

Course Catalog: Intermediate Unit 1 Online Summer School

Language Arts and Literature

Language Arts 7

Welcome to the seventh grade language arts curriculum. Through this course of study, you will learn and practice strategies, which have been proven to increase reading skill levels and comprehension. You will be immersed in a reading environment that encourages reading for enjoyment, learning, and lifelong success.

There will be several novels, poems, short stories, and plays to read. Writing narrative, persuasive, and informative essays, according to the Pennsylvania State Standards, will be included in your daily activities. Vocabulary will be enhanced.

You will acquire skills with language conventions using the Holt Middle School Handbook. Listening and speaking strategies will be introduced and practiced in order to become proficient in communication skills. You will be introduced to research techniques that will help you improve your researching ability. You will explore the library and read independently.

Textbook: The Holt Handbook: Grammar, Usage, Mechanics, Sentences: First Course, Holt, Rinehart, and Winston 2003. ISBN: 0-03-066143-9

Novels and trade books: Actual readings selected by summer teacher from this list

- The Giver, by Lois Lowry
- Bud, Not Buddy, by Christopher Paul Curtis
- Holes, by Louis Sachar
- Eleanor Roosevelt: A Life of Discovery, by Russell Freedman

Language Arts 8

In this course you will explore the many aspects of eighth grade language arts. These aspects include writing, literature, grammar, listening and speaking, elements of research, and cultural literacy.

This course is designed to provide the opportunity for you to incorporate prior knowledge, utilize the reading process, read frequently, respond to reading and understand a variety of reading materials. To enhance your learning experiences, you are encouraged to reflect on the material read and to use the higher order thinking skills of analyzing, synthesizing and evaluating to make relevant connections.

You will keep an electronic journal in WORD called "My Journal" and make entries in it every day. This will allow you a proper amount of reflection for all the new information you are encountering. You can expect your instructor to ask for a periodic review of your journal. Your journal will include three divisions called **A Word to the Wise** which will include idioms of language and famous quotations, **Visions** which will include your response to fine arts and **Reflections** which will include your daily reflections on events both in the bigger world and in your personal world.

- You will learn how to express your ideas in all three modes of writing and you will submit writing samples for evaluation.
- You will learn how to evaluate your writing using the Pennsylvania Domains Scoring Guide, and you will revise your writing to improve it.
- You will read literature in all its forms.
- You will learn to identify and create literary devices.
- You will take quizzes and exams; do projects and Power Point presentations.
- You will look at works of art that have been inspired by literature.
- You will learn about various sentence structures and their punctuation.
- You will examine word origins, idioms of language and cultural literacy.
- You will have a happy and challenging year as you participate in this adventure in learning.

Textbooks: HOLT HANDBOOK: Second Course, Holt, Rinehart and Winston-Publishers Copyright 2003.

Elements of Literature: Second Course, Holt, Rinehart and Winston- Publishers Copyright 1997. ISBN: 0-03-067279-1

Novels, plays and other materials: Actual readings selected by summer teacher from this list

- Shakespeare Parallel Text: A MIDSUMMER NIGHT'S DREAM Perfection Form Company, Logan, Iowa
- Video: A MIDSUMMER NIGHT'S DREAM, 1999, starring Kevin Kline and Michele Pfeiffer
- Of Mice and Men, by John Steinbeck
- The Adventures of Huckleberry Finn, by Mark Twain

English 9 (available in 2005-06)

In this course you will explore the many aspects of ninth grade language arts. These aspects include writing, literature, grammar, listening and speaking, elements of research, and cultural literacy.

This course is designed to provide the opportunity for you to incorporate prior knowledge, utilize the reading process, read frequently, respond to reading and understand a variety of reading materials. To enhance your learning experiences, you are encouraged to reflect on the material read and to use the higher order thinking skills of analyzing, synthesizing and evaluating to make relevant connections.

- You will keep an Electronic Journal in WORD called "My Journal" and make entries in it every day. The term Electronic Journal will signal you to make such entries. Doing this will allow you a proper amount of reflection for all the new information you are encountering. You can expect your instructor to ask for a periodic review of your journal. You should divide your journal by the various headings in your assignment sections such as: Drama or Novel for easy organization.
- You will review the three modes of writing and you will submit writing samples for evaluation.
- You will learn how to evaluate your writing using the Pennsylvania Domains Scoring Guide, and you will revise your writing to improve it.
- You will read literature in all its forms.
- You will learn to identify and create literary devices.
- You will take quizzes and exams; do projects and Power Point presentations.
- You will look at works of art that have been inspired by literature.
- You will learn about various sentence structures and their punctuation.
- You will examine word origins, idioms of language and cultural literacy.
- You will have a happy and challenging year as you participate in this adventure in learning.

Textbook: Elements of Literature; Holt, Rinehart and Winston, 2003

ISBN: 0-03-068384-X (T) and 0-03068376-9 (ST)

Holt Handbook; 2003, ISBN: 0-03-066146-3 (ST)

Novels, plays and other materials: Actual readings selected by summer teacher from this list

- Romeo and Juliet
- Romeo and Juliet VHS/DVD
- I Know Why the Caged Bird Sings
- The Hobbit
- Great Expectations

English 10 (available in 2005-06)

Because of the independent nature of this curriculum, you hold the key to unlocking this experience. You will find that we have combined the two-fold experience of reading and writing into one, and have made reading and writing a part of every lesson. The Literature Response Journal serves as a valuable outlet for you as you react to and interact with your literature.

Our curriculum is designed to meet the scaffolding guidelines of the Pennsylvania Academic Standards, but the parameters of our curriculum are intentionally expandable according to your needs and interests. World Wide Web activities accompany every lesson, and we hope that you will linger over lessons that may serve as a springboard to other interests.

We have chosen the novels to deliberately "whet" a wide variety of interests. If you are a history buff or a romantic, you will enjoy strolling through the French Revolution with *The Scarlet Pimpernel*, and if you love adventure, you will enjoy exploring Mayfield, Alabama with Jem and Finch from *To Kill a Mockingbird*. No one can read Elie Wiesel's memoir *Night*, without agreeing that the Holocaust must never happen again. If you are studying US History, you may find familiar information as you are reading *Fallen Angels*, a first-person account of the Vietnam War. *Bury My Heart at Wounded Knee*, Dee Brown's epic non-fictional retelling of the history of the American West also has a history-based setting. As you read Gary Soto's autobiography *A Summer Life*, it will no doubt invoke your own childhood memories.

Textbook: Elements of Literature with readings in World Literature;

Holt, Rinehart and Winston, 2003 ISBN 0-03-067309-7 (T) and 0-03-067282-1 (ST)

Elements of Language; Holt, Rinehart and Winston, 2004 ISBN 0-03-068688-1(T)

and 0-03-068668-7 (ST)

Novels, plays and other materials: Actual readings selected by summer teacher from this list

- The Scarlet Pimpernel
- Bury my Heart at Wounded Knee
- A Summer Life
- Night
- Fallen Angels
- To Kill a Mockingbird

English 11—American Literature and Composition (available in 2005-06)

The units of study in English 11 have been designed to coordinate with the textbook you will use. They comprise a chronological survey of American literature, beginning with the arrival of the first European settlers on this continent, and ending with authors who are writing and publishing today.

- Beginnings to 1800
- American Romanticism
- The American Renaissance
- The Realms of Darkness
- A New American Poetry
- The Rise of Realism
- The Moderns
- Contemporary Literature
- Research Paper

The first eight units are literature based. Your final unit will guide you through development and writing of a 10-15 page research paper.

Each unit of study, together with all of its links and folders, has been color coordinated for ease of navigation.

Textbook: Elements of Literature with readings in World Literature; Holt, Rinehart and Winston, 2003 ISBN: 0-03-067311-09 (T) and 0-03-067283-X (ST)

Novels, plays and other materials: Actual readings selected by summer teacher from this list

- The Scarlet Letter
- Adventures of Huckleberry Finn
- The Old Man and the Sea

English 12—World Literature and Composition (available in 2005-06)

This course invites you to journey on a flight of fancy. Wander into the misty depths of the past. Look through the eyes of those who were there. Ride with warriors; weep with lost loves; triumph when good topples evil; unravel the mysteries of the ages; look death in the eye and catch a glimpse of the eternal. From the divine to the absurd, you'll sample it all. This could be an experience of a lifetime (the ultimate quest).

Are you ready for such a quest? Have you opened your mind and turned on your imagination? We'll see. As with every quest, there are trials. In order to open the doors to the past, you must have the right keys. To begin your journey, click into the "All Aboard" folder in the "Assignments" section of the course.

Textbook: World Literature, Third Edition; Holt, Rinehart and Winston, 2001 ISBN: 0-03-055618-X (T) and 0-03-055617-1 (ST)

Mathematics

Mathematics 7—Algebra

This course was written using The University of Chicago School Mathematics Project as a guide to pattern the sequence of the material taught.

Throughout this course, you will be given access to many lessons that engage you in interactive exercises, creative imagery and challenging projects. The lessons take you to many websites to supplement the information in the notes. You will also visit many websites where you will practice assignments and even do some investigation. After each lesson, you will visit an assignment that includes three parts. The first is Cover the Reading, which addresses the new topics and checks for reading comprehension of the material in the text. The second stage is called Applying The Mathematics. The topics are presented using real life applications. The last stage is the Review. This is a continual review of previously taught material that continues through the course. It is essential that you place a high emphasis on completing each assigned problem. The authors of the course have assigned all available problems from the text.

Our goal in creating this course is to teach algebra in a way that captivates the learner, and thus encourage you to further explore mathematics.

Textbook: The University of Chicago School Mathematic Project Algebra, Scott Foresman Addison Wesley, 2002. ISBN: 130587788 (T) and 0130584150 (0-673-45952-7) (ST)

Mathematics—Geometry

The goal of this course is to help students learn mathematics on their own, so that they will be better able to deal with mathematics in the real world (i.e. in newspapers, on television, at work, or in school).

This course can be covered in a variety of time frames, depending on the student. It can be covered in four nine week periods with daily class time at 45 minutes, two nine week periods with daily class time at 90 minutes, or a much slower pace with each lesson being broken into two parts thus creating a two year course. The average homework time is between 40 – 60 minutes daily.

In this course, you will study:

1. Points and Lines
2. Language and Logic of Geometry
3. Angles and Lines
4. From Reflections to Congruence
5. Proofs Using Congruence
6. Polygons and Symmetry
7. Triangle Congruence
8. Perimeters and Areas
9. Three-Dimensional Figures
10. Surface Areas and Volumes
11. Similar Triangles and Trigonometry
12. Further work with circles

Textbook: The University of Chicago School Mathematic Project Geometry Integrated Mathematics Scott Foresman Addison Wesley, 2002.
ISBN: 130587796 (T) and 0-13-058417-7 (ST)

Math Essentials

The Math Essentials course covers a variety math topics that are considered the basic and most essential that a student needs to learn. Even though there will be a wide variety of topics covered each topic and chapter is related. What you learn in chapter one may be needed in chapter four. So it is imperative that the student makes sure they understand a concept before moving on to the next lesson or chapter.

Some of the concepts that will be covered in this course:

- Place Values
- Addition, Subtraction, Multiplication, and Division
- Addition, Subtraction, Multiplication, and Division of Decimals
- Statistics
- Fractions
- Addition, Subtraction, Multiplication, and Division of Fractions
- Measurements
- Ratio and Proportion
- Percents
- Probability

The course uses many different activities and methods to explore each one of these concepts. The basic lesson format is set up with an introduction to the lesson (what will be learned), a reading assignment, lesson notes, an assignment to practice the concepts just learned, and an answer key so the student may check their answers to see how well they learned the concept taught. The course also uses web activities to either teach a new concept or reinforce one already taught. Each chapter consists of lessons, web activities, a mid-chapter review, a chapter review, and a chapter test. So the student has plenty of opportunities to learn and demonstrate their learning of a concept.

Textbook: Practical Mathematics Skills and Concepts; Holt, Rinehart and Winston, 1998 ISBN: 0-03-051338-3 (T) and 0-03-051337-5 (ST)

Advanced Algebra

Chapter 1 - Functions 1-1 The Language of Algebra

- 1-2 What Is a Function?
- 1-2 Function Notations
- 1-4 Graphs of Functions
- 1-5 Solving Equations
- 1-6 Rewriting Formulas
- 1-7 Explicit Formulas for Sequences
- 1-8 Recursive Formulas for Sequences
- 1-9 Notation for Recursive Formulas

Chapter 2 - Variation and Graphs

- 2-1 Direct Variation
 - 2-2 Inverse Variation
 - 2-3 The Fundamental Theorem of Variation
 - 2-4 The Graph of $y=kx$
 - 2-5 The Graph of $y=kx^2$
 - 2-6 The Graphs of $y=k/x$ and $y=k/x^2$
 - 2-7 Fitting a Model to Data I
 - 2-8 Fitting a Model to Data II
- 2-9 Combined and Joint Variation

<p>Chapter 3 - Linear Functions</p> <ul style="list-style-type: none"> • 3-1 Constant-Increase or Constant-Decrease Situations • 3-2 The Graph of $y=mx+b$ • 3-3 Linear-Combination Situations • 3-4 The Graph of $Ax + By = C$ • 3-5 Finding an Equation of a Line • 3-6 Fitting a Line to Data • 3-7 Recursive Formulas for Arithmetic Sequences • 3-8 Explicit Formulas for Arithmetic Sequences • 3-9 Step Functions 	<p>Chapter 4 - Matrices</p> <ul style="list-style-type: none"> • 4-1 Storing Data in Matrices • 4-2 Matrix Addition • 4-3 Matrix Multiplication • 4-4 Matrices for Size Changes • 4-5 Matrices for Scale Changes • 4-6 Matrices for Reflections • 4-7 Transformations and Matrices • 4-8 Matrices for Rotations • 4-9 Rotations and perpendicular Lines • 4-10 Translations and Parallel Lines
<p>Chapter 5 - Systems</p> <ul style="list-style-type: none"> • 5-1 Inequalities and Compound Sentences • 5-2 Solving Systems Using Tables or Graphs • 5-3 Solving Systems by Substitution • 5-4 Solving Systems Using Linear Combinations • 5-5 Inverses of Matrices • 5-6 Solving Systems Using Matrices • 5-7 Graphing Inequalities in the Coordinate Plane • 5-8 Systems of Linear Inequalities • 5-9 Linear Programming I • 5-10 Linear Programming II 	<p>Chapter 6 - Quadratic Functions</p> <ul style="list-style-type: none"> • 6-1 Quadratic Expression, Rectangles, and Squares • 6-2 Absolute Value, Square Roots, and Quadratic Equations • 6-3 The Graph-Translation Theorem • 6-4 Graphing $y=ax^2+bx+c$ • 6-5 Completing the Square • 6-6 Fitting a quadratic Model to Data • 6-7 The Quadratic Formula • 6-8 Imaginary Numbers • 6-9 Complex Numbers • 6-10 Analyzing Solutions to Quadratic Equations
<p>Chapter 7 - Powers</p> <ul style="list-style-type: none"> • 7-1 Power Functions • 7-2 Properties of Powers • 7-3 Negative Integer Exponents • 7-4 Compound Interest • 7-5 Geometric Sequences • 7-6 nth Roots • 7-7 Positive Rational Exponents • 7-8 Negative Rational Exponents 	<p>Chapter 8 - Inverses and Radicals</p> <ul style="list-style-type: none"> • 8-1 Composition of Functions • 8-2 Inverses of Relations • 8-3 Properties of Inverse Functions • 8-4 Radical Notation for nth Roots • 8-5 Products with Radicals • 8-6 Quotients with Radicals • 8-7 Powers and Roots of Negative Numbers • 8-8 Solving Equations with Radicals
<p>Chapter 9 - Exponential and Logarithmic Functions</p> <ul style="list-style-type: none"> • 9-1 Exponential Growth • 9-2 Exponential Decay • 9-3 Continuous Growth and Decay • 9-4 Fitting Exponential Models • 9-5 Common Logarithms • 9-6 Logarithmic Scales • 9-7 Logarithms to Bases Other Than 10 • 9-8 Properties of Logarithms • 9-9 Natural Logarithms • 9-10 Using Logarithms to Solve Exponential Equations 	<p>Chapter 10 - Trigonometry</p> <ul style="list-style-type: none"> • 10-1 Three Trigonometric Functions • 10-2 More Right-Triangle Trigonometry • 10-3 Properties of Trigonometric Ratios • 10-4 Trigonometry and the Unit Circle • 10-5 Cosines and Sines in Quadrants II-IV • 10-6 The Law of Cosines • 10-7 The Law of Sines • 10-8 The Cosine and Sine Functions • 10-9 Solving $\sin\theta=k$ • 10-10 Radian Measure

<p>Chapter 11 - Polynomials</p> <ul style="list-style-type: none"> • 11-1 Introduction to Polynomials • 11-2 Polynomials and Geometry • 11-3 Factoring Special Cases • 11-4 Estimating Solutions to Polynomial Equations • 11-5 The Factor Theorem • 11-6 Factoring Quadratic Trinomials and Related Polynomials • 11-7 The Rational-Zero Theorem • 11-8 Solving All Polynomial Equations • 11-9 Finite Differences • 11-10 Modeling Data with Polynomials 	<p>Chapter 12 - Quadratic Relations</p> <ul style="list-style-type: none"> • 12-1 Parabolas • 12-2 Circles • 12-3 Semicircles, Interiors, and Exteriors of Circles • 12-4 Ellipses • 12-5 Relationships Between Ellipses and Circles • 12-6 Equations for Some Hyperbolas • 12-7 Equations for More Hyperbolas • 12-8 Quadratic-Linear Systems • 12-9 Quadratic-Quadratic Systems
<p>Chapter 13 - Series and Combinations</p> <ul style="list-style-type: none"> • 13-1 Arithmetic Series • 13-2 Geometric Series • 13-3 The E and ! Symbols • 13-4 Descriptive Statistics • 13-5 Pascal's Triangle • 13-6 The Binomial Theorem • 13-7 Subsets and Combinations • 13-8 Probabilities and Combinations • 13-9 Lotteries • 13-10 Binomial and Normal Distributions • 13-11 Polls and Sampling 	

Textbook: Advanced Algebra; Prentice Hall, ISBN: 0-13-058780-X (T) and 0-13-058416-9 (ST)

Science

Science 8—Physical Science

The Physical Science course is basically divided in half. Half of the course covers Chemistry principles and the other half covers Physics principles. Even though the course may present these as two separate components it also shows how they are very much related to one another.

Some of the topics that will be covered are:

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|--|---|
| <ul style="list-style-type: none"> • Introduction to Physical Science • Scientific Process • Properties of Matter • Forces and Motion • Simple Machines | <ul style="list-style-type: none"> • The Atom • The Periodic Table • Chemical Reactions • Acids and Bases • Waves, Sound, and Light • Much, Much More |
|--|---|

The course has the students completing several different tasks for each lesson. Some of the components to a lesson may include a pre-reading assignment, a reading assignment, notes posted for the lesson, an activity or activities, and assignment or assignments. At the end of the lessons for a chapter there is a chapter review that should be completed before the student takes the chapter assessment.

Even though the course relies on the Holt, Rinehart, Winston Physical Science textbook the course is designed with many different Web based and hands on activities.

Note: Some of the activities and assignments may require parent or guardian supervision.

The students' grades will be determined from several different areas of the course. Each are listed below with a quick description.

- Science Log- Each student is required to keep a Science Log in which they will use it to answer questions, record observations from labs and write answers in it as assigned by the teacher. This is a major portion of a student's grade.
- Activities- these are mostly labs or other activities that are used to reinforce the concepts that are trying to be taught in the lesson.
- Assignments- these are various activities that can range from hands on to completing a worksheet that demonstrates to the teacher that the student not only understands the concepts trying to be taught but is also able to apply the concept.
- Chapter Assessments- These are short but comprehensive quizzes that cover the overall concept for the chapter.

Textbook: Physical Science Textbook from Holt, Rinehart, and Winston, 2001 ISBN: 0-03-0151958-6 (T) and 0-03-051957-8 (ST)

Earth and Environmental Science—9

This course is designed to give the student a basic overview of Earth Science and related environmental topics. The course will cover the following topics:

Chapter 1

- The Nature of Science

Chapter 2

- Mapping Our World

Chapter 3

- Matter and Atomic Structure

Chapter 4

- Minerals

Chapter 5

- Types of Rocks - Igneous, Sedimentary, and Metamorphic

Chapter 6

- The Rock Cycle

Chapter 7

- Weathering, Erosion, and Soil

Chapter 8

- Mass Movements, Wind, and Glaciers

Chapter 9

- Surface Water

Chapter 10

- Groundwater

Chapter 17

- Plate Tectonics

Chapter 18

- Volcanic Activity

Chapter 19

- Earthquakes

The course basically follows the accompanying textbook with a few exceptions. This course compacts the text's Chapters 5 and 6 into one large chapter on the three types of rocks. The course's Chapter 6 is dedicated to the rock cycle. Also, there is no Unit 4. The unit sequence goes from 3 to 5. Again, this is in keeping with the continuity of the textbook.

Text book: Earth Science: Geology, The Environment and the Universe; Glenco / McGraw Hill, 2002, ISBN: 0-07-821592-7 (T) and 0-07-821591-9 (ST)

Biology—10 (available in 2005-06)

This course is designed to focus on the Pennsylvania Academic Standards for high school biology. The intended goals for developing this course are to expand scientific literacy dealing with biology for the high school student. Students will gain age-appropriate knowledge and understanding that will ensure they become life-long learners. Students will be introduced to many of the major concepts within the field of biology. Various approaches will be utilized to aid in investigation, learning, and integrating the concepts within the science of life. Assessments will come in several forms including tests, labs, notebook entries, discussion questions, and assigned course work. Some rubrics will be available as an assessment tool wherever appropriate. The content of this course is aligned with the Pennsylvania Academic Standards. The particular standards for each unit are specified in the "Pennsylvania Academic Standards" folder. This course is set up to include nine different units. These units should be completed in the order in which they are listed.

The following list outlines the precise order.

1. Introduction to Biology
2. Cells and Mitosis
3. Mendel and Meiosis
4. DNA, RNA, and Protein Synthesis
5. Application of Genetics and Biotechnology
6. Bioethics
7. Classification
8. Evolution
9. Animal Kingdom

Each unit is divided into several different categories that should be viewed and completed in the order in which they appear. These categories include such titles as materials, Pennsylvania Standards, reading, vocabulary, content notes, hotlinks, assignments and assessments.

The materials category includes a list of all materials that are needed in order to complete that unit.

The Pennsylvania Standards category includes a listing of the standards which are addressed by completing each unit. The reading category outlines required reading from the textbook as well as other sources (perhaps online) which may enhance understanding of a particular unit.

The vocabulary category includes all the content-related vocabulary required for each unit. It is important that you take time to make flashcards and learn the definitions and appropriate usage of this list of terms.

The content notes category includes specific information that will aid in comprehension of each unit. This will be the material on which the unit assessments are based. There is a printable version of each of these notes packets.

The hotlink category includes web-related sites which you are required to visit. These sites will be instrumental in your understanding of the course content notes. These will serve as the major source of course content for you. These sites will serve as a provider of biological information that will be further supplemented by your textbook. While visiting some of these sites you will be required to make entries into a three-ringed binder. All of the entries from one given unit will be collected by your instructor. Each hotlink entry will be graded using the rubric for "Hotlink Notebook Entries." Each notebook entry is worth a possible 10 points. There are a total of 29 notebook entries to be recorded within this course.

The activities category of each unit includes worksheets and other types of activities which must be completed by you. All of these assignments will be gathered together and handed in to your teacher as a Unit Packet of Assignments. Each unit packet will be graded using the rubric for "Unit Packet of Assignments." Therefore, you will turn nine unit packets for grading throughout this course. There are 153 different assignments expected from you under the activities category throughout this course. Additional activities (not included in that total) involve discussion board questions. These questions will be graded by your teacher using the rubric for "Discussion Board Questions." There are 35 discussion board questions throughout this course.

The final category within each unit is the assessment. This includes the formal test, which will be graded as soon as you submit it(excluding essay questions graded by your teacher).

Textbook: Biology: The Dynamics of Life with Teacher's Resource Guide; Glenco / McGraw Hill, 2004, ISBN: 0-07-829899-7 (T) and 0-07-829900-4 (ST) and 0-07-829901-2 (TRG)

Chemistry—11

Science presumes that the events in the universe occur in consistent patterns that are comprehensible through careful, systematic study. The basic intent of this course is to discover these patterns through inquiry, experimentation and validation. This is a very active process that engages the student in hands-on and minds-on problem solving.

Matter and Change

- 3.4.10A Explain concepts about the structure and properties of matter.
- In this chapter, you will be introduced to the field of chemistry, matter, and the periodic table. You should be able to distinguish between the branches of chemistry, identify changes and classifications of matter, and use the periodic table to show relationships between the elements.

Measurements and Calculations

- 3.1.10B Describe concepts of models as a method to predict and understand science and technology.
- This chapter covers the scientific method, measurement and data analysis. You will understand the components of the scientific method, collect data using the metric system, use significant figures, and analyze data.

Atoms

- 3.4.12A Apply concepts about the structure and properties of matter.
- This chapter will cover the history and development of atomic theory and the structure of the atom. You will be able to distinguish between the subatomic particles and understand the experiments that led to their discovery.

The Periodic Law

- 3.4.10A Explain the repeating pattern of chemical properties by using the repeating patterns of atomic structure within the periodic table.
- This chapter will cover the development of the periodic table and explore the relationship between the periodic law and electron configuration.

Chemical Bonding

- 3.4.10A Explain the formation of compounds and their resulting properties using bonding theories (ionic and covalent)
- In this chapter you will cover the characteristics of chemical bonding and uses electronegativity values to contrast bonds.

Chemical Formulas and Compounds

- 3.4.10A Recognize formulas for simple inorganic compounds.
- This chapter describes the naming of binary ionic and molecular compounds and describes how to calculate formula masses.

Chemical Equations and Reactions

- 3.4.10A Describe various types of chemical reactions by applying the laws of conservation of mass and energy.
- This chapter covers the writing and balancing of the five basic types of equations.

Kinetic Molecular Theory and Gases

- 3.4.10A Predict the behavior of gases through the use of Boyle's, Charles' or the ideal gas laws.
- This chapter presents the gas laws that express simple mathematical relationships.

Solids and Liquids

- 3.4.10A Describe phases of matter according to the Kinetic Molecular Theory.
- This chapter uses the kinetic-molecular theory to describe properties of liquids and solids.

Textbook: Modern Chemistry; Holt, Rinehart and Winston, 2002

ISBN: 0-03-056538-3 (T) and 0-03-056537-5 (ST)

Social Studies

Social Studies 8—Pennsylvania History (available in 2005-06)

This course focuses on the history of Pennsylvania from pre-colonization until the present. Elements of economics, geography and civics are included. Tests and exams are few and far between. Writing is stressed as a means of evaluation, and choices of a mode of presentation are often presented. In this course, you will study:

- Pennsylv--what?
- Hey! We Were Here First! (Early Inhabitants)
- A Land of Milk and Honey (Colonization)
- Redcoats, Riots and Revolution
- Congratulations! It's a Country!
- Brother Vs. Brother
- Industrialization -- Uncle Sam gets Muscle
- Not So Long Ago (Twentieth Century)
- Politics, Economics and Tomorrow

Textbook: Pennsylvania Pride, 3rd Edition, Penns Valley Publishers, textbook and workbook, ISBN: unknown

American History—9

This folder will contain an overview of American History. It includes the course outline:

- Unit 1 - Golden Age (Chapters 5,6,7, 8)
- Unit 2 - Claiming an Empire (Chapters 9, 10, 11)
- Unit 3 - Roaring 20s (Chapters 12, 13)
- Unit 4 - The Great Depression (Chapters 14, 15)
- Unit 5 - World War II (Chapters 16, 17)
- Unit 6 - Cold War (Chapters 18, 19, 20)
- Unit 7 - Changes in America (Chapters 21, 22, 23)
- Unit 8 - Watergate, Star Wars, and the Rise of the Internet (Chapters 24, 25, 26)

Textbook: The Americans: Reconstruction Through the 20th Century; McDougal Littell, 2002 ISBN: 0-618-10816-5 (T) and 0-618-10814-9 (ST)

World History/Geography—10

Unit I: Beginnings of the Modern World

1. Renaissance and Reformation
2. A New Worldview in Europe
3. The World in the Age of European Expansion
4. Revolutions of Society and State

Unit II: Expansion of the Modern World

1. The Industrial Revolution in the West
2. An Era of Expansion and Reform
3. Nation-States and Empires in Europe
4. The Imperial World Order

Unit III: The Modern World in Crisis

1. World War I and After
2. Revolution, Depression, and Totalitarianism
3. Growing Aggression and World War II

Unit IV: The World Since 1945

1. Postwar Europe and North America
2. Independent Asia
3. Africa and the Middle East After Empire
4. New Directions in Latin America
5. From the Past to the Future

Textbook: World History: Continuity and Change; Holt, Rinehart and Winston, ISBN: 0-03-052453-9 (T) and 0-03-052452-0 (ST)

All courses were developed by PA Certified teachers contracted by BlendedSchools.net and each course was aligned to the PA Academic Standards.



Intermediate Unit 1
Fayette - Greene - Washington