will lead to school success in general education. Our goal for each student is for him/her to be educated in his/her least restrictive environment with additional supports by way of specially designed instruction. After all interventions in the general education setting have been exhausted and the student is still not making progress, students can receive direct instruction in a special education classroom. Direct instruction provides more intense intervention and replacement instruction in order to minimize skill deficits. In our special education classrooms, students will have access to the standards-based general education curriculum, as well as using various research-based intervention programs. Resources and activities will be adjusted based on individual student needs. Suggested time found within the curriculum will be adjusted as needed per individual student's needs.

Special Education Strategies can be located in the IEP Enhancements table located in Appendix: A at the end of this document.

**Dunmore School District
Curriculum Guide**

Year-at-a-glance

Subject: Fifth Grade Science	Grade Level: 5	Date Completed: 4/8/2019
-------------------------------------	-----------------------	---------------------------------

1st Quarter

Topic – Earth Sciences	Resources	Standards
Resources – Renewable and nonrenewable Alternate Energy Resources	Approved textbook <i>Science</i> , Chapter 10: Lessons 1-4	3.1.7.A, 3.1.7.D, 3.2.7.A, 3.2.7.B, 3.2.7.C, 3.2.7.D 3.5.7.B
Oceans Fresh Water Water Cycle Types of Clouds	Approved textbook <i>Science</i> , Chapter 7: Lessons 1-4	3.1.7.A, 3.1.7.B, 3.1.7.E, 3.2.7.A 3.2.7.B, 3.2.7.C, 3.2.7.D, 3.5.7.D

Dunmore School District
Curriculum Guide

2nd Quarter

Topic – Earth Sciences	Resources	Standards
Severe Weather Weather instruments Climate	Approved textbook <i>Science</i> , Chapter 8: Lessons 1-5	3.1.7.A, 3.1.7.B, 3.2.7.A, 3.2.7.B 3.2.7.C, 3.2.7.D, 3.5.7.A, 3.5.7.C
Earth's Structure Weathering/Erosion Types of Rocks	Approved textbook <i>Science</i> , Chapter 9: Lessons 1-6	3.1.7.A, 3.1.7.B, 3.2.7.A, 3.2.7.B 3.2.7.C, 3.2.7.D, 3.5.7.A

**Dunmore School District
Curriculum Guide**

3rd Quarter

Topic – Space Science	Resources	Standards
Solar System Earth’s place in the solar system Moon	Approved Textbook <i>Science</i> , Chapter 17: Lessons 1-4	3.1.7.A, 3.1.7.B, 3.1.7.C, 3.1.7.D, 3.2.7.A, 3.2.7.B 3.2.7.C, 3.2.7.D, 3.4.4.D 3.4.7.D
Matter (Begin in this quarter) Compounds Phase changes Mixtures/solutions	Approved Textbook <i>Science</i> , Chapter 11: Lessons 1-4	3.4.10.A, 3.1.10.B, 3.1.10C

**Dunmore School District
Curriculum Guide**

4th Quarter

Topic – Physical Science	Resources	Standards
Matter (End in this quarter) Compounds Phase changes Mixtures/solutions	Approved Textbook <i>Science</i> , Chapter 11: Lessons 1-4	3.4.10.A, 3.1.10.B, 3.1.10C
Gravity Newton’s Laws Simple Machines	Approved textbook <i>Science</i> , Chapter 13: Lessons 1-4	3.1.7.B, 3.1.10.B, 3.4.4.C 3.4.7.C, 3.4.7.D, 3.4.12.C 3.4.10.C

**Dunmore School District
Curriculum Guide**

General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
The Earth's processes affect and are affected by human activities.	<p>Anchor Descriptor: S8.B.3.3 Explain how renewable and nonrenewable resources provide for human needs or how these needs impact the environment.</p> <p>PA Academic Standards: 3.1.7.A Explain the parts of a simple system and their relationship to each other.</p> <ul style="list-style-type: none"> • Describe a system as a group of related parts that work together to achieve a desired result (e.g., digestive system). • Explain the importance of order in a system. • Distinguish between system inputs, system processes and system outputs. • Distinguish between open loop and closed loop systems. • Apply systems analysis to solve problems. <p>3.1.7.D Identify change as a variable in describing natural and</p>	<p>Eligible Content: S8.B.3.3.1 Explain how human activities may affect local, regional, and global environments.</p> <p>S8.B.3.3.2 Explain how renewable and nonrenewable resources provide for human needs (i.e., energy, food, water, clothing, and shelter).</p> <p>S8.B.3.3.3 Describe how waste management affects the environment (e.g., recycling, composting, landfills, incineration, sewage treatment).</p> <hr/> <p>Essential Knowledge/Skills: Humans depend on Earth's land, ocean, atmosphere, and living things for many different resources.</p> <p>Minerals, fresh water, and living resources are limited,</p>	<p>Approved textbook <i>Science</i>, Chapter 10: Lessons 1-4</p> <p>Projector PowerPoint ABCD Cards Quizlet Newsela Kids Discover magazine: Oil Chromebooks Super Science Magazine Google classroom</p> <p>Oil, water, toothpicks</p> <p>FOSS - Solar Houses</p> <p>Solar beads</p> <p>Nature print paper</p>	Teacher prepared tests, quizzes, etc.	26 days

**Dunmore School District
Curriculum Guide**

	<p>physical systems.</p> <ul style="list-style-type: none"> • Describe fundamental science and technology concepts that could solve practical problems. • Explain how ratio is used to describe change. • Describe the effect of making a change in one part of a system on the system as a whole. <p>3.2.7.A Explain and apply scientific and technological knowledge.</p> <ul style="list-style-type: none"> • Distinguish between a scientific theory and a belief. • Answer “What if” questions based on observation, inference or prior knowledge or experience. • Explain how skepticism about an accepted scientific explanation led to a new understanding. • Explain how new information may change existing theories and practice. <p>3.2.7.B Apply process knowledge to make and interpret observations.</p>	<p>and many are not renewable or replaceable over human lifetimes.</p> <p>Vocabulary: Atmosphere Hydrosphere Natural resources Nonrenewable resources Renewable resources</p>			
--	--	--	--	--	--

