

# Wallenpaupack Area School District Planned Course Curriculum Guide

## Science

### 8<sup>th</sup> Grade Physical Science

**Course Description:** The major goal of the eighth grade physical science program is to provide basic knowledge of chemistry and physics as it relates to everyday experiences. Students will learn to discover and interpret scientific knowledge by completing projects, reports, demonstrations and lab activities. An additional goal of the course is to apply basic math principles to science concepts. The eighth grade physical science curriculum encompasses three major topics focusing on the chemical and physical nature of matter. These topics are: (1) scientific method, (2) introduction to matter, (3) motions and forces, (4) work, machines, and energy, and (5) atoms & the interaction of matter.

**Revision Date:**  
**September 2015**

**This PCCG is an ACTIVE document capable of technological modification as required.**

Wallenpaupack Area School District Curriculum	
<b>COURSE: Science</b>	<b>GRADE/S: Grade 8</b>
<b>UNIT 1: Scientific Method</b>	<b>TIMEFRAME: 3 weeks</b>

**PA COMMON CORE/NATIONAL STANDARDS:**

CCSS.ELA-Literacy.RST.6-8.1

Cite specific textual evidence to support analysis of science and technical texts.

CCSS.ELA-Literacy.RST.6-8.2

Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

CCSS.ELA-Literacy.RST.6-8.3

Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

CCSS.ELA-Literacy.RST.6-8.4

Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6-8 texts and topics*.

CCSS.ELA-Literacy.RST.6-8.6

Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.

CCSS.ELA-Literacy.RST.6-8.7

Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

CCSS.ELA-Literacy.RST.6-8.8

Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.

CCSS.ELA-Literacy.RST.6-8.9

Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

**PA INQUIRY BASED STANDARDS:**

- Understand how theories are developed.
- Identify questions that can be answered through scientific investigations and evaluate the appropriateness of questions.
  - Design and conduct a scientific investigation and understand that current scientific knowledge guides scientific investigations.
  - Describe relationships using inference and

prediction.

- Use appropriate tools and technologies to gather, analyze, and interpret data and understand that it enhances accuracy and allows scientists to analyze and quantify results of investigations.
- Develop descriptions, explanations, and models using evidence and understand that these emphasize evidence, have logically consistent arguments, and are based on scientific principles, models, and theories.
- Analyze alternative explanations and understanding that science advances through legitimate skepticism.
- Use mathematics in all aspects of scientific inquiry.
- Understand that scientific investigations may result in new ideas for study, new methods, or procedures for an investigation or new technologies to improve data collection.
- Compare and contrast scientific theories.
- Know that both direct and indirect observations are used by scientists to study the natural world and universe.
- Identify questions and concepts that guide scientific investigations.
- Formulate and revise explanations and models using logic and evidence.
- Recognize and analyze alternative explanations and models.
- Explain the importance of accuracy and precision in making valid measurements.

\*\*\*The standards listed above will be integrated in the remaining units covered throughout the school year.

**UNIT OBJECTIVES (SWBATS):**

- Students will be able to define and follow the general scientific method.
- Students will be able to formulate questions in order to evaluate a hypothesis.
- Students will be able to design and conduct experiments to answer their questions.
- Students will be able to identify independent and dependent variables as well as control and experimental groups.
- Students will be able to record, graph, and evaluate the experimental data to reach conclusions.
- Students will be able to correlate experimental results with the appropriate theory.

**INSTRUCTIONAL STRATEGIES/ACTIVITIES:**

Oral Questioning	Class Discussions	Peer Discussion
Lab Reports (write-up)	Lab Experiments(testing)	Worksheets
Internet Resources	Homework	

**ANCHOR VOCABULARY:**

Analyze	Predict	Observe
Conclude	Differentiate	Relate

**ASSESSMENTS (Diagnostic/Benchmark/Formative/Summative):**

- Homework
- Quizzes
- Lab Reports
- Tests
- CDTS (Diagnostic)
- Study Island

**EVIDENCE OF MASTERY/Cut Score (Keystone Exam):**

- Formative Assessments
- Teacher/Department generated Exams/Quizzes
- Lab Reports
- Mastery is demonstrated by the passing of the course.

