Wallenpaupack Area School District

Wallenpaupack Area Middle School
Course Title: 8th Grade Physical Science
Length of Course: Full Year, Every other day

District Policies:

Academic Integrity:
Academic integrity is essential to the success of an educational community. Students are responsible for learning and upholding professional standards of research, writing, assessment, and ethics in their areas of study. Written or other work which students submit must be the product of their own efforts and must be consistent with appropriate standards of professional ethics. Academic dishonesty, which includes cheating, plagiarism, multiple submissions and other forms of dishonest or unethical behavior, is prohibited.

Assessment:
The goal of grading is to report student progress and achievement to the parents to strengthen the home-school connection. The grade should accurately reflect the student's performance in mastering the PA Standards and the WASD curriculum.

Attendance:
Regular school attendance is vitally important to academic success. Not only does attendance reinforce and enrich the learning process; it also establishes patterns and attitudes that will carry forward into adult work habits. Regular, consistent attendance is a prerequisite to successful school life. Children should be absent only in cases of illness or emergency.

Special Education:
Our commitment to each student is to ensure a free appropriate public education which begins with the general education setting, with the use of Supplementary Aids and Services. Inclusive education describes the successful education of all students with the appropriate supports and services to participate in and benefit from the general classroom settings and other educational environments.

Course Description: The course includes units that utilize the scientific method to study the properties of matter, states of matter, forces and motion, Newton's Laws, elements/compounds & mixtures, energy & energy resources, atoms, chemical bonding, the periodic table, and work & machines.

Pennsylvania State Standards: All WAMS courses are aligned to the PA State Standards and Common Core Standards, where applicable.

Course Objectives:
Students will demonstrate the ability to:

- Identify and utilize the steps of Scientific Method.
- Analyze and calculate metric measurement.
- Describe the properties and states of matter.
- Measure the net force on an object.
- Calculate speed and velocity.
- Define gravity and describe the difference between mass and weight.
- State and apply Newton's laws of motion.
- Classify the differences and similarities of elements, compounds and mixtures.
- Describe how the Atomic theory has changed over time.
- Create models of atoms using protons, neutrons, and electrons.
- Compare and contrast the physical and chemical properties of elements on the periodic table.
- Describe chemical bonding (ionic, covalent, and metallic) and the properties of each.
- Measure and calculate work and power.
- Identify and explain the simple and compound machines.
- Measure and calculate Potential and Kinetic Energy.

- Explain the law of conservation of energy.
- Identify and evaluate several types of renewable and nonrenewable energy resources.

Student Responsibilities:

Attendance expectations: Attendance is essential to reaching your full potential in understanding science concepts.

Homework expectations: Assigned homework is expected to be completed to reinforce skills and concepts taught.

Make-Up Work: Number of days absent equals the number of days to make up missed work.

Late Work: Partial credit will be given for late work. It is the student's responsibility to show the work to the teacher for credit.

Assessment:

Grading Components for the Semester:

First Quarter - 22.25%

Second Quarter – 22.25%

Third Quarter – 22.25%

Fourth Quarter – 22.25%

Final Exam Grade – 11%

Grading Components for each Quarter:

Lab Reports – 50%

Tests/Quizzes – 45%

Homework – 5%

Content Pacing Guide:

Topic	Major Assignments	Estimated Time
World of physical science	Labs: scientific method (paper towel absorption): metric measurement (silent lab); quiz	3 weeks
Properties of matter	Labs: density lab, chemical change lab, measuring liquid volume lab, penny lab; quiz	3 weeks
States of matter	Labs: hot and cold lab, frozen balloon lab, can crusher lab, graphing lab; quiz	3 weeks
Work and machines	Labs: monster truck lab, a powerful workout lab, inclined to move lab; simple machines presentations; quiz	3 weeks
Energy and energy resources	Labs: finding energy lab; energy resource flyers; quiz	4 weeks
Introduction to atoms	Timelines; atom models; quiz	3 weeks

Elements, compounds and mixtures	Labs: mystery mixture lab, un-polluting water lab, sugar cube race lab; quiz	3 weeks
The periodic table	Labs; create a periodic table lab; quizzes	3 weeks
Chemical bonding	Labs: slime lab, balancing equation lab; quizzes	3 weeks
Matter in Motion	Labs; Matchbox/Speed lab,quiz	3 weeks
Forces in Motion	Calculating Newton's Laws; quizzes	3 weeks
Final exam - cumulative	Exam covering 9 chapters – review packet	1 week