Dunmore School District
Curriculum Guide

	<ul style="list-style-type: none">• Measure materials using a variety of scales.• Describe relationships by making inferences and predictions.• Communicate, use space / time relationships, define operationally, raise questions, formulate hypotheses, test and experiment,• Design controlled experiments, recognize variables, and manipulate variables.• Interpret data, formulate models, design models, and produce solutions. <p>3.2.7.C Identify and use the elements of scientific inquiry to solve problems.</p> <ul style="list-style-type: none">• Generate questions about objects, organisms and/or events that can be answered through scientific investigations.• Evaluate the appropriateness of questions.• Design an investigation with limited variables to investigate a question.• Conduct a two-part				
--	---	--	--	--	--

Dunmore School District
Curriculum Guide

	<p>experiment.</p> <ul style="list-style-type: none">• Judge the significance of experimental information in answering the question.• Communicate appropriate conclusions from the experiment. <p>3.2.7.D Know and use the technological design process to solve problems.</p> <ul style="list-style-type: none">• Define different types of problems.• Define all aspects of the problem, necessary information and questions that must be answered.• Propose the best solution.• Design and propose alternative methods to achieve solutions.• Apply a solution.• Explain the results, present improvements, identify and infer the impacts of the solution. <p>3.5.7.B Recognize earth resources and how they affect everyday life.</p> <ul style="list-style-type: none">• Identify and locate significant earth resources (e.g., rock types, oil, gas, coal deposits) in Pennsylvania.				
--	---	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<ul style="list-style-type: none">• Explain the processes involved in the formation of oil and coal in Pennsylvania.• Explain the value and uses of different earth resources (e.g., selected minerals, ores, fuel sources, agricultural uses).• Compare the locations of human settlements as related to available resources.				
--	--	--	--	--	--

**Dunmore School District
Curriculum Guide**

General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.	<p>Anchor Descriptor: S8.D.1.3 Describe characteristic features of Earth’s water systems or their impact on resources.</p> <p>PA Academic Standards: Science 3.1.7.A Explain the parts of a simple system and their relationship to each other.</p> <ul style="list-style-type: none"> • Describe a system as a group of related parts that work together to achieve a desired result (e.g., digestive system). • Explain the importance of order in a system. • Distinguish between system inputs, system processes and system outputs. • Distinguish between open loop and closed loop systems. • Apply systems analysis to solve • problems. <p>3.1.7B. Describe the use of</p>	<p>Eligible Content: S8.D.1.3.1 Describe the water cycle and the physical processes on which it depends (i.e., evaporation, condensation, precipitation, transpiration, runoff, infiltration, energy inputs, and phase changes).</p> <hr/> <p>Essential Knowledge/Skills: Water continually cycles among geosphere, hydrosphere, biosphere, and atmosphere via transpiration, evaporation, condensation, and precipitation.</p> <p>Develop models for the movement of water within the Earth’s spheres (i.e., geosphere, hydrosphere, biosphere, atmosphere).</p> <p>Vocabulary: Atmosphere Condensation Evaporation Hydrosphere</p>	<p>Approved textbook Science, Chapter 7: Lessons 1-4</p> <p>Projector PowerPoint Quizlet Newsela Kids Discover magazine: Water Super Science Magazine Chromebooks Google classroom</p> <p>Cloud in a bottle</p> <p>Cloud observation pamphlet</p> <p>Water cycle activities</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>26 days</p>

**Dunmore School District
Curriculum Guide**

	<p>models as an application of scientific or technological concepts.</p> <ul style="list-style-type: none"> • Identify and describe different types of models and their functions. • Apply models to predict specific results and observations • (e.g., population growth, effects of infectious organisms). • Explain systems by outlining a • system’s relevant parts and its • purpose and/or designing a model that illustrates its function. <p>3.1.7.E Identify change as a variable in describing natural and physical systems.</p> <ul style="list-style-type: none"> • Describe fundamental science and technology concepts that could solve practical problems. • Explain how ratio is used to describe change. • Describe the effect of making a • change in one part of a system on the system as a whole. 	<p>Precipitation Runoff Water Cycle Salinity Saltwater Freshwater</p>			
--	---	---	--	--	--

Dunmore School District
Curriculum Guide

	<p>3.2.7.A A. Explain and apply scientific and technological knowledge.</p> <ul style="list-style-type: none">• Distinguish between a scientific theory and a belief.• Answer “What if” questions based on observation, inference or prior knowledge or experience.• Explain how skepticism about an accepted scientific explanation led to a new understanding.• Explain how new information may change existing theories and practice. <p>3.2.7.B Apply process knowledge to make and interpret observations.</p> <ul style="list-style-type: none">• Measure materials using a variety of scales.• Describe relationships by making inferences and predictions.• Communicate, use space / time relationships, define operationally, raise questions, formulate hypotheses, test and experiment,• Design controlled				
--	---	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<p>experiments, recognize variables, and manipulate</p> <ul style="list-style-type: none"> • variables. • Interpret data, formulate models, design models, and produce solutions. <p>3.2.7.C Identify and use the elements of scientific inquiry to solve problems.</p> <ul style="list-style-type: none"> • Generate questions about objects, organisms and/or events that can be answered through scientific investigations. • Evaluate the appropriateness of questions. • Design an investigation with limited variables to investigate a question. • Conduct a two-part experiment. • Judge the significance of • experimental information in • answering the question. • Communicate appropriate • conclusions from the experiment. <p>3.2.7.D Know and use the technological design process to solve problems.</p> <ul style="list-style-type: none"> • Define different types of 				
--	--	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<p>problems.</p> <ul style="list-style-type: none">• Define all aspects of the problem, necessary information and questions that must be answered.• Propose the best solution.• Design and propose alternative methods to achieve solutions.• Apply a solution.• Explain the results, present improvements, identify and infer the impacts of the solution. <p>3.5.7.D Explain the behavior and impact of the earth's water systems.</p> <ul style="list-style-type: none">• Explain the water cycle using the condensation.• Describe factors that affect evaporation and condensation.• Distinguish salt from fresh water• (e.g., density, electrical conduction).• Compare the effect of water type (e.g., polluted, fresh, salt water) and the life contained in them.• Identify ocean and shoreline features, (e.g., bays, inlets, spit, tidal marshes).				
--	---	--	--	--	--