**DIFFERENTIATED INSTRUCTION (Remediation/Extension) (Process, Product or Content)**

**Remediation:**

- **Appropriate accommodations based on the student's IEP/504 Plan**
- **Study guides by unit**
- **Explicit modeling followed by systematic guided practice**

**Extension:**

- **Assign narrative selections that are appropriate level of student comprehension**
- **Extending skills to the next level of complexity**
- **Individualized enriched assignments and activities**

**RESOURCES (Websites, Blogs, Videos, Whiteboard Resources, etc.):**

- **Discovery Education Techbook**
- **Holt Science and Technology: Physical Science, copyright 2001**
- **Internet Resources**
- **Teacher Created Resources**

**RESOURCE SPECIFIC VOCABULARY:**

<b>Problem</b>	<b>Hypothesis</b>	<b>Materials</b>	<b>Procedure</b>
<b>Data</b>	<b>Analysis</b>	<b>Conclusion</b>	<b>Variable</b>
<b>Independent Variable</b>		<b>Dependent Variable</b>	
<b>Experimental Group</b>		<b>Control Group</b>	
<b>Scientific Method</b>			

<b>Wallenpaupack Area School District Curriculum</b>	
<b>COURSE: Science</b>	<b>GRADE/S: Grade 8</b>
<b>UNIT 2: Introduction to Matter</b>	<b>TIMEFRAME: 9 Weeks</b>

**PA COMMON CORE/NATIONAL STANDARDS:**

- 3.2.6.A1.1 - Distinguish the differences in properties of solids, liquids, and gases.
- 3.2.6.A1.2 - Differentiate between volume and mass. Investigate that equal volumes of different substances usually have different masses.
- 3.2.6.B6.2 - Investigate that materials may be composed of parts too small to be seen without magnification
- 3.2.6.A3.1 - Explain and give examples of how mass is conserved in a closed system
- 3.2.6.A4.1 - Differentiate between physical changes and chemical changes.
- 3.2.6.A5.1 - Identify characteristic properties of matter that can be used to separate one substance from the other.
- 3.2.6.B3.2 - Explain the effect of heat on particle motion by describing what happens to particles during a phase change.
- 3.2.6.B6.1 - Demonstrate that heat moves in predictable ways from warmer objects to cooler ones.
- 3.2.6.A1.2 - Differentiate between volume and mass. Investigate that equal volumes of different substances usually have different masses.
- 3.3.6.B1.2 - Recognize the role of gravity as a force that pulls all things on or near the earth toward the center of the earth and in the formation of the solar system and the motions of objects in the solar system.
- 3.2.7.A1.3 - Explain how materials are characterized by having a specific amount of mass in each unit of volume (density).
- 3.2.7.A1.1 - Differentiate between elements, compounds, and mixtures.
- 3.2.7.A2.1 - Identify atoms as the basic building blocks of matter and that elements are composed of one type of atom.
- 3.2.7.A1.3 - Explain how materials are characterized by having a specific amount of mass in each unit of volume (density).
- 3.2.8.A1.1 - Differentiate between mass and weight.
- 3.2.8.B1.1 - Explain how inertia is a measure of an object's mass.
- 3.2.8.B1.2 - Explain how momentum is related to the forces acting on an object.

## UNIT OBJECTIVES (SWBATS):

### The students will be able to:

- Know that all matter takes up space.
- Know that volume is the amount of space something takes up.
- Know that solids maintain their form and volume without a container.
- Know that liquids take the shape of their container, and have a fixed volume.
- Know that gases do not have a fixed shape or volume.
- Know that cubic meters and cubic centimeters are used to measure the volume of solids and gases, while liters and milliliters are used to measure the volume of liquids.
- Measure the volume of solids.
- Measure the volume of liquids.
- Know that a gas's volume is dependent on temperature, pressure, and its container, making it complicated to measure.
- Know that scientists have developed instruments, such as a gas syringe, based on different scientific laws they discovered when experimenting with different gases.
- Recognize that atoms and molecules are too small to be seen.
- Identify examples of elements, compounds, molecules, and diatomic molecules.
- Describe how the properties of a compound are different from the properties of the elements that form the compound.
- Draw atomic diagrams of elements, compounds, and diatomic molecules.
- Build models of elements, compounds, and diatomic molecules
- Draw or model the movement of atoms in a solid, liquid and gas.
- Explain what happens to the motion and energy of molecules as a substance is heated or cooled.
- Define "change of state," condensation point, boiling point, freezing point and melting point.
- Explain that energy is lost or gained when a substance changes state.
- Describe the chemical structure of water molecules
- Describe the many unique properties of water, including those that make water necessary for life
- Explain how the addition or subtraction of thermal energy affects water
- Compare and contrast the energy and relative positions of molecules inside the three states of water: solid, liquid, and gas
- Create and analyze a temperature-time graph of water phase changes
- Explore the density and buoyancy of objects in water
- Explain that matter is anything that has mass and takes up space.
- Identify the characteristic physical properties of matter as color, odor, density, solubility, melting point, boiling point, and electrical conductivity.
- Explain that the characteristic physical and chemical properties of matter do not depend on the amount of matter or how it is contained.
- Identify the characteristic chemical properties of matter as acidity, basicity, combustibility, and reactivity.
- Describe several physical properties of materials such as rigidity, tensile strength, formability (or malleability), conductivity, and density.

