

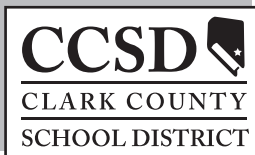
Curriculum Overview

MIDDLE SCHOOL
GRADES

6-8

CORE CURRICULUM

CCSD 
CLARK COUNTY
SCHOOL DISTRICT



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Dear Parents/Guardians,

This curriculum overview has been developed to help parents/guardians understand what is expected of students at each grade level in the core academic areas. These expectations take into account Nevada State Content and Performance Standards as students progress through a standards-based curriculum. Student progress is assessed on an annual basis for each specific course, with culminating proficiency examinations in writing, mathematics, and reading administered beginning in the spring of the student's sophomore year in school. The curriculum overview provides a general description of the concepts and skills to be taught at each grade level relative to specific courses. Information has been included outlining Nevada's State Content Standards, which have been developed to ensure all of Nevada's students are provided a quality education. Additionally, the Clark County School District POWER STANDARDS for English Language Arts/Reading, Mathematics, and Science are included in this document. Power Standards are the most critical standards that students are held accountable for mastering. They are highly focused specific areas of instructional emphasis and are essential for student proficiency in the identified K-12 subject areas. Those standards that are not designated as Power Standards are intended to be embedded in instruction throughout the year. For more information regarding the curriculum you may access the District website at www.ccsd.net/schools/curricOverviews.phtml. Parents/guardians may use this information to assess their student's progress from course to course and year to year.

The district recognizes that parental/guardian guidance and encouragement in the development of a student's skills and knowledge are critical to the educational process. Understanding what will be required of your child as he/she progresses through the secondary grades towards earning a high school diploma will enable you to help your child reach this goal. It is our hope that the information contained in this document will be useful to parents/guardians as they continue to guide their children during these important years.

You are encouraged to contact your child's school staff and district staff should you have any questions regarding the contents of this booklet. You are commended for your hard work and unceasing efforts to ensure that your son/daughter is afforded the best educational experience possible.

CLARK COUNTY SCHOOL DISTRICT STATEMENT OF NON-DISCRIMINATION

The Clark County School District does not knowingly discriminate against any person on the basis of race, color, creed, religion, national or ethnic origin, sex, age, or disability in admission or access to, or treatment or participation in its programs and activities.

21ST CENTURY COURSE OF STUDY EXPECTATIONS

The Clark County School District expects all students to meet the requirements of the 21st Century Course of Study. In addition to the three years of mathematics and two years of science necessary to graduate with a high school standard diploma, students enrolling as freshmen in the fall of 2006 (graduating class of 2010), and each grade thereafter, will be scheduled into a fourth year of mathematics, which will include Algebra II, and a third year of science, which will include Biology. Although the graduation requirements for a standard diploma will not change, the school district expects its students to be competitive in higher education and the workforce, and to be prepared to take full advantage of what the world has to offer beyond high school.

The Clark County School District believes that all students must be prepared for the following post-secondary opportunities:

- University/Four-Year College
- Community/Two-Year College
- Trade/Technical School
- Workforce

21ST CENTURY COURSE OF STUDY EXPECTATIONS	
Areas of Study	Units
English	4
Mathematics (Includes Algebra II)	4
Science (Includes Biology)	3
World History or Geography (Class of 2011)	1
U.S. History	1
U.S. Government	1
Physical Education	2
Health Education	1/2
Use of Computers	1/2
Electives (Includes one Arts and Humanities or Career and Technical Education course)	5 1/2
Total	22 1/2

The 21st Century Course of Study will provide the following for students:

- Opens Doors to Post-Secondary Education and Workforce Opportunities
- Meets Nevada System of Higher Education University Admissions Grade Point Average (GPA) and Core Curriculum Requirements including:
 - o 3.00 GPA (weighted or unweighted) **in the core curriculum**
 - o NSHE Approved Core Curriculum (4 English, 3 Math – including Algebra II, 3 Natural Science, 3 Social Science & History = 13 units)
- Prepares Students for the Governor Guinn Millennium Scholarship GPA and Core Curriculum Requirements including:
 - o 3.25 **cumulative** GPA (weighted or unweighted) **and**
 - o NSHE Approved Core Curriculum (4 English, 4 Math – including Algebra II, 3 Natural Science, 3 Social Science & History = 14 units)

CODE OF HONOR

NEVADA DEPARTMENT OF EDUCATION

There is a clear expectation that all students will perform academic tasks with honor and integrity, with the support of parents, staff, faculty, administration, and the community. The learning process requires students to think, process, organize and create their own ideas. Throughout this process, students gain knowledge, self-respect, and ownership in the work that they do. These qualities provide a solid foundation for life skills, impacting people positively throughout their lives. Cheating and plagiarism violate the fundamental learning process and compromise personal integrity and one's honor. Students demonstrate academic honesty and integrity by not cheating, plagiarizing or using information unethically in any way.

WHAT IS CHEATING?

Cheating or academic dishonesty can take many forms, but always involves the improper taking of information from and/or giving of information to another student, individual, or other source. Examples of cheating can include, but are not limited to:

- Taking or copying answers on an examination or any other assignment from another student or other source
- Giving answers on an examination or any other assignment to another student
- Copying assignments that are turned in as original work
- Collaborating on exams, assignments, papers, and/or projects without specific teacher permission
- Allowing others to do the research or writing for an assigned paper
- Using unauthorized electronic devices
- Falsifying data or lab results, including changing grades electronically

WHAT IS PLAGIARISM?

Plagiarism is a common form of cheating or academic dishonesty in the school setting. It is representing another person's works or ideas as your own without giving credit to the proper source and submitting it for any purpose. Examples of plagiarism can include, but are not limited to:

- Submitting someone else's work, such as published sources in part or whole, as your own without giving credit to the source
- Turning in purchased papers or papers from the Internet written by someone else
- Representing another person's artistic or scholarly works such as musical compositions, computer programs, photographs, drawings, or paintings as your own
- Helping others plagiarize by giving them your work

All stakeholders have a responsibility in maintaining academic honesty. Educators must provide the tools and teach the concepts that afford students the knowledge to understand the characteristics of cheating and plagiarism. Parents must support their students in making good decisions relative to completing coursework assignments and taking exams. Students must produce work that is theirs alone, recognizing the importance of thinking for themselves and learning independently, when that is the nature of the assignment. Adhering to the Code of Honor for the purposes of academic honesty promotes an essential skill that goes beyond the school environment. Honesty and integrity are useful and valuable traits impacting one's life.

Questions or concerns regarding the consequences associated with a violation of the Code of Honor may be directed towards your child's school administration and/or the school district.

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CLARK COUNTY SCHOOL DISTRICT MIDDLE LEVEL CURRICULUM

Grade 6

- Mathematics
- English
- Reading
- Science
- Physical Education/Computer Literacy*
- Elective**

* Minimum of one semester P.E. and one semester of computer literacy.

** Additional social studies is recommended in the exploratory program.

Grade 7

- Mathematics
- English
- Reading
- Science
- U.S. History/Nevada History**
- Physical Education*
- Elective ***

* Minimum of one semester P.E.

** Cultures will be taught as it relates to the development of U.S. History.

*** Recommend technology and foreign language components be offered in the exploratory program.

Grade 8

- Mathematics*
- English*
- World Geography*
- Science*
- Physical Education/Health**
- Elective

* Teach reading strategies through all content areas.

** Minimum 1 semester of P.E. and 9 weeks of Health. The required sex education/AIDS component will be taught by an appropriately certified instructor.

Clark County School District

Curriculum and Professional Development Division - Guidance and Counseling Department

MIDDLE/JUNIOR HIGH SCHOOL PROMOTION REGULATION

Throughout the middle school years, we value and emphasize a well-balanced educational program including mathematics, English, reading, science, social studies, aspects of technology, the arts or exploratory classes, health, and physical education.

The importance of all coursework cannot be underestimated. Mathematics, reading and English at the middle level are foundational courses. With a strong level of skill in these disciplines, one is better able to understand and prepare to learn social studies and science concepts. The time and effort that one invests in all of the middle school courses of study will predict a student's success on the mandatory Nevada Proficiency Exams in mathematics, reading, writing and science. Students must pass the Nevada Proficiency Exams to graduate from high school. Likewise, students who pursue postsecondary education or training will have a stronger knowledge base in all areas to perform successfully on the SAT and ACT college admissions exams.

Successful performance in high school, college, trade school and work-related life-long learning programs is directly related to the depth of understanding and foundational skills in these subject areas. The Nevada State Board of Education and the Clark County School District have adopted promotion standards and regulations to help ensure that students be held accountable to acquire basic foundational skills.

STATE OF NEVADA REGULATION FOR PROMOTION TO HIGH SCHOOL

Students enrolled in the 8th grade for the 2009-2010 School Year:

According to Nevada Administrative Code (NAC) 389.445, students must complete one and one-half units of credit in mathematics, one and one-half units of credit in English or reading, one unit of credit in science, and one unit of credit in social studies with a passing grade during seventh and eighth grade for promotion to high school. One-half unit of credit is the equivalent of one semester.

CLARK COUNTY SCHOOL DISTRICT POLICY AND REGULATION 5123

Clark County School District Policy and Regulation 5123 – Promotion, Retention, and Demotion of Students – sets the standard for promotion from sixth to seventh grade, from seventh to eighth grade, and from eighth grade to high school.

- Pupils enrolled in Grade 6 during the 2009-2010 school year must complete one semester with a passing grade in mathematics, one semester with a passing grade in English or reading, and one semester with a passing grade in science for promotion to Grade 7.
- Pupils enrolled in Grade 7 during the 2009-2010 school year must complete one semester with a passing grade in mathematics, one semester with a passing grade in English or reading, one semester with a passing grade in science, and one semester with a passing grade in social studies for promotion to Grade 8.
- Pupils enrolled in Grade 8 during the 2009-2010 school year must complete three semesters with a passing grade in mathematics, and three semesters of a passing grade in English or

reading, two semesters of science, and two semesters of social studies during the seventh and eighth grade years for promotion to high school. An eighth grade student who does not meet promotion requirements may be promoted to high school on academic probation provided the student meets the criteria. A parent or guardian may elect not to place his/her child on academic probation but to remain in Grade 8.

HIGH SCHOOL ACADEMIC PROBATION

Although a student may be promoted to high school on academic probation, summer school credit retrieval is recommended to improve academic skills and to prepare for success in high school. Successful completion of required summer school courses may remove a student from academic probation.

- An eighth grade student who has not met the promotion requirements may be promoted to the ninth grade on academic probation provided at least one of the following criteria has been met:
 - 1) Criterion-Referenced Test (CRT) scores meet or exceed standards in the area(s) of credit deficiency; or
 - 2) Credits have been earned in the core area(s): English or reading, mathematics, science, and social studies; however, the student is deficient in one semester of the five total credits required for promotion; or
 - 3) A student reaches the age of sixteen before, on, or after the first day of school.
- High School Academic Probation will consist of the appropriate remediation in the subject area(s) in which the student failed to pass in middle school. Remediation may include, but is not limited to a minimum of one semester of remedial instruction in the deficient subject area(s) during the ninth grade year. The student must earn a passing grade in the remediation course(s) in order to be removed from academic probation. A student may be placed on academic probation for more than one semester.

An eighth grade student ***not meeting criteria for promotion to ninth grade and not meeting the criteria for academic probation*** may be retained in the eighth grade for the following school year. ***A retained eighth grade student may not be promoted mid-year.***

Please reference the complete regulation for additional details.

NEVADA STATE CONTENT STANDARDS INTRODUCTION

The 1999/00 school year saw the implementation of Nevada State Content and Performance Standards in English/language arts, mathematics, and science. The 2000/01 school year saw the addition of social studies, the arts, physical education/health, and computer and technology education. For the purposes of the Curriculum Overview, only the core academic curricular state standards are provided. These standards fulfill promises made by the Nevada Legislature to establish high expectations for all of Nevada's children. The standards identify what all Nevada students should know and be able to do from kindergarten through twelfth grade. The pages that follow outline the academic standards in English/language arts, mathematics, science, and social studies. Each secondary course profiled in this booklet will cover or address a variety of the state content standards. To ensure that all students are provided the opportunity to learn all of the identified content standards, recommended course sequences in each content area either have been or will be developed to guide students as they progress from grades six through twelve. These opportunities to learn are critical as students prepare to take the Nevada High School Proficiency Examinations beginning in the fall of their junior year. The class of 2005 will be the first class to participate in a standards-based proficiency examination program in writing, reading, mathematics, and science. While high academic standards for all of our students will help improve teaching and learning in our schools, parents/guardians also play a major role in the education of their children. By encouraging your child to develop his or her skills and knowledge, you will be sending the message that a good education is important to his/her future. Parents/guardians wishing more details regarding Nevada State Content and Performance Standards may contact their child's school.

NEVADA STATE CONTENT STANDARDS

Standards identify what students should learn by the end of twelfth grade.

ENGLISH/LANGUAGE ARTS

1. Students know and use word analysis skills and strategies to comprehend new words encountered in text and to develop vocabulary.
2. Students use reading process skills and strategies to build comprehension.
3. Students read literary text to comprehend, interpret, and evaluate authors, cultures, and times.
4. Students read expository and persuasive texts to comprehend, interpret, and evaluate for specific purposes.
5. Students write a variety of texts using the writing process.
6. Students write a variety of texts that inform, persuade, evaluate, entertain, or tell a story and that are appropriate to audience and purpose.
7. Students listen to and evaluate oral communication of content, style, speaker's purpose, and audience appropriateness.
8. Students speak using organization, style, tone, voice, and media aids appropriate to audience and purpose. Students participate in discussions to offer information, clarify ideas, and support a position.

MATHEMATICS

1. **Numbers, Number Sense, and Computation:** Students will accurately calculate and use estimation techniques, number relationships, operation rules, and algorithms; they will determine the reasonableness of answers and the accuracy of solutions to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.
2. **Patterns, Functions, and Algebra:** Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations (words, numbers, tables, and graphs) of patterns, functions, and algebraic relations as modeled in practical situations to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.
3. **Measurement:** Students will use appropriate tools and techniques of measurement to determine, estimate, record, and verify direct and indirect measurements to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.
4. **Spatial Relationships, Geometry, and Logic:** Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics.
5. **Data Analysis:** Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability projections to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.

NEVADA STATE CONTENT STANDARDS

MATHEMATICS (CONT.)

Nevada Process Standards

- A. **Problem Solving:** Students will develop their ability to solve problems by engaging in developmentally appropriate opportunities where there is a need to use various approaches to investigate and understand mathematical concepts,
- