

# **Pleasant Valley Community Junior High**

## **2017-18 Schedule of Courses**

### **Preface**

The subjects and programs outlined in this guide will make it possible for students to select a program of study determined by their interests/aptitudes. As students make their course selections, they should keep in mind the core requirements along with their own personal interests, aptitudes and abilities. It is recommended that students sit down with their parents to review the Schedule of Courses book. By reviewing these items, students will have a better idea of the courses they will take during junior high and how the courses will prepare them for high school.

Counselors and staff will assist students in selecting their courses on the basis of aptitude, achievement test scores, previous academic performance, recommendations, and work ethic.

**Course Description Booklet  
Table of Contents**

**Seventh Grade Courses**

<b>Preface</b>	Page 1
<b>Table of Contents</b>	Page 2, 3
<b>Public Notice</b>	Page 4
<b>Required Courses</b>	Page 5
<b>Electives</b>	Page 5
<b>Study Skills</b>	Page 5
<b>Language Arts</b>	
Language Arts 7	Page 5
Second Chance Reading	Page 6
<b>Social Studies</b>	Page 6
<b>Mathematics</b>	
Math 7	Page 7
Pre-Algebra 7	Page 7
<b>Science</b>	
Science 7	Page 8
<b>Orientation</b>	
Art	Page 9
Family and Consumer Sciences	Page 9
Industrial Technology	Page 10
World Languages	Page 10
<b>Wellness</b>	
Physical Education and Health	Page 10
<b>Electives</b>	
Concert Band	Page 11
Vocal Music	Page 11
Orchestra	Page 11
Study Hall	Page 12

## Eighth Grade Courses

<b>Required Courses</b>	Page 13
<b>Electives</b>	Page 13
<b>Study Skills</b>	Page 13
<b>Language Arts</b>	
Language Arts 8	Page 13
Second Chance Reading	Page 13
<b>Social Studies</b>	Page 14
<b>Mathematics</b>	
Pre-Algebra 8	Page 14
Algebra	Page 15
Honors Geometry	Page 15
<b>Science</b>	
Science 8	Page 15
Honors 8 <sup>th</sup> Science	Page 16
<b>Orientation</b>	
Art	Page 17
Computer Technology	Page 17
Family and consumer Science	Page 17
Industrial Technology	Page 17
<b>Wellness</b>	
Physical Education	Page 17
<b>Electives</b>	Page 18
Concert Band	Page 18
Orchestra	Page 18
Vocal Music	Page 19
Spanish I	Page 19
French 1	Page 19
Japanese I	Page 20
Life Skills	Page 20
Study Hall	Page 20

# **A Public Notice**

## **Non-Discrimination Policy**

The board will not to discriminate in its educational activities on the basis of race, creed, color, sex, sex orientation, gender identity, national origin, religion, race, disability, or age.

The board requires all persons, agencies, vendors, contractors and other persons and organizations doing business with or performing services for the school district to subscribe to all applicable federal and state laws, executive orders, rules and regulations pertaining to contract compliance and equal opportunity.

The board is committed to the policy that no otherwise qualified person will be excluded from educational activities on the basis of race, creed, color, sex, sexual orientation, gender identity, national origin, religion, disability, or age. Further, the board affirms the right of all students and staff to be treated with respect and to be protected from intimidation, discrimination, physical harm and harassment.

This requirement not to discriminate extends to employment by the district. Inquiries concerning the application of federal and state nondiscrimination statutes and the implementing regulations to the district may be referred to the Pleasant Valley Community School District Administration Center or to the Director of the Office for Civil Rights, Department of HEW, Washington, D.C.

# SEVENTH GRADE COURSES

As you begin to map out an educational plan with your child, please use this course description booklet as a resource for the courses we offer 7<sup>th</sup> grade students at Pleasant Valley Junior High. To assist in the transition from the elementary to the secondary level, 7th grade teachers and staff will work together to enhance the educational environment.

If you have any questions, please visit or call the guidance office at 332-0202.

## REQUIRED CLASSES

Language Arts (2 periods daily)  
Social Studies  
Orientation

Science  
Math  
Wellness (Physical Education and Health)

## ELECTIVES

Band/Study Hall  
Band/Chorus  
Study Hall (Everyday)

Chorus/Study Hall  
Orchestra/Study Hall

## STUDY SKILLS

Although study skills are not taught as a separate class, the following study skills are emphasized throughout the curriculum:

- assignment notebook
- note taking
- textbook format
- time management
- test taking
- listening skills
- research

## LANGUAGE ARTS

Language Arts 7

Language Arts meet daily for two class periods. The following areas, grounded in the Common Core State Standards for English Language Arts & Literacy, are covered: Reading Literature, Reading Informational Text, Writing, Speaking/Listening, and Language Study.

The goal for all students is to progress toward a mastery of communication skills and reading aptitude.

Language Arts 7 integrates the study of oral and written communication, literature, vocabulary, and English. Students read a variety of materials, write in many forms, and speak in numerous formal and informal situations.

*Essential Course Questions:*

- What is literacy and how does it affect the quality of life for young adults?
- How does an understanding of word knowledge (e.g. spelling patterns, etymology, root words, base words, prefixes, and suffixes) develop literacy?
- How do authors select various literary genres and how does recognizing genre affect understanding of forms of communication?
- How does writing as a process develop and clarify ideas?
- How does knowledge of grammar, usage, and mechanics effectively communicate ideas?
- What are effective speaking skills and how can those skills be applied in both formal and informal speaking situations?
- How does knowledge and application of reading strategies improve comprehension?
- How does text structure affect communication and reader understanding?
- What defines a life-long reader and learner and how are those characteristics fostered and enriched by pursuing individual interests through self-selected reading?
- What are the traits of effective writing?

*Essential Course Standards*

- Students will be able to write arguments to support claims with clear reasons and relevant evidence.
- Students will be able to write informative texts to examine a topic.

- Students will be able to determine a theme or central idea of a text and analyze its development across the course of the text.
- Students will be able to determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings.
- Students will be able to analyze how an author develops and contrasts the points of view of different characters or narrators in a text.
- Students will be able to analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

## **SECOND CHANCE READING**

Placement in this course will be determined by the Iowa Assessment scores and teacher recommendation. This course integrates reading, writing, speaking, listening, observing, reacting and thinking. This course focuses on reading practice, comprehension strategies, vocabulary and fluency through the use of cooperative learning.

### *Key Learnings*

The students will:

- improve vocabulary by building associations with new words.
- clarify understanding of materials by utilizing higher order thinking skills.
- respond in writing to prompts.
- discuss passages from a piece of literature and by using reading strategies, build skill in understanding the meaning of the text.

## **SOCIAL STUDIES**

### **Social Studies**

Seventh grade students will participate in a yearlong course that meets daily. The social studies program is a study of world geography and cultures. The units include: Five themes of Geography: United States, Canada, Latin America, Europe, Africa, Asia, and Australia. Throughout the course, students will be exposed to various supplemental materials along with the text, develop map skills, and discuss current events.

### *Essential Course Questions:*

- How are the people of the world dependent on each other?
- Why do people settle in some places and not in others?
- What physical and cultural features make places unique?
- How do different forms of government and economic systems influence a country and its citizens?
- How do humans impact and interact with environment in positive or negative ways?
- How might geography and its related technologies be regularly used by people?

### *Essential Course Standards:*

- Understand the changing nature of society.
- Understand factors that create patterns of interdependence in the world economy. Understand the different types of economies and universal economic concepts (supply and demand, production, consumption, labor, capital, etc.) and their influence on each other.
- Understand the use of geographic tools to locate and analyze information about people, places, and environments.
- Understand human and physical characteristics of place.
- Understand how physical processes and human actions modify the environment and how the environment affects humans.
- Understand the effects of geographic factors on historical events.
- Understand patterns of nationalism, state-building, religious and social reform.
- Understand the essential characteristics of limited and unlimited governments.

# MATHEMATICS

## Math 7

Math 7 is a course that provides the opportunity for students to improve math skills while learning how math connects to the world. Algebraic and geometric terms, concepts and applications are introduced and reinforced throughout the course. This course is designed to prepare students for Pre-Algebra 8.

### **7<sup>th</sup> Grade Math Key Learnings**

#### **Analyze proportional relationships and use them to solve real world and mathematical problems.**

- Compute unit rates to find equivalent ratios and compare quantities.
- Use proportions to solve percent problems.

#### **Apply and extend understandings of operations with rational numbers in real world settings.**

- Add, subtract, multiply, and divide positive, negative, decimal, and fractional numbers.
- Understanding of distances between numbers on a number line, and the distance from zero is the absolute value.

#### **Apply properties of operations as strategies to add, subtract, factor, and solve equations.**

- Being able to recognize equivalent expressions by distributing and combining like terms.
- Write and solve simple and multi-step linear equations and inequalities with one variable.

#### **Draw and analyze 2 and 3 dimensional figures.**

- Solve real world problems using the area of triangles, quadrilaterals, and circles.
- Solve real world problems using the volume and surface area of prisms
- Solve for the missing angles in triangles and quadrilaterals

#### **Apply statistical information to draw conclusions.**

- Use sample data to draw conclusions about a single population or two populations.
- Compute both the theoretical and experimental probabilities of simple, compound, dependent and independent events.

## Pre-Algebra 7

Pre-Algebra 7 is a year-long course designed to prepare students for Algebra I at the eighth grade level. Pre-Algebra 7 introduces students to algebraic vocabulary and concepts. Pre-Algebra 7 is designed for high functioning math students. Therefore, placement will be reviewed upon teacher recommendation, grades, work ethic, Iowa Assessments, MAP scores, and district benchmarks. As stated, this course enables the most capable students to make a successful transition from elementary school mathematics to algebra in one year.

### **7<sup>th</sup> Grade Algebra Prep Key Learnings**

#### **Rational Numbers and Exponents:**

- Apply and extend previous understanding of operations with rational and irrational numbers.
- Know and apply properties of integer exponents and radicals.
- Simplify equivalent expressions using properties of operations.\*

#### **Proportionality and Linear Relationships:**

- Analyze proportional relationships and use to solve multistep ratio and percent problems.\*
- Simplify equivalent expressions using properties of operations.\*
- Understand and identify connections between proportional relationships, lines, and linear equations.\*
- Solve and graph linear equations and pairs of simultaneous equations in one variable.\*

## Introduction to Sampling Inference:

- Use measures of center and measures of variability to draw informal inferences about two populations represented by various data displays.\*
- Find probabilities of simple and compound events using organized lists, tables, tree diagrams, and the counting principle.\*

## Creating, Comparing, and Analyzing Geometric Figures:

- Analyze and solve problems involving angle measure relationships, surface area, and volume.\*
- Analyze and solve problems involving volume of cylinders, cones, and spheres.\*
- Understand and apply the Pythagorean Theorem.\*
- Understand and prove congruency of two-dimensional figures through a sequence of transformations.  
\*within context of a real-world problem

## SCIENCE

### Science 7

Seventh grade students will participate in a yearlong course that meets daily, diving into physical, life, and earth science. Instruction includes: Methods of Science, electric charges, magnetism, energy, motion/forces, molecules to organisms, ecosystems, heredity, Earth history, the solar system, and basic engineering.

#### *Essential Course Questions:*

- How does force relate to the basic concepts of motion?
- What are different ways to describe matter?
- How do graphs, charts, and tables help you to interpret and communicate information?

#### *Essential Course Standards according to the NGSS:*

- Forces and Interactions
  1. Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.
  2. Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.
  3. Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.
- Energy
  1. Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.
  2. Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.
  3. Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.
- Growth, Development, and Reproduction of Organisms
  1. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.
  2. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
  3. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.
  4. Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.
  5. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.
- Matter and Energy in Organisms and Ecosystems

1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
  2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
  3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
  4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
- Space Systems
    1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.
    2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.
    3. Analyze and interpret data to determine scale properties of objects in the solar system.
  - History of Earth
    - Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.

## **ORIENTATION**

### **Art 7**

Seventh grade art is a nine week course offered as one of the four orientation classes. The course focuses on the design elements of line, shape, form, space, texture and color and gives students an opportunity to explore these elements while using various media. Art history, aesthetics, and art criticism is emphasized throughout the course.

*Essential Course Questions:*

- How does management and organization of materials help you to succeed in art?
- How does the terminology unique to art apply to the creation of artwork?
- How do you create the illusion of depth in 2-dimensional art?
- How are shape, form, and space used in art?
- How does the study of art work help to understand how to use techniques that are specific to different media?
- What are the properties of color?
- How do artists use the expressive qualities of color to create meaning in their work?

### **Family and Consumer Science 7**

Family and Consumer Science 7 is a nine week course in the orientation curriculum. In FACS class students will learn a variety of lifelong, introductory skills. These skills will be in 5 main areas: sewing, effective communication, laundry, cooking and babysitting/child care. Examples may include, but are not limited to, the following: computerized sewing machine stitching with the creation of a sewing projects, verbal/non-verbal communication with students providing a speech about themselves to the class, stain removal, laundry sorting, and completing a load of laundry at home, and child care safety practices and cooking basics by creating 3 food labs.

*Essential Course Questions:*

- What are the safety procedures for working in the sewing lab?
- How do you demonstrate effective communication?
- How do you operate sewing equipment safely?
- How does sewing terminology apply to the construction of apparel and accessories?
- How do you manage and organize tools, equipment, and supplies to succeed in the completion of projects and labs in this course?
- How do you effectively sort clothes and treat stains for laundry?
- How is resource management critical to success in sewing unit?
- What are important characteristics that a babysitter should practice?
- What are important food and kitchen safety practices?

## **Industrial Technology**

### **Design & Modeling**

The students will learn about engineers and technology utilizing the Project Lead the Way curriculum. The students will learn a design process that engineers use to create, design, and develop a product. In this unit the students will learn the 3D solid model software, Inventor. Utilizing this design approach, students understand how design influences their lives. Students also learn sketching techniques and use descriptive geometry as a component of design, measurement, and computer modeling. Students brainstorm, research, develop ideas, create models, test, and evaluate design ideas and communicate solutions.

Essential Course Questions:

- What is an engineer?
- How does engineering affect my life?
- What is technology?
- How has technology affected my life?
- What skills are required for an engineering career?

### **World Languages**

World language is a nine week course in the orientation curriculum. The course provides an opportunity for students to experience hearing, speaking and writing Spanish, French, and Japanese. These are the three world languages that are taught in the Pleasant Valley Community School District. In addition to learning some basic vocabulary and conversational phrases, students will be introduced to cultural aspects of the countries where the languages are spoken. Students will prepare a short dialog simulating a shopping or restaurant experience where they incorporate most of the vocabulary topics learned.

*Essential Course Questions:*

- What are the basic characteristics of languages in general including English? Why is language so important to our daily lives?
- What are the basic sound systems of Spanish, French, and Japanese? How is the language written?
- How do people greet each other in French, in Spanish, and in Japanese?
- How do people count in Spanish, in French, and in Japanese? How are the numbers written?
- How do we talk about our classes and the things we use for classes?
- How does knowledge of the culture help us to learn the language better and to understand our world better?
- What is the importance of listening skills in learning another language?

## **WELLNESS**

### **Physical Education**

The focus of the junior high physical education program is to provide an opportunity for students to improve their cardiovascular endurance, muscular strength, muscular endurance, and flexibility. In addition, students will participate in a wide variety of physical activities and experiences that promote the mastery of many of the core skills introduced at the elementary level. During this time, students explore activities (competitive, lifetime fitness, and fitness based) and apply skills and concepts that will empower them to assume responsibility for their own individual health, wellness, and fitness.

*Essential Course Questions*

- What are the key components of fitness?
- What is the importance of living an active lifestyle?

### **7-8 Wellness Essential Standards**

Essential Learnings

1. Students will be able to identify, understand, and apply the 5 components of fitness in PE class and their daily life.
  - Cardiovascular Endurance – students will use their heart rate to measure their progress and create a lifelong healthy lifestyle
  - Flexibility – students will understand the connection of how it is important to their health. Students will understand the benefits, differences, and be able to model/identify examples
  - Dynamic, and Static stretches.
  - Muscular Strength and Endurance – Students will be able to identify the differences and the importance of each.
  - Body Composition – students will be able to define and understand what it means and what factors can be beneficial in improving it.

2. Students will use basic loco motor patterns, stretches, and movements during the warm-ups and units offered.
3. Students will set goals (based on the fitness gram testing) at the beginning of the year and measure their progress with checkpoints throughout the year.
4. Students will apply proper sportsmanship and etiquette in each of the units they participate in.
5. Students will make choices of units based on interests and goals they have set forth. They will be actively engaged throughout each class period.

## **Health**

Health is a yearlong course in which the students study all aspects of health: decision making, personal health, environmental health, emotional & social health, self-esteem, stress management, safety & survival skills, interpersonal relationships, prevention and control of communicable diseases, drugs and alcohol, human growth and development, CPR, and nutrition. Health meets twice per week on Tuesdays and Thursdays. Our goal is to help students understand the skills to make good decisions based on the information given within our units and to help them lead a healthy lifestyle.

### *Essential Course Questions*

- How do students demonstrate good decision making skills?

## **ELECTIVES**

All seventh grade students are required to choose from the following:

Band/Study Hall  
 Chorus/Study Hall  
 Band/Chorus  
 Orchestra/Study Hall  
 Study Hall (Everyday)

## **Concert Band**

This course is available to all seventh grade students with one or more years of playing experience who want to continue to develop skills in instrumental music. The band rehearses every Monday, Wednesday, and Friday. In addition to full group rehearsals, students will have one individual lesson each week to help them progress on their particular instrument. All students will participate in various concerts throughout the year including a district solo festival. There will also be honor band opportunities for students who are interested.

### *Essential Course Questions:*

- How can I improve my playing level and positively contribute to the performance of a large group?
- How can I improve my music reading skills through the knowledge of scales, key signatures, and rhythms?
- How is style (articulation, dynamics, phrasing, and tempo) used as a component of musical performance?
- How do you display good concert etiquette?
- How does music relate to life outside of class?

## **Vocal Music**

7<sup>th</sup> Grade Choir is open to any 7<sup>th</sup> grade student who likes to sing. In 7<sup>th</sup> grade there are two choirs, a boys' choir and a girls' choir. Along with whole group rehearsals 2-3 times per week, students are offered a weekly lesson. During lessons, students will do voice testing, breathing technique, sight-singing, rhythm activities, and check knowledge of the music prior to concerts. Students are encouraged to audition in the fall for the Opus Honor Choir, a state activity taking place in Ames in November. Students may also be recommended for the SEICDA Honor Choir. Participation in vocal performances is required.

Students will perform in these concerts throughout the years

### *Essential Course Questions:*

- Are students able to sing their line independently in a 2-3 part score?
- Are students aware of musical symbols in a piece of music, and can they describe the meaning of these symbols?
- Can students apply good singing techniques in rehearsals and concerts?
- Are students able to differentiate between a variety of musical styles and traditions?
- Do students understand the differences between a solo singer and a chorus member?

## **Orchestra**

This elective course is open only to 7<sup>th</sup> grade students who have had previous stringed instrument experience. Exceptions may be made with instructor/administration approval. The Pleasant Valley Junior High School Orchestral Strings Program

consists of a performing string ensemble that meets three days per week with study hall on alternate days. Fundamentals of performance on an orchestral string instrument are the main focus of the class. Intonation, stylistic musical interpretation, proper performance etiquette, and other musical performance skills are addressed in the course. Participation in orchestra performances is required. All students must own or rent their own instrument. The school provides cellos and basses for school use only. Students receive one individual lesson per week..

*Essential Course Questions:*

- Can I read and identify musical notes written on sheet music?
- Can I perform written music on my orchestral strings instrument?
- Can I listen to, analyze and describe orchestral music?
- Can I use musical terminology to evaluate music that I am preparing to perform?
- Can I use musical terminology to describe music I am listening to?

**Study Hall**

This elective is open to all students who desire a quiet setting to pursue studies at school. It is available daily or in combination with band, chorus or orchestra.

# EIGHTH GRADE COURSES

As you continue to map out an educational plan with your child, please use this course description booklet as a resource for the courses we offer 8<sup>th</sup> grade students at Pleasant Valley Junior High. To assist in the transitional period of junior high, 8<sup>th</sup> grade teachers and staff will work together to enhance the educational environment.

If you have any questions, please visit or call the guidance office at 332-0202.

## REQUIRED CLASSES

Language Arts (2 periods daily)	Science
Social Studies	Math
Orientation	Physical Education (meets M,W,F)
Life Skills (meets T, TH)	

(Life Skills will be scheduled for all students with the exception of those who, because of a world language and elective selections, are not able to work the course into their schedule.)

## ELECTIVES

Band	Chorus - everyday
Orchestra	Chorus (Tues/Thurs) / PE (M,W,F)
*French I	*Spanish I
Study Hall (every day) If no other electives are chosen	*Japanese I

\*Must be recommended by 7<sup>th</sup> grade Level 1 Language Arts teacher.

## STUDY SKILLS

Although Study Skills is not taught as a separate class, the following study skills are emphasized throughout the curriculum and during Advisory sessions:

- assignment notebook
- note taking
- textbook format
- time management
- test taking
- listening skills
- research

## LANGUAGE ARTS

### Language Arts 8

Language Arts 8 meet daily for two periods and center on the Iowa Core Standards. Within this time frame, the following areas are covered: Reading – Literature and Informational Texts, Writing, Speaking and Listening, and Language Instruction. Formal writing activities will be connected to reading materials.

*Essential Course Questions:*

- What are underlying themes and writing techniques, and how are they used in fiction and nonfiction?
- How does reading different types of texts help you understand yourself and the world?
- Why is the understanding of a grammatical framework necessary for application?
- How can technology and other resources improve your communication?
- Why is effective communication important? (Writing, speaking, listening, and presenting)

## SECOND CHANCE READING

Placement in this course will be determined by the Iowa Assessment scores and teacher recommendation. This course integrates reading, writing, speaking, listening, observing, reacting and thinking. This course focuses on reading practice, comprehension strategies, vocabulary and fluency through the use of cooperative learning.

*Key Learnings*

The students will:

- improve vocabulary by building associations with new words.
- clarify understanding of materials by utilizing higher order thinking skills.

- respond in writing to prompts.
- discuss passages from a piece of literature and by using reading strategies, build skill in understanding the meaning of the text.

## **SOCIAL STUDIES**

### **Social Studies**

United States history is a full year course. Time parameters are from Pre-Revolutionary War through the end of the 1800's. Ninth grade social studies will continue U.S. history from 1900 to the present.

#### *Essential Course Questions*

- Why do we study history?
- How did conflicts, such as the Revolutionary War and Civil War, originate and how were they resolved?
- What beliefs and ideas led to westward expansion?
- What impact has American expansion had on Native Americans?
- How was our government created, what role does each branch play, and how are laws implemented?

#### *Essential Course Standards*

- Students will be able to express ideas in written form.
- Students will be able to read reflectively and critically.
- Students will be able to understand cause and effect relationships.
- Students will understand how past and current issues impact society.
- Students will become motivated to value citizenship in the realm of school

## **MATHEMATICS**

### **Pre-Algebra 8**

Pre-Algebra 8 is a year long course designed for those students who are intending to attend college and is designed to allow students to take full advantage of high school math offerings. It gives an introduction to the basic algebra concepts and terminology. Placement in Pre-Algebra will be considered based upon teacher recommendation, grade, work ethic, Iowa Assessments, MAP scores, and district benchmarks.

#### **8<sup>th</sup> Grade Pre-Algebra Key Learnings**

##### **Expressions and Equations:**

- Know and apply the properties of exponents and radicals to generate equivalent expressions and solve equations.
- Analyze, interpret, graph, and solve linear equations and pairs of simultaneous linear equations with one variable.

##### **Functions:**

- Define, evaluate, and compare the functional relationship between two quantities.

##### **Geometry:**

- Understand congruence and similarity of 2-D figures through rotations, translations, reflections, dilations, reductions, and angle relationships.
- Understand and apply the Pythagorean Theorem.
- Solve problems involving the volume of cylinders, cones, and spheres.

##### **Statistics and Probability:**

- Use the equation of a linear model to solve problems in the context of bivariate measurement data by interpreting the slope and y-intercept.

**\*Students will be able to apply each of these essential standards in a real-world context.**

## **Algebra**

Algebra is a year long advanced course. It will examine the logic of algebra topics in depth while incorporating enrichment topics. Placement in Algebra will be based upon teacher recommendation, work ethic, Iowa Assessments, MAP scores, and a strong expectation that students enrolling in Algebra will complete a rigorous four year course of study in high school culminating in AP Calculus.