- Explain why different materials have different physical properties.
- State that denser objects or liquids sink when placed in less dense liquids.
- State that less dense objects or liquids float when placed in more dense liquids.
- State that denser gases sink and less dense gases rise when they come together.
- State that density is measured as mass per unit volume, or density can be calculated by dividing a substance's mass by its volume using the equation:  $d=m/v$ .
- State that specific gravity is the density of a substance compared to the density of water. It is calculated by dividing the density of the substance by the density of water.
- Identify the characteristics of a compound.
- Build models of compounds.
- Recognize that compounds are named from the elements that compose them.
- Recognize that carbon is unique in that it can combine with other elements in many ways to form millions of compounds
- Define a mixture.
- Distinguish solutions, colloids, suspensions, and mixtures.
- Separate mixtures into their components using a variety of methods.

**INSTRUCTIONAL STRATEGIES/ACTIVITIES:**

Oral Questioning  
Lab Reports (write-up)  
Internet Resources

Class Discussions  
Lab Experiments(testing)  
Homework

Peer Discussion  
Worksheets

**ANCHOR VOCABULARY:**

Atoms  
Mass  
Gravity

Compounds  
Mixtures

Elements  
Molecules

**ASSESSMENTS (Diagnostic/Benchmark/Formative/Summative):**

- Homework
- Quizzes
- Lab Reports
- Tests
- CDTS (Diagnostic)
- Study Island



**EVIDENCE OF MASTERY/Cut Score (Keystone Exam):**

- Formative Assessments
- Teacher/Department generated Exams/Quizzes
- Lab Reports
- Mastery is demonstrated by the passing of the course.

**DIFFERENTIATED INSTRUCTION (Remediation/Extension) (Process, Product or Content)**

**Remediation:**

- Appropriate accommodations based on the student's IEP/504 Plan
- Study guides by unit
- Explicit modeling followed by systematic guided practice

**Extension:**

- Assign narrative selections that are appropriate level of student comprehension
- Extending skills to the next level of complexity
- Individualized enriched assignments and activities

**RESOURCES (Websites, Blogs, Videos, Whiteboard Resources, etc.):**

- Discovery Education Techbook
- Holt Science and Technology: Physical Science, copyright 2001
- Internet Resources
- Teacher Created Resources

**RESOURCE SPECIFIC VOCABULARY:**

Matter, volume, meniscus, mass, gravity, weight, newton(N), inertia, physical property, density, chemical property, physical change, chemical change, states of matter, solid, liquid, gas, pressure, Boyle's law, Charles' Law, plasma, change of state, melting, freezing, vaporization, boiling, evaporation, condensation, sublimation, pure substance, metals, nonmetals, metalloids, solution, solute, solvent, concentration, solubility, suspension, colloid.

Wallenpaupack Area School District Curriculum	
<b>COURSE: Science</b>	<b>GRADE/S: 8<sup>th</sup> Grade</b>
<b>UNIT 3: Motions and Forces</b>	<b>TIMEFRAME: 6 Weeks</b>

**PA COMMON CORE/NATIONAL STANDARDS:**

- 3.2.7.B1.1 - Describe how unbalanced forces acting on an object change its velocity.
- 3.2.7.B1.2 - Analyze how observations of displacement, velocity, and acceleration provide necessary and sufficient evidence for the existence of forces.
- 3.2.8.B1.2 - Explain how momentum is related to the forces acting on an object.
- 3.2.8.B1.2 - Explain how momentum is related to the forces acting on an object.
- 3.2.8.B6.1 - Explain how physics principles underlie everyday phenomena and important technologies.

**UNIT OBJECTIVES (SWBATS):**

Students should be able to:

- Explain that a moving object tends to keep moving in the same direction.
- Explain that a force is needed to change the direction of a moving object.
- Predict the direction an object will move based on the forces acting on that object.
- Investigate ways to apply forces to change the direction of a moving object.
- Identify speed as the distance an object travels in a given amount of time.
- Identify that velocity is described by both speed and direction.
- Identify acceleration as the change in velocity over time.
- Describe an unbalanced force.
- Explain what happens when an object is acted on by unbalanced force.
- Describe forces that can act on an object.
- Describe the motion of an object in terms of its change in position over time compared to a reference point.

- Explain why motion can only be described in comparison to a reference point
- Explain that motion is a result of forces acting on an object.
- Explain that changes in motion are due to unbalanced forces acting on an object.
- Describe Newton's First Law of Motion.
- Define inertia.
- Explain and apply Newton's first law.
- Explain and apply Newton's second law.
- Explain and apply Newton's third law.

**INSTRUCTIONAL STRATEGIES/ACTIVITIES:**

<b>Oral Questioning</b>	<b>Class Discussions</b>	<b>Peer Discussion</b>
<b>Lab Reports (write-up)</b>	<b>Lab Experiments(testing)</b>	<b>Worksheets</b>
<b>Internet Resources</b>	<b>Homework</b>	

**ANCHOR VOCABULARY:**

<b>Gravity</b>	<b>Inertia</b>	<b>Velocity</b>
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**ASSESSMENTS (Diagnostic/Benchmark/Formative/Summative):**

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- Tests
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- Study Island

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- Holt Science and Technology: Physical Science, copyright 2001
- Internet Resources
- Teacher Created Resources

**RESOURCE SPECIFIC VOCABULARY:**

Motion, speed, acceleration, force, newton, net force, friction, weight, mass, terminal velocity, free fall, projectile motion, inertia, momentum, Newton's Laws

<b>Wallenpaupack Area School District Curriculum</b>	
<b>COURSE: Science</b>	<b>GRADE/S: 8<sup>th</sup> Grade Science</b>
<b>UNIT 4: Work, Machines, &amp; Energy</b>	<b>TIMEFRAME: 7 Weeks</b>

**PA COMMON CORE/NATIONAL STANDARDS:**

- 3.3.6.A4.1 - Describe how water on earth cycles in different forms and in different locations, including underground and in the atmosphere.
- 3.2.6.B2.1 - Describe energy as a property of objects associated with heat, light, electricity, magnetism, mechanical motion, and sound.
- 3.2.6.B4.1 - Describe how electric current produces magnetic forces and how moving magnets produce electric current.
- 3.2.6.B2.2 - Differentiate between potential and kinetic energy.
- 3.2.7.B2.1 - Describe how energy can be changed from one form to another

(transformed) as it moves through a system or transferred from one system to another system.

3.2.7.B6.1 - Demonstrate that heat is often produced as energy is transformed through a system.

3.4.6.E3.1 - Investigate that power is the rate at which energy is converted from one form to another or transferred from one place to another.

3.2.8.B2.1 - Identify situations where kinetic energy is transformed into potential energy, and vice versa.

3.2.8.B1.2 - Explain how momentum is related to the forces acting on an object.

3.3.8.A1.2 - Compare and contrast the types of energy that drive Earth's systems.

3.3.8.A2.1 - Describe renewable and nonrenewable energy resources.

3.4.8.B3.1 - Explain how throughout history, new technologies have resulted from the demands, values, and interests of individuals, businesses, industries, and societies

3.4.8.B1.1 - Evaluate the societal implications of the management of waste produced by technology

3.3.8.A6.1 - Explain changes in earth systems in terms of energy transformation and transport

3.2.7.B4.1 - Explain how electrical current is produced by the flow of electrons.

3.2.7.B4.2 - Explain and demonstrate how electric current produces magnetic forces and how moving magnets produce electric current.

3.3.7.A5.2 - Explain the relationship between the energy provided by the sun and the temperature differences among water, land and atmosphere.