**Dunmore School District
Curriculum Guide**

**Dunmore School District
Curriculum Guide**

General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.	<p>Anchor Descriptor: S8.D.2.1 Explain how pressure, temperature, moisture, and wind are used to describe atmospheric conditions that affect regional weather or climate.</p> <p>PA Academic Standards: Science 3.1.7.A Explain the parts of a simple system and their relationship to each other.</p> <ul style="list-style-type: none"> • Describe a system as a group of related parts that work together to achieve a desired result (e.g., digestive system). • Explain the importance of order in a system. • Distinguish between system inputs, system processes and system outputs. • Distinguish between open loop and closed loop systems. • Apply systems analysis to solve problems. <p>3.1.7.B Describe the use of models as an application of scientific or technological concepts.</p>	<p>Eligible Content: S8.D.2.1.1 Explain the impact of water systems on the local weather or the climate of a region (e.g., lake effect snow, land/ocean breezes).</p> <p>S8.D.2.1.2 Identify how global patterns of atmospheric movement influence regional weather and climate.</p> <p>S8.D.2.1.3 Identify how cloud types, wind directions, and barometric pressure changes are associated with weather patterns in different regions of the country.</p> <p>Essential Knowledge/Skills: Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude and local and regional geography resulting in complex patterns that are</p>	<p>Approved textbook Science, Chapter 8: Lessons 1-5</p> <p>Projector PowerPoint Quizlet Newsela Super Science Magazine Chromebooks Google classroom</p> <p>Weather Channel to track and graph weather data</p> <p>Marshmallow crusher</p> <p>Materials to make a homemade thermometer</p>	Teacher prepared tests, quizzes, etc.	28 days

**Dunmore School District
Curriculum Guide**

	<ul style="list-style-type: none"> • Identify and describe different types of models and their functions. • Apply models to predict specific results and observations (e.g., population growth, effects of infectious organisms). • Explain systems by outlining a system’s relevant parts and its purpose and/or designing a model that illustrates its function. <p>3.2.7.A Explain and apply scientific and technological knowledge.</p> <ul style="list-style-type: none"> • Distinguish between a scientific theory and a belief. • Answer “What if” questions based on observation, inference or prior knowledge or experience. • Explain how skepticism about an accepted scientific explanation led to a new understanding. • Explain how new information may change existing theories and practice. 	<p>difficult to predict.</p> <p>Analyze weather patterns using cloud types, wind directions, and barometric pressure.</p> <p>Vocabulary: Air pressure Atmosphere Altitude Barometer Climate Weather Weather Front</p>			
--	--	---	--	--	--

Dunmore School District
Curriculum Guide

	<p>3.2.7.B Apply process knowledge to make and interpret observations.</p> <ul style="list-style-type: none">• Measure materials using a variety of scales.• Describe relationships by making inferences and predictions.• Communicate, use space / time relationships, define operationally, raise questions, formulate hypotheses, test and experiment,• Design controlled experiments, recognize variables, and manipulate variables.• Interpret data, formulate models, design models, and produce solutions. <p>3.2.7.C Identify and use the elements of scientific inquiry to solve problems.</p> <ul style="list-style-type: none">• Generate questions about objects, organisms and/or events that can be answered through scientific investigations.• Evaluate the appropriateness of questions.• Design an investigation with				
--	---	--	--	--	--

Dunmore School District
Curriculum Guide

	<p>limited variables to investigate a question.</p> <ul style="list-style-type: none">• Conduct a two-part experiment.• Judge the significance of experimental information in answering the question.• Communicate appropriate conclusions from the experiment. <p>3.2.7.D Know and use the technological design process to solve problems.</p> <ul style="list-style-type: none">• Define different types of problems.• Define all aspects of the problem, necessary information and questions that must be answered.• Propose the best solution.• Design and propose alternative methods to achieve solutions.• Apply a solution.• Explain the results, present improvements, identify and infer the impacts of the solution. <p>3.5.7.A Describe earth features and processes.</p> <ul style="list-style-type: none">• Describe major layers of the earth.				
--	--	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<ul style="list-style-type: none"> • Describe the processes involved in the creation of geologic features (e.g., folding, faulting, volcanism, sedimentation) and that these processes seen today (e.g., erosion, weathering crustal plate movement) are similar to those in the past. • Describe the processes that formed Pennsylvania geologic structures and resources including mountains, glacial formations, water gaps and ridges. • Explain how the rock cycle affected rock formations in the state of Pennsylvania. • Distinguish between examples of rapid surface changes (e.g., landslides, earthquakes) and slow surface changes (e.g., weathering). • Identify living plants and animals that are similar to fossil forms. <p>3.5.7.C Describe basic elements of meteorology.</p> <ul style="list-style-type: none"> • Explain weather forecasts by interpreting weather 				
--	---	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<p>data and symbols.</p> <ul style="list-style-type: none">• Explain the oceans' impact on local weather and the climate of a region.• Identify how cloud types, wind directions and barometric pressure changes are associated with weather patterns in different regions of the country.• Explain and illustrate the processes of cloud formation and precipitation.• Describe and illustrate the major layers of the earth's atmosphere.• Identify different air masses and global wind patterns and how they relate to the weather patterns in different regions of the U.S.				
--	--	--	--	--	--