### **8<sup>th</sup> Grade Algebra Key Learnings**

#### **Relationships between quantities and reasoning with equations.**

- Write an equation in Slope-Intercept Form from a table and a graph\*
- Analyze and solve systems of equations using substitution, elimination, and graphing\*
- Write, solve, interpret, and represent linear and exponential equations and inequalities\*

#### **Linear and exponential functions.**

- Define, evaluate, and compare functions in function notation\*
- Identify and relate the domain and range of a function to a table, equation, and graph\*
- Write equations for arithmetic and geometric sequences and use them to model situations\*
- Simplify polynomials to produce an equivalent expression\*
- Solve and graph quadratic equations with factoring and the quadratic formula\*

**\*Students will be able to apply each of these essential standards in a real-world context.**

## **Honors Geometry @ PVCHS**

This course will cover the same basic topics as the high school Geometry class but will examine each topic in more depth. More emphasis is placed on solid geometry topics than is covered in Geometry. Enrichment topics are also introduced. This is a challenging full year course offered primarily to students with above average algebraic skills and who completed Algebra as a seventh grader.

### **Essential Course Questions**

- What different roles are played by axioms, definitions, and theorems in the logical structure of mathematics?
- How can we identify and apply the definitions related to lines and angles prove theorems and solve problems?
- How can basic theorems about congruent and similar triangles be used to prove additional theorems and solve problems?
- How can the definitions and basic properties of a circle be used to solve basic theorems and solve problems?
- How can the Pythagorean Theorem, its converse, and properties of special right triangles be applied to solve problems?
- How are rigid motions (compositions of reflections, translation, rotations) used to determine whether two geometric figures are congruent?
- How are the aspects of the similarity of figures and scale factors used to solve problems?
- How do the geometric measurements (length, area, perimeter, and volume) depend on the choice of a unit?
- How are the measurements made on physical object approximations?
- How do we calculate the measurements of common plane and solid geometric figures?

## **SCIENCE**

### **Science 8**

The eighth grade science course is a yearlong course that meets daily with emphasis in life, physical, and earth science. The course will include instruction on fossils, similarities between organisms, natural selection, artificial selection, human impact on the environment, weather systems, forces, energy transfer, and waves

Co-taught Science 8 covers the same curriculum as Science 8, with additional direct instruction and support for reading and questioning strategies. This course is designed for students who are recommended by their teacher and who are achieving at or below grade level as measured by the Iowa Assessments, MAP scores, and district benchmarks. This is a co-taught course.

### **Essential Course Standards According to the NGSS:**

- PS1-3** Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

- PS2-1** Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.\*
- PS2-2** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.
- PS3-1** Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.
- PS3-3** Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.\*
- PS4-1** Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.
- PS4-2** Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.
- PS4-3** Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.
- LS2-5** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.\*
- LS4-1** Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.
- LS4-2** Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.
- LS4-3** Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.
- LS4-4** Construct an explanation based on evidence that describes how genetic variations of traits in a population increasesome individuals' probability of surviving and reproducing in a specific environment
- LS4-5** Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.
- LS4-6** Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.
- ESS2-4** Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
- ESS2-5** Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.
- ESS2-6** Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.
- ESS3-3** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.\*
- ESS3-4** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
- ESS3-5** Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

### **Honors 8<sup>th</sup> Science**

Honors Science is an advanced and accelerated Science curriculum designed to challenge high-ability science students. This year long science course meets daily with an emphasis on the biological sciences. The course will cover a rigorous and relevant curriculum including the topics: life characteristics and chemistry, cells and cell energy, genetics, ecological processes, and human anatomy and physiology. Placement in this class is based upon a required combination of grades, work ethic, Iowa Assessments standards and MAP Assessment.

#### *Essential Course Questions:*

- How can discovery through laboratory analysis lead to problem solving?
- How do living structures utilize major biomolecules?
- How do you apply the concept of cycles to the nature of life?

## **ORIENTATION**

### **Art**

Eighth-grade art is a nine week course offered as one of the four orientation classes. The course emphasizes the study of art history, aesthetics, and art criticism. It also includes studio production in numerous art disciplines: drawing, painting, sculpture, ceramics, and printmaking.

Student artwork is based on the understanding and use of the basic design elements: line, value, shape/form, space, color, and texture. Projects also incorporate the study of the principles of composition including: balance, unity, variety, emphasis, rhythm, movement, proportion, and depth.

*Essential Course Questions:*

- How does management and organization of materials help you to succeed in art?
- How do you show respect for supplies and artwork?
- How does the terminology unique to art apply to the creation of artwork?
- How does the study of artwork help to understand how to use techniques that are specific to different media?
- How do you create the illusion of depth in 2-dimensional art?
- How does light reflect from 3-dimensional objects?
- How is art influenced by cultural celebrations?
- How can the feeling of movement be captured in 3-dimensional art?
- How can texture be used as an expressive element in creating 2-dimensional art?
- How can line be used to show texture?