**UNIT OBJECTIVES (SWBATS):**

Students will be able to:

- Explain where geothermal energy comes from.
- Explain how geothermal energy can be transformed into electricity.
- Identify that geothermal and hydroelectric power are sources of clean, renewable energy and explain why.
- Identify the pros and cons of using dams to produce hydroelectric energy.
- Describe the phenomenon of electromagnetism.
- Explain how energy can transfer from one object or place to another
- Describe the Law of Conservation of Energy
- Give examples of how energy is conserved in a simple system
- Identify kinetic energy as the energy an object has due to its motion.
- Identify potential energy as the energy an object has due to its position or chemical composition.
- Understand how the law of conservation of energy applies to conversions between kinetic and potential energy.
- Identify different forms of kinetic energy, such as the energy of motion, radiant energy, and heat.
- Identify different forms of potential energy, such as gravitational potential energy and chemical energy.
- Calculate Work and Power.
- Examine how simple machines are used.
- Measure the mechanical advantages of a Class 1 lever.
- Define potential energy and provide examples of it;
- Describe the two main types of potential energy;
- Explain how potential energy differs from kinetic energy;
- Explain how kinetic energy can turn into potential energy and how potential energy can turn into kinetic energy;
- Use a ramp to investigate energy transfer;
- Record data in a table;
- Compare results from several trials.
- Identify three different types of fossil fuels (coal, oil, natural gas)
- Describe different ways that humans use fossil fuels
- Explain how fossil fuels are used to generate electricity in power plants
- Use simulated drilling to calculate the volume of oil “reservoirs” in clay models
- Identify non-fossil fuels as alternative sources of energy.
- Identify alternative sources of energy.
- Enumerate the advantages and disadvantages of alternative energy resources.
- Distinguish between renewable and nonrenewable energy resources.
- Enumerate the advantages and disadvantages of renewable and nonrenewable energy resources
- Analyze their own choices about consumption and waste
- Weigh the costs and benefits of using renewable resources
- Weigh the costs and benefits of using nonrenewable resources

- Explain how the energy in fossil fuels originally came from energy in sunlight.
- Describe the energy transformations that transform the energy in sunlight to the energy in wind, water, and biofuels.
- Explain what electricity is and how we use batteries and generators to produce it.
- Describe how solar energy can be captured and converted to electricity
- Describe how wind energy can be captured and converted to electricity
- Identify the pros and cons of solar and wind energy
- Explain why solar and wind energy are renewable resources
- Explain why solar and wind energy are clean energy source

**INSTRUCTIONAL STRATEGIES/ACTIVITIES:**

<b>Oral Questioning</b>	<b>Class Discussions</b>	<b>Peer Discussion</b>
<b>Lab Reports (write-up)</b>	<b>Lab Experiments(testing)</b>	<b>Worksheets</b>
<b>Internet Resources</b>	<b>Homework</b>	

**ANCHOR VOCABULARY:**

<b>Electromagnetic force</b>	<b>Magnets</b>	<b>Electricity</b>
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**ASSESSMENTS (Diagnostic/Benchmark/Formative/Summative):**

- Homework
- Quizzes
- Lab Reports
- Tests
- CDTS (Diagnostic)
- Study Island

**EVIDENCE OF MASTERY/Cut Score (Keystone Exam):**

- Formative Assessments
- Teacher/Department generated Exams/Quizzes
- Lab Reports
- Mastery is demonstrated by the passing of the course.

**DIFFERENTIATED INSTRUCTION (Remediation/Extension) (Process, Product or Content)**

**Remediation:**

- Appropriate accommodations based on the student's IEP/504 Plan
- Study guides by unit
- Explicit modeling followed by systematic guided practice

**Extension:**

- **Assign narrative selections that are appropriate level of student comprehension**
- **Extending skills to the next level of complexity**
- **Individualized enriched assignments and activities**

**RESOURCES (Websites, Blogs, Videos, Whiteboard Resources, etc.):**

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- **Internet Resources**
- **Teacher Created Resources**

**RESOURCE SPECIFIC VOCABULARY:**

**Work, joule, power, watt, machine, work input, work output, mechanical advantage, mechanical efficiency, lever, inclined plane, wedge, screw, wheel and axle, pulley, compound machine, energy, kinetic energy, potential energy, mechanical energy, energy conversion, friction, law of conservation of energy, energy resource, nonrenewable resources, fossil fuels, renewable resources**



<b>Wallenpaupack Area School District Curriculum</b>	
<b>COURSE: Science</b>	<b>GRADE/S: 8<sup>th</sup> Grade</b>
<b>UNIT : The Atom</b>	<b>TIMEFRAME: 11 Weeks</b>

**PA COMMON CORE/NATIONAL STANDARDS:**

- 3.4.7.D2.1 - Select and safely use appropriate tools, products and systems for specific tasks.
- 3.2.7.A1.1 - Differentiate between elements, compounds, and mixtures.
- 3.2.7.A2.1 - Identify atoms as the basic building blocks of matter and that elements are composed of one type of atom.
- 3.2.7.A2.1 - Identify atoms as the basic building blocks of matter and that elements are composed of one type of atom.
- 3.2.7.A1.2 - Identify groups of elements that have similar properties.
- 3.2.7.A3.1 - Explain how energy transfer can affect the chemical and physical properties of matter.
- 3.2.7.A4.1 - Describe how reactants change into products in simple chemical reactions.