**Dunmore School District
Curriculum Guide**

General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.	<p>Anchor Descriptor: S8.D.1.2 Describe the potential impact of human made processes on changes to Earth’s resources and how they affect everyday life.</p> <p>PA Academic Standards: Science 3.1.7.A Explain the parts of a simple system and their relationship to each other.</p> <ul style="list-style-type: none"> • Describe a system as a group of related parts that work together to achieve a desired result (e.g., digestive system). • Explain the importance of order in a system. • Distinguish between system inputs, system processes and system outputs. • Distinguish between open loop and closed loop systems. • Apply systems analysis to solve problems. <p>3.1.7.B Identify patterns as repeated processes or recurring elements in science and</p>	<p>Eligible Content: S8.D.1.1.1 Explain the rock cycle as changes in the solid earth and rock types (igneous – granite, basalt, obsidian, pumice; sedimentary – limestone, sandstone, shale, coal; and metamorphic – slate, quartzite, marble, gneiss).</p> <p>S8.D.1.1.2 Describe natural processes that change Earth’s surface (e.g., landslides, volcanic eruptions, earthquakes, mountain building, new land being formed, weathering, erosion, sedimentation, soil formation).</p> <p>S8.D.1.1.4 Explain how fossils provide evidence about plants and animals that once lived throughout Pennsylvania’s history (e.g., fossils provide evidence of different environments).</p>	<p>Approved textbook Science, Chapter 9: Lessons 1-6</p> <p>Projector PowerPoint Quizlet Newsela Kids Discover magazine: Rocks Super Science Magazine Chromebooks Google classroom</p> <p>Cornstarch and water</p> <p>Rocks for classification</p> <p>Erosion table</p>	Teacher prepared tests, quizzes, etc.	26 days

**Dunmore School District
Curriculum Guide**

	<p>technology.</p> <ul style="list-style-type: none"> • Identify different forms of patterns and use them to group and classify specific objects. • Identify repeating structure patterns. • Identify and describe patterns that occur in physical systems (e.g., construction, manufacturing, transportation), informational systems, and biochemical-related systems. <p>3.2.7.A Explain and apply scientific and technological knowledge.</p> <ul style="list-style-type: none"> • Distinguish between a scientific theory and a belief. • Answer “What if” questions based on observation, inference or prior knowledge or experience. • Explain how skepticism about an accepted scientific explanation led to a new understanding. <p>Explain how new information may change existing theories and practice.</p>	<p>Essential Knowledge/Skills: All Earth processes are the result of energy flowing and matter cycling within and among the planet’s systems. The energy is derived from the sun and the earth’s interior. These flows and cycles produce chemical and physical changes in Earth’s materials and living organisms.</p> <p>Classify rocks as one of three different types and explain the interrelationship of the rock types as part of the rock cycle. (e.g., igneous: granite, basalt, obsidian, pumice; sedimentary: limestone, sandstone, shale, coal; and metamorphic: slate, quartzite, marble, gneiss).</p> <p>Vocabulary: Erosion Igneous rock Metamorphic rock Sedimentary rock Rock cycle Weathering</p>			
--	---	--	--	--	--

Dunmore School District
Curriculum Guide

	<p>3.2.7.B Apply process knowledge to make and interpret observations.</p> <ul style="list-style-type: none">• Measure materials using a variety of scales.• Describe relationships by making inferences and predictions.• Communicate, use space / time relationships, define operationally, raise questions, formulate hypotheses, test and experiment,• Design controlled experiments, recognize variables, and manipulate variables.• Interpret data, formulate models, design models, and produce solutions. <p>3.2.7.C Identify and use the elements of scientific inquiry to solve problems.</p> <ul style="list-style-type: none">• Generate questions about objects, organisms and/or events that can be answered through scientific investigations.• Evaluate the appropriateness of questions.				
--	--	--	--	--	--

Dunmore School District
Curriculum Guide

	<ul style="list-style-type: none">• Design an investigation with limited variables to investigate a question.• Conduct a two-part experiment.• Judge the significance of experimental information in answering the question.• Communicate appropriate conclusions from the experiment. <p>3.2.7.D Know and use the technological design process to solve problems.</p> <ul style="list-style-type: none">• Define different types of problems.• Define all aspects of the problem, necessary information and questions that must be answered.• Propose the best solution.• Design and propose alternative methods to achieve solutions.• Apply a solution.• Explain the results, present improvements, identify and infer the impacts of the solution. <p>3.5.7.A Describe earth features and processes.</p> <ul style="list-style-type: none">• Describe major layers of the				
--	---	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<p>earth.</p> <ul style="list-style-type: none"> • Describe the processes involved in the creation of geologic features (e.g., folding, faulting, volcanism, sedimentation) and that these processes seen today (e.g., erosion, weathering crustal plate movement) are similar to those in the past. • Describe the processes that formed Pennsylvania geologic structures and resources including mountains, glacial formations, water gaps and ridges. • Explain how the rock cycle affected rock formations in the state of Pennsylvania. • Distinguish between examples of rapid surface changes (e.g., landslides, earthquakes) and slow surface changes (e.g., weathering). • Identify living plants and animals 				
--	---	--	--	--	--

General Topic	Anchor Descriptor	Eligible Content,	Resources & Activities	Assessments	Suggested
---------------	-------------------	-------------------	------------------------	-------------	-----------