### **Computer Technology**

This is a nine-week, 8<sup>th</sup> grade orientation course designed to introduce the students to commonly used technology tools and a limited understanding of self-directed learning. We will use Windows based computers with Microsoft Office 2010 and Google Apps, as well as a number of Web 2.0 tools.

Inquiry-based learning will be the focus of the course. Keyboarding skills will naturally improve throughout the nine weeks due to constant practice, and we will explore tools in website creation, photo and video editing, blogging, presenting, and much more. Students will be using Mozilla Firefox, personal devices (iPod touch, tablets, cell phones), and Microsoft Office products on several occasions.

*Essential Course Questions:*

- What are the basic steps to identifying and solving a problem on your own?
- When working with technology, what is most important to remember about the learning process?
- What is *Digital Citizenship*, and how does it affect you as a *Digital Citizen*?
- 

### **Family and Consumer Science 8**

Family and Consumer Science 8 is a nine week course in the orientation curriculum. The course focuses on personal development through food and nutrition basics. Students are introduced to food safety guidelines, kitchen basics and food preparation. Meal planning and food service skills are explored in this course. Students prepare foods from all basic food groups. Team work and management skills are practiced in this introductory course.

*Essential Course Questions:*

- What are the safety procedures for working in the foods lab?
- How is resource management critical to the success in the kitchen?
- How do you operate food preparation equipment safely?
- How does cooking terminology apply to the preparation and serving of food?
- How do you manage and organize tools, equipment, and supplies to succeed in the food preparation?
- How do you show respect for the classroom materials, personal equipment and materials while using them in the lab setting?
- How do you prepare a menu and create a grocery list on a budget?
- How do you use career preparation skills to prepare for the world of work?
- How do you demonstrate effective teamwork skills?

### **Industrial Technology**

#### **Automation & Robotics**

The students will learn how Automation and Robotics are used in Industry. Students trace the history, development, and influence of automation and robotics. They learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students acquire knowledge and skills in problem solving, teamwork collaboration, and innovation. They will learn different types of gear systems. They will also learn about the relationship between speed and torque.

Essential Course Questions:

- How is Automation and Robotics used in industry today?
- What is the relationship between speed and torque?
- How do you increase the torque in a gear system?
- How do you increase the speed in a gear system?
- What skills are required for an engineering career?

## **WELLNESS**

### **Physical Education**

The focus of the junior high physical education program is to provide an opportunity for students to improve their cardiovascular endurance, muscular strength, muscular endurance, and flexibility. In addition, students will participate in a wide variety of physical activities and experiences that promote the mastery of many of the core skills introduced at the elementary level. During this time, students explore activities (competitive, lifetime fitness, and fitness based) and apply skills and concepts that will empower them to assume responsibility for their own individual health, wellness, and fitness.

*Essential Course Questions*

- What are the key components of fitness?
- What is the importance of living an active lifestyle?

## **ELECTIVES**

All eighth grade students are required to choose from the following

Band	Spanish I
Chorus	French I
Chorus/PE	Japanese I
Orchestra	Study Hall
PE/Life Skills	

### **Concert Band**

This course is available to all eighth grade students who want to continue to develop skills in instrumental music. Band will meet everyday and students will have one lesson every week to help them progress individually on their particular instrument. All students will participate in various concerts throughout the year in addition to a district solo fest. There are also honor band and jazz band opportunities available for interested students.

*Essential Course Questions:*

- How do you positively contribute to the performance of a large group?
- How does the knowledge of key signatures & scales affect your performance?
- How does balance affect the sound of a large group?
- How do you produce a good tone?
- Why is it important to practice?
- What does it mean to play in tune?
- How can you use music in your everyday life?
- What are the skills & behaviors necessary for success in this class?
- How do you display good concert etiquette?

### **Orchestra**

This elective course is open only to 8<sup>th</sup> grade students who have had previous stringed instrument experience. Exceptions may be made with instructor/administration approval. The Pleasant Valley Junior High School Orchestral Strings Program consists of a performing string ensemble that rehearses every day. Fundamentals of performance on an orchestral string

instrument are the main focus of the class. Intonation, stylistic musical interpretation, proper performance etiquette and other musical performance skills are addressed in the course. Participation in orchestra performances is required. All students must own or rent their own instrument. The school provides cellos and basses for school use only. Rehearsals for 8<sup>th</sup> grade are daily along with each student receiving on individual lesson per week. Students may also be recommended for honors orchestras such as Junior High All-State Honors Orchestra in November and S.E.I.S.T.A. in January.

*Essential Course Questions:*

- Can I read and identify musical notes written on sheet music?
- Can I perform written music on my orchestral strings instrument?
- Can I to listen, analyze and describe orchestral music?
- Can I use musical terminology to evaluate music that I am preparing to perform?
- Can I use musical terminology to describe music I am listening to?

### **Vocal Music**

8<sup>th</sup> Grade Choir is open to any 8<sup>th</sup> grade student. In 8<sup>th</sup> grade, boys and girls come together to create a mixed choir. Along with whole group rehearsals 2-3 times per week, students are offered a weekly lesson. During lessons, students will work on the basic elements of singing, ear training, sight-singing and music theory activities. Students are encouraged to audition in the fall for the Opus Honor Choir, a state activity taking place in Ames in November. Students may also be recommended for the SEICDA Honor Choir. Participation in vocal performance is required. Students will perform in three concerts throughout the year.

*Essential Course Questions:*

- Are students able to sing their line independently in a 3-4 part score?
- Are students able to recognize different pitches, and sing with correct dynamics, rhythm, and articulation?
- Are students able to create a short rhythm and melody line?
- Do students recognize music from a variety of genres?
- Are students able to see music as a global experience and relate it to other disciplines?
- Are students able to sight read in a variety of keys using correct rhythm?

### **Spanish 1**

Spanish 1 is a two semester beginning level language course open to *eighth* graders who are planning a five year sequence in Spanish. It is equivalent to the level 1 Spanish Course at the high school level. The course is designed to give students a good background in basic conversational Spanish and an introduction to Spanish grammar. Students are also exposed to the cultures of the Spanish-speaking people around the world. A strong background in English grammar is required and students need to be recommended by their Level One Language Arts teacher to confirm the student's readiness to work at an advanced level.

*Essential Course Questions:*

- Where is Spanish spoken? What are the countries and their capitals? Where are they located?
- How do Spanish people greet each other?
- How do we talk about our activities in Spanish?
- How do we describe people and things in Spanish?
- What are the various parts of speech in Spanish? How can they be identified? How are they different from English?
- What is "agreement" in Spanish grammar and how is it used in Spanish?
- What is the importance of listening skills and how do they help in learning the language?
- How do we write paragraphs to describe our daily lives discussing such things as school, our friends, families, food clothing, and activities?
- How is the Hispanic culture different from our own and how is it like ours?
- How do we respond to and give basic commands?

### **French 1**

French 1 is a two semester course, beginning level language course open to *eighth* graders who are planning a five year sequence in French. It is equivalent to the level 1 French Course at the high school level. The course is designed to give students a good background in basic conversational French and an introduction to French grammar. Students are also exposed to the cultures of the French-speaking people around the world. A strong background in English grammar is required and students need to be recommended by their Level One Language Arts teacher to confirm the student's readiness to work at an advanced level.

*Essential Course Questions:*

- How do we discuss our daily activities using regular verbs?
- How do we conjugate the irregular verbs *avoir, faire, aller, and etre*?
- How do we express numbers, family member, school, basic clothing, and basic food vocabulary?
- What are the basic pronunciation features and vowels?
- How do we express the time and date, and identify seasons and months in French?
- Where is French spoken in the world?
- How is the sentence structure of French different from English to describe people and things?
- How do we express questions in French?
- What do the signs say?
- How do we discuss asking people's preferences, what they are currently doing or wish to do?
- What is the role of listening skills in learning French?

## **Japanese 1**

Japanese 1 is a two-semester, beginning level language course open to *eighth* graders who are planning a five year sequence in Japanese. This course is designed to give students a good background in basic conversational Japanese and an introduction to Japanese grammar. Two Japanese syllabaries (Hiragana and Katakana) will be taught as well as some Chinese characters (Kanji). Students will also be introduced to several aspects of Japanese culture. A strong background in English grammar is required and students need to be recommended by their Level One Language Arts teacher to confirm the student's readiness to work at an advanced level.

### *Essential Course Questions:*

- What are the basic Japanese sounds with correct pitch and intonation?
- How do you read and write Hiragana and Katakana?
- How do you greet and address people, both formally and informally?
- How do we respond to and give basic commands?
- How do we create simple sentences with correct word order?
- Can we read and listen to passages written/discussed in present/future and past tense in order to respond to simple questions accordingly?
- How do we describe people and things in Japanese?
- How do we discuss everyday activities in Japanese?
- How do we make, accept, and decline offers to different activities?
- How do our lives compare with that of Japanese teenagers?
- How are they alike and how are they different?

## **Life Skills**

Life Skills is a yearlong course in which students will explore skills for a successful life in our global and diverse world. This course is designed to work in partnership with the Iowa 21<sup>st</sup> century framework that was established by the Iowa Legislature in 2007. The framework of the class will be centered on financial literacy, career and college exploration, employability skills, and developing leadership skills and health concepts. Within this framework will be the common strands of learning and innovation; communication, information, technology; and life and career skills.

### *Essential Course Questions:*

- What finance knowledge is necessary to build a foundation to make intelligent, personal financial decision?
- What college and career path is the right fit for the individual student?
- How do students effectively communicate with others?
- How do students demonstrate the ability to problem solve and work effectively in a group?
- What health knowledge is necessary to make informed, safe, personal health decisions?

## **Study Hall**

This elective is open to all students who desire a quiet setting to pursue studies at school. It is available daily if no other electives are selected or on Tuesdays and Thursdays opposite Monday, Wednesday, Friday PE if other every day electives are selected.