**UNIT OBJECTIVES (SWBATS):**

Students should be able to:

- Explain that atoms are the smallest unit making up an element.
- Describe the differences between elements.
- Describe the difference between a neutral atom and an ion.
- Recognize that the smallest particle representing an element is an atom.
- Construct a simple model of an atom and identify the particles that make up the atom.
- Use the number of protons in an atom to identify the element it represents.
- Describe how electrons can move from one atom to another when atoms bond with other atoms.

- Describe how electrons can move between atoms to produce an electric current.
- Describe the various models of the atom and explain advantages of each.
- Identify turning points in the development of modern atomic theory.
- Identify and describe characteristics of subatomic particles.
- Explain how elements are organized in the periodic table.
- Describe the properties of elements in major regions of the periodic table.
- Explain how the periodic table can be used to help predict the properties of elements in the periodic table.
- Explain what happens when a chemical reaction occurs.
- List the indicators that a chemical reaction has occurred.
- Identify the reactants and products in a chemical reaction.
- Distinguish between endothermic and exothermic chemical reactions.
- Explain the Law of Conservation of Mass.
- Explain how chemical reactions are represented so that mass is conserved.
- Correctly balance given unbalanced chemical equations.
- Describe what happens to atoms in molecules involved in a chemical reaction.

**INSTRUCTIONAL STRATEGIES/ACTIVITIES:**

**Oral Questioning**

**Class Discussions**

**Peer Discussion**

**Lab Reports (write-up)**

**Lab Experiments(testing)**

**Worksheets**

**Internet Resources**

**Homework**

**ANCHOR VOCABULARY:**

**Atoms**

**Compounds**

**Elements**

**Endothermic**

**Exothermic**

**Hydrogen Bond**

**Periodic Table**

**Organic Molecules**

**ASSESSMENTS (Diagnostic/Benchmark/Formative/Summative):**

- **Homework**
- **Quizzes**
- **Lab Reports**
- **Tests**
- **CDTS (Diagnostic)**
- **Study Island**

**EVIDENCE OF MASTERY/Cut Score (Keystone Exam):**

- **Formative Assessments**
- **Teacher/Department generated Exams/Quizzes**
- **Lab Reports**
- **Mastery is demonstrated by the passing of the course.**

**DIFFERENTIATED INSTRUCTION (Remediation/Extension) (Process, Product or Content)**

**Remediation:**

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**Extension:**

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- **Internet Resources**
- **Teacher Created Resources**

**RESOURCE SPECIFIC VOCABULARY:**

**Theory, electrons, model, nucleus, electron cloud, protons, atomic mass unit (AMU), neutrons, atomic number, isotopes, mass number, atomic mass, periodic, periodic law, period, group, alkali metals, alkaline earth metals, halogens, noble gases, chemical bonding, chemical bond, valence electrons, ionic bond, ions, covalent bond, molecule, metallic bond.**



<b>Wallenpaupack Area School District Curriculum</b>	
<b>COURSE:</b>	<b>GRADE/S:</b>
<b>UNIT 1:</b>	<b>TIMEFRAME:</b>

<b>PA COMMON CORE/NATIONAL STANDARDS:</b>
<b>UNIT OBJECTIVES (SWBATS):</b>
<b>INSTRUCTIONAL STRATEGIES/ACTIVITIES:</b>
<b>ANCHOR VOCABULARY:</b>
<b>ASSESSMENTS (Diagnostic/Benchmark/Formative/Summative):</b> <ul style="list-style-type: none"> <li>• CDTS (Diagnostic)</li> <li>• Keystones (Summative)</li> </ul>
<b>EVIDENCE OF MASTERY/Cut Score (Keystone Exam):</b>
<b>DIFFERENTIATED INSTRUCTION (Remediation/Extension) (Process, Product or Content)</b>
<b>RESOURCES (Websites, Blogs, Videos, Whiteboard Resources, etc.):</b>
<b>RESOURCE SPECIFIC VOCABULARY:</b>