**Dunmore School District
Curriculum Guide**

	PA Academic and Core Standards	Essential Knowledge, Skills & Vocabulary			Time (In Days)
The universe is composed of a variety of different objects, which are organized into systems, each of which develops according to accepted physical processes and laws.	<p>Anchor Descriptor: S8.D.3.1 Explain the relationships between and among the objects of our solar system.</p> <p>PA Academic Standards: 3.1.7.A Explain the parts of a simple system and their relationship to each other.</p> <ul style="list-style-type: none"> • Describe a system as a group of related parts that work together to achieve a desired result (e.g., digestive system). • Explain the importance of order in a system. • Distinguish between system inputs, system processes and system outputs. • Distinguish between open loop and closed loop systems. • Apply systems analysis to solve problems. <p>3.1.7.B Describe the use of models as an application of scientific or technological concepts.</p> <ul style="list-style-type: none"> • Identify and describe different types of models 	<p>Eligible Content: S8.D.3.1.1 Describe patterns of earth’s movements (i.e., rotation and revolution) in relation to the moon and sun (i.e., phases, eclipses, and tides)</p> <p>S8.D.3.1.2 Describe the role of gravity as the force that governs the movement of the solar system and universe.</p> <p>S8.D.3.1.3 Compare and contrast characteristics of celestial bodies found in the solar system (e.g., moons, asteroids, comets, meteors, inner and outer planets).</p> <hr/> <p>Essential Knowledge/Skills: The phases of the Moon are caused by the orbit of the moon around the Earth.</p> <p>Identify and explain monthly patterns in the phases of the Moon.</p>	<p>Approved textbook Science, Chapter 17: Lessons 1-4</p> <p>Projector PowerPoint Quizlet Newsela Kids Discover magazine: Planets Super Science Magazine Chromebooks Google classroom</p> <p>Google slide presentation about a planet - made by groups for a grade</p> <p>Moon box to see the phases of the moon</p>	<p>Teacher prepared tests, quizzes, etc.</p>	<p>24 days</p>

**Dunmore School District
Curriculum Guide**

	<p>and their functions.</p> <ul style="list-style-type: none"> • Apply models to predict specific results and observations (e.g., population growth, effects of infectious organisms). • Explain systems by outlining a system’s relevant parts and its purpose and/or designing a model that illustrates its function. <p>3.1.7.C Explain scale as a way of relating concepts and ideas to one another by some measure.</p> <ul style="list-style-type: none"> • Apply various applications of size and dimensions of scale to scientific, mathematical, and technological applications. • Describe scale as a form of ratio and apply to a life situation. <p>3.1.7.D Identify change as a variable in describing natural and physical systems.</p> <ul style="list-style-type: none"> • Describe fundamental science and technology concepts that could solve practical problems. • Explain how ratio is used to describe change. 	<p>Observable patterns and changes in tides are caused by the Earth-Moon-Sun system.</p> <p>Earth’s spin axis is fixed in direction and tilted relative to its orbit around the sun. The seasons are a result of the Earth’s tilt on its axis and are caused by the differential intensity of sunlight on different areas of Earth throughout the year.</p> <p>Use models of Earth's orientation and motion to explain how changes in intensity and duration of daily sunlight lead to seasons.</p> <p>Identify and explain the position and orientation of the Earth as it orbits the Sun.</p> <p>Vocabulary: Axis Earth Orbit Position Revolution Rotation Season Tilt</p>			
--	--	---	--	--	--

Dunmore School District
Curriculum Guide

	<ul style="list-style-type: none">• Describe the effect of making a change in one part of a system on the system as a whole. <p>3.2.7.A Explain and apply scientific and technological knowledge.</p> <ul style="list-style-type: none">• Distinguish between a scientific theory and a belief.• Answer “What if” questions based on observation, inference or prior knowledge or experience.• Explain how skepticism about an accepted scientific explanation led to a new understanding.• Explain how new information may change existing theories and practice. <p>3.2.7.B Apply process knowledge to make and interpret observations.</p> <ul style="list-style-type: none">• Measure materials using a variety of scales.• Describe relationships by making inferences and predictions.• Communicate, use space / time relationships, define				
--	--	--	--	--	--

Dunmore School District
Curriculum Guide

	<p>operationally, raise questions, formulate hypotheses, test and experiment,</p> <ul style="list-style-type: none">• Design controlled experiments, recognize variables, and manipulate variables.• Interpret data, formulate models, design models, and produce solutions. <p>3.2.7.C Identify and use the elements of scientific inquiry to solve problems.</p> <ul style="list-style-type: none">• Generate questions about objects, organisms and/or events that can be answered through scientific investigations.• Evaluate the appropriateness of questions.• Design an investigation with limited variables to investigate a question.• Conduct a two-part experiment.• Judge the significance of experimental information in answering the question.• Communicate appropriate conclusions from the experiment.				
--	---	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<p>3.2.7.D Know and use the technological design process to solve problems.</p> <ul style="list-style-type: none">• Define different types of problems.• Define all aspects of the problem, necessary information and questions that must be answered.• Propose the best solution.• Design and propose alternative methods to achieve solutions.• Apply a solution.• Explain the results, present improvements, identify and infer the impacts of the solution. <p>3.4.4.D Describe the composition and structure of the universe and the earth's place in it.</p> <ul style="list-style-type: none">• Recognize earth's place in the solar system.• Explain and illustrate the causes of seasonal changes.• Identify planets in our solar system and their general characteristics.• Describe the solar system motions and use them to explain time (e.g., days, seasons), major lunar phases and eclipses.				
--	--	--	--	--	--

Dunmore School District
Curriculum Guide

	<p>3.4.7.D Describe essential ideas about the composition and structure of the universe and the earth's place in it.</p> <ul style="list-style-type: none">• Compare various planets' characteristics.• Describe basic star types and identify the sun as a star type.• Describe and differentiate comets, asteroids and meteors.• Identify gravity as the force that keeps planets in orbit around the sun and governs the rest of the movement of the solar system and the universe.• Illustrate how the positions of stars and constellations change in relation to the Earth during an evening and from month to month.• Identify equipment and instruments that explore the universe.• Identify the accomplishments and contributions provided by selected past and present scientists in the field of astronomy.• Identify and articulate				
--	---	--	--	--	--

Dunmore School District
Curriculum Guide

	space program efforts to investigate possibilities of living in space and on other planets.				
--	---	--	--	--	--

**Dunmore School District
Curriculum Guide**

General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
Matter can be understood in terms of the types of atoms present and the interactions both between and within atoms.	<p>Anchor Descriptor: S11.C.1.1.1 Explain that matter is made of particles called atoms and that atoms are composed of even smaller particles (e.g., protons, neutrons, electrons).</p> <p>PA Academic Standards: 3.1.10.B Describe concepts of models as a way to predict and understand science and technology.</p> <ul style="list-style-type: none"> • Distinguish between different types of models and modeling techniques and apply their appropriate use in specific applications (e.g., kinetic gas theory, DNA). • Examine the advantages of using models to demonstrate processes and outcomes (e.g., blue print analysis, structural stability). • Apply mathematical models to science and technology. <p>3.1.10.C Apply patterns as repeated processes or recurring elements in science and</p>	<p>Eligible Content: S11.C.1.1 Explain the relationship between the structure and properties of matter.</p> <hr/> <p>Essential Knowledge/Skills: Each atom has a charged substructure consisting of a nucleus, which is made of protons and neutrons, surrounded by electrons. The periodic table orders elements in increasing number of protons and places those with similar chemical properties in columns.</p> <p>Vocabulary: Electron Proton Neutron Elements Energy Nucleus</p>	<p>Approved textbook Science, Chapter 11: Lessons 1-4</p> <p>Projector PowerPoint ABCD Cards Quizlet Newsela Super Science Magazine Chromebooks Google classroom</p> <p>Balance Gram cubes and blocks to test for density Tin foil boats</p>	Teacher prepared tests, quizzes, etc.	25 days

Dunmore School District
Curriculum Guide

	<p>technology.</p> <ul style="list-style-type: none">• Examine and describe recurring patterns that form the basis of biological classification, chemical periodicity, geological order and astronomical order.• Examine and describe stationary physical patterns.• Examine and describe physical patterns in motion. <p>3.4.10.A Explain concepts about the structure and properties of matter.</p> <ul style="list-style-type: none">• Know that atoms are composed of even smaller sub-atomic structures whose properties are measurable.• Explain the repeating pattern of chemical properties by using the repeating patterns of atomic structure within the periodic table.• Predict the behavior of gases through the use of Boyle's, Charles' or the ideal gas law, in everyday situations.• Describe phases of matter according to the Kinetic Molecular Theory.• Explain the formation of compounds and their resulting properties using				
--	--	--	--	--	--

Dunmore School District
Curriculum Guide

	<p>bonding theories (ionic and covalent).</p> <ul style="list-style-type: none">• Recognize formulas for simple inorganic compounds.• Describe various types of chemical reactions by applying the laws of conservation of mass and energy.• Apply knowledge of mixtures to appropriate separation techniques.• Understand that carbon can form several types of compounds.				
--	--	--	--	--	--

**Dunmore School District
Curriculum Guide**

General Topic	Anchor Descriptor	Eligible Content, Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time (In Days)
	PA Academic and Core Standards				
Interactions between any two objects can cause changes in one or both of them.	<p>Anchor Descriptor: S8.C.3.1 Describe the effect of multiple forces on the movement, speed, or direction of an object.</p> <p>PA Academic Standards: 3.1.7.B Identify patterns as repeated processes or recurring elements in science and technology.</p> <ul style="list-style-type: none"> • Identify different forms of patterns and use them to group and classify specific objects. • Identify repeating structure patterns. • Identify and describe patterns that occur in physical systems (e.g., construction, manufacturing, transportation), informational systems and biochemical-related systems. <p>3.1.10.B Describe concepts of models as a way to predict and understand science and technology.</p> <ul style="list-style-type: none"> • Distinguish between 	<p>Eligible Content: S8.C.3.1.1 Describe forces acting on objects (e.g., friction, gravity, balanced versus unbalanced).</p> <hr/> <p>Essential Knowledge/Skills:</p> <p>Gravitational forces are always attractive. There is a gravitational force between all objects. This force is dependent upon mass and distance between the objects.</p> <p>Develop a simple model using given data that represents the relationship of gravitational interactions (force, mass, distance) and the motion of objects in space.</p> <p>The motion of an object is determined by the sum of the forces acting on it; if the total force on the object is not zero, its motion will change. Communicate qualitative observations and information graphically and mathematically</p>	<p>Approved textbook Science, Chapter 13: Lessons 1-4</p> <p>Projector PowerPoint ABCD Cards Quizlet Newsela Super Science Magazine Chromebooks Google classroom</p> <p>Newton’s Law activities Free experimentation with simple machines</p>	Teacher prepared tests, quizzes, etc.	25 days

**Dunmore School District
Curriculum Guide**

	<p>different types of models and modeling techniques and apply their appropriate use in specific applications (e.g., kinetic gas theory, DNA).</p> <ul style="list-style-type: none"> Examine the advantages of using models to demonstrate processes and outcomes (e.g., blue print analysis, structural stability). Apply mathematical models to science and technology. <p>3.4.4.C Recognize basic concepts about the structure and properties of matter.</p> <ul style="list-style-type: none"> Describe properties of matter (e.g., hardness, reactions to simple chemical tests). Know that combining two or more substances can make new materials with different properties. Know different material characteristics (e.g., texture, state of matter, solubility). <p>3.4.7.C Identify and explain the principles of force and motion.</p> <ul style="list-style-type: none"> Describe the motion of an 	<p>to represent how an object's relative position, velocity, and direction of motion are affected by forces acting on the object.</p> <p>Vocabulary: Gravitational forces Mass Weight Acceleration Balanced Displacement Distance Net Force Newton's 1st Law Newton's 2nd Law Position Reference frame Speed Unbalanced Velocity Acceleration Force Force pairs Mass Newton's 3rd Law Simple machines Work</p>			
--	---	---	--	--	--

Dunmore School District
Curriculum Guide

	<p>object based on its position, direction and speed.</p> <ul style="list-style-type: none">• Classify fluid power systems according to fluid used or mode of power transmission (e.g., air, oil).• Explain various motions using models.• Explain how convex and concave mirrors and lens change light images.• Explain how sound and light travel in waves of differing speeds, sizes and frequencies. <p>3.4.7.D Describe essential ideas about the composition and structure of the universe and the earth's place in it.</p> <ul style="list-style-type: none">• Compare various planets' characteristics.• Describe basic star types and identify the sun as a star type.• Describe and differentiate comets, asteroids and meteors.• Identify gravity as the force that keeps planets in orbit around the sun and governs the rest of the movement of the solar system and the universe.				
--	--	--	--	--	--

**Dunmore School District
Curriculum Guide**

	<ul style="list-style-type: none">• Illustrate how the positions of stars and constellations change in relation to the Earth during an evening and from month to month.• Identify equipment and instruments that explore the universe.• Identify the accomplishments and contributions provided by selected past and present scientists in the field of astronomy.• Identify and articulate space program efforts to investigate possibilities of living in space and on other planets. <p>3.4.12.C Apply the principles of motion and force.</p> <ul style="list-style-type: none">• Evaluate wave properties of frequency, wavelength and speed as applied to sound and light through different media.• Propose and produce modifications to specific mechanical power systems that will improve their efficiency.• Analyze the principles of translational motion, velocity				
--	--	--	--	--	--

Dunmore School District
Curriculum Guide

	<p>and acceleration as they relate to free fall and projectile motion.</p> <ul style="list-style-type: none">• Analyze the principles of rotational motion to solve problems relating to angular momentum, and torque.• Interpret a model that illustrates circular motion and acceleration.• Describe inertia, motion, equilibrium, and action/reaction concepts through words, models and mathematical symbols. <p>3.4.10.C Distinguish among the principles of force and motion.</p> <ul style="list-style-type: none">• Identify the relationship of electricity and magnetism as two aspects of a single electromagnetic force.• Identify elements of simple machines in compound machines.• Explain fluid power systems through the design and construction of appropriate models.• Describe sound effects (e.g., Doppler effect, amplitude, frequency, reflection, refraction, absorption, sonar, seismic).				
--	--	--	--	--	--

Dunmore School District
Curriculum Guide

	<ul style="list-style-type: none">• Describe light effects (e.g., Doppler effect, dispersion, absorption, emission spectra, polarization, interference).• Describe and measure the motion of sound, light and other objects.• Know Newton's laws of motion (including inertia, action and reaction) and gravity and apply them to solve problems related to forces and mass.• Determine the efficiency of mechanical systems by applying mathematical formulas.				
--	--	--	--	--	--

**Dunmore School District
Curriculum Guide**

Appendix: A

IEP Enhancements

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p>The Earth's processes affect and are affected by human activities.</p> <p>Humans depend on Earth's land, ocean, atmosphere, and living things for many different resources.</p>	<ul style="list-style-type: none"> • Preferential Seating • Use of Computer (When Available) • Interactive Online Videos • Visual Aids • Anchor Charts • Breaking tasks down into more manageable increments • Breaking down directions with one directive given at a time • Frequent breaks to maintain focus • Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined • Extra time to complete assignments • Additional textbook sent home • Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material • Sample Problems provided • Directions read aloud • Colored overlay for reading • Guided Reading Strip • Larger Font • Access to computer to type written responses. • Small group reteach • One-on-One Instruction • Larger lined paper for writing assignments • Graphic Organizer • Copy of notes provided • Audio recordings of text • Mark texts with highlighter • Extended Wait time after asking a question 		<p>Assessments:</p> <ul style="list-style-type: none"> • Extended time to complete • Elimination of 1-2 Answer Choices • Questions & Answer Choices read aloud • Use of highlighter to highlight important details • Frequent breaks to maintain focus • Modified Assessments • Provide Study Guides • Change testing location • Chunking tests into more manageable sections • Oral responses for open ended questions • Oral responses for essay questions <p>Suggested Time: 26 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p>The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.</p> <p>Water continually cycles among geosphere, hydrosphere, biosphere, and atmosphere via transpiration, evaporation, condensation, and precipitation.</p>	<ul style="list-style-type: none"> • Preferential Seating • Use of Computer (When Available) • Interactive Online Videos • Visual Aids • Anchor Charts • Breaking tasks down into more manageable increments • Breaking down directions with one directive given at a time • Frequent breaks to maintain focus • Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined • Extra time to complete assignments • Additional textbook sent home • Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material • Sample Problems provided • Directions read aloud • Colored overlay for reading • Guided Reading Strip • Larger Font • Access to computer to type written responses. • Small group reteach • One-on-One Instruction • Larger lined paper for writing assignments • Graphic Organizer • Copy of notes provided • Audio recordings of text • Mark texts with highlighter • Extended Wait time after asking a question 		<p>Assessments:</p> <ul style="list-style-type: none"> • Extended time to complete • Elimination of 1-2 Answer Choices • Questions & Answer Choices read aloud • Use of highlighter to highlight important details • Frequent breaks to maintain focus • Modified Assessments • Provide Study Guides • Change testing location • Chunking tests into more manageable sections • Oral responses for open ended questions • Oral responses for essay questions <p>Suggested Time: 26 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p>The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.</p> <p>Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude and local and regional geography resulting in complex patterns that are difficult to predict.</p>	<ul style="list-style-type: none"> • Preferential Seating • Use of Computer (When Available) • Interactive Online Videos • Visual Aids • Anchor Charts • Breaking tasks down into more manageable increments • Breaking down directions with one directive given at a time • Frequent breaks to maintain focus • Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined • Extra time to complete assignments • Additional textbook sent home • Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material • Sample Problems provided • Directions read aloud • Colored overlay for reading • Guided Reading Strip • Larger Font • Access to computer to type written responses. • Small group reteach • One-on-One Instruction • Larger lined paper for writing assignments • Graphic Organizer • Copy of notes provided • Audio recordings of text • Mark texts with highlighter • Extended Wait time after asking a question 		<p>Assessments:</p> <ul style="list-style-type: none"> • Extended time to complete • Elimination of 1-2 Answer Choices • Questions & Answer Choices read aloud • Use of highlighter to highlight important details • Frequent breaks to maintain focus • Modified Assessments • Provide Study Guides • Change testing location • Chunking tests into more manageable sections • Oral responses for open ended questions • Oral responses for essay questions <p>Suggested Time: 28 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p>The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales.</p> <p>All Earth processes are the result of energy flowing and matter cycling within and among the planet's systems. The energy is derived from the sun and the earth's interior. These flows and cycles produce chemical and physical changes in Earth's materials and living organisms.</p>	<ul style="list-style-type: none"> • Preferential Seating • Use of Computer (When Available) • Interactive Online Videos • Visual Aids • Anchor Charts • Breaking tasks down into more manageable increments • Breaking down directions with one directive given at a time • Frequent breaks to maintain focus • Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined • Extra time to complete assignments • Additional textbook sent home • Multi-Modality instruction including modeling, • explicit instruction, repetition, rephrasing, visual cues, and chunking of material • Sample Problems provided • Directions read aloud • Colored overlay for reading • Guided Reading Strip • Larger Font • Access to computer to type written responses. • Small group reteach • One-on-One Instruction • Larger lined paper for writing assignments • Graphic Organizer • Copy of notes provided • Audio recordings of text • Mark texts with highlighter • Extended Wait time after asking a question 		<p>Assessments:</p> <ul style="list-style-type: none"> • Extended time to complete • Elimination of 1-2 Answer Choices • Questions & Answer Choices read aloud • Use of highlighter to highlight important details • Frequent breaks to maintain focus • Modified Assessments • Provide Study Guides • Change testing location • Chunking tests into more manageable sections • Oral responses for open ended questions • Oral responses for essay questions <p>Suggested Time: 26 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p>The universe is composed of a variety of different objects, which are organized into systems, each of which are organized into systems, each of which develops according to accepted physical processes and laws.</p> <p>The phases of the Moon are caused by the orbit of the moon around the Earth.</p>	<ul style="list-style-type: none"> • Preferential Seating • Use of Computer (When Available) • Interactive Online Videos • Visual Aids • Anchor Charts • Breaking tasks down into more manageable increments • Breaking down directions with one directive given at a time • Frequent breaks to maintain focus • Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined • Extra time to complete assignments • Additional textbook sent home • Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material • Sample Problems provided • Directions read aloud • Colored overlay for reading • Guided Reading Strip • Larger Font • Access to computer to type written responses. • Small group reteach • One-on-One Instruction • Larger lined paper for writing assignments • Graphic Organizer • Copy of notes provided • Audio recordings of text • Mark texts with highlighter • Extended Wait time after asking a question 		<p>Assessments:</p> <ul style="list-style-type: none"> • Extended time to complete • Elimination of 1-2 Answer Choices • Questions & Answer Choices read aloud • Use of highlighter to highlight important details • Frequent breaks to maintain focus • Modified Assessments • Provide Study Guides • Change testing location • Chunking tests into more manageable sections • Oral responses for open ended questions • Oral responses for essay questions <p>Suggested Time: 24 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p>Matter can be understood in terms of types of atoms present and the interactions both between and within atoms.</p> <p>Each atom has a charged substructure consisting of a nucleus, which is made of protons and neutrons, surrounded by electrons. The periodic table orders elements in increasing number of protons and places those with similar chemical properties in columns.</p>	<ul style="list-style-type: none"> • Preferential Seating • Use of Computer (When Available) • Interactive Online Videos • Visual Aids • Anchor Charts • Breaking tasks down into more manageable increments • Breaking down directions with one directive given at a time • Frequent breaks to maintain focus • Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined • Extra time to complete assignments • Additional textbook sent home • Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material • Sample Problems provided • Directions read aloud • Colored overlay for reading • Guided Reading Strip • Larger Font • Access to computer to type written responses. • Small group reteach • One-on-One Instruction • Larger lined paper for writing assignments • Graphic Organizer • Copy of notes provided • Audio recordings of text • Mark texts with highlighter • Extended Wait time after asking a question 		<p>Assessments:</p> <ul style="list-style-type: none"> • Extended time to complete • Elimination of 1-2 Answer Choices • Questions & Answer Choices read aloud • Use of highlighter to highlight important details • Frequent breaks to maintain focus • Modified Assessments • Provide Study Guides • Change testing location • Chunking tests into more manageable sections • Oral responses for open ended questions • Oral responses for essay questions <p>Suggested Time: 25 days as specified in the curriculum with additional time as needed per individual student</p>

**Dunmore School District
Curriculum Guide**

General Topic:	Specially Designed Instruction:	Additional Vocabulary:	Assessments/Suggested Time:
<p>Interactions between any two objects can cause changes in one or both of them.</p> <p>Gravitational forces are always attractive. There is a gravitational force between all objects. This force is dependent upon mass and distance between the objects.</p>	<ul style="list-style-type: none"> • Preferential Seating • Use of Computer (When Available) • Interactive Online Videos • Visual Aids • Anchor Charts • Breaking tasks down into more manageable increments • Breaking down directions with one directive given at a time • Frequent breaks to maintain focus • Modified Assignments - examples (not limited to) less questions on page, reduction of questions, reduced number of answers, larger font on typed worksheets, vocabulary words defined • Extra time to complete assignments • Additional textbook sent home • Multi-Modality instruction including modeling, explicit instruction, repetition, rephrasing, visual cues, and chunking of material • Sample Problems provided • Directions read aloud • Colored overlay for reading • Guided Reading Strip • Larger Font • Access to computer to type written responses. • Small group reteach • One-on-One Instruction • Larger lined paper for writing assignments • Graphic Organizer • Copy of notes provided • Audio recordings of text • Mark texts with highlighter • Extended Wait time after asking a question 		<p>Assessments:</p> <ul style="list-style-type: none"> • Extended time to complete • Elimination of 1-2 Answer Choices • Questions & Answer Choices read aloud • Use of highlighter to highlight important details • Frequent breaks to maintain focus • Modified Assessments • Provide Study Guides • Change testing location • Chunking tests into more manageable sections • Oral responses for open ended questions • Oral responses for essay questions <p>Suggested Time: 25 days as specified in the curriculum with additional time as needed per individual student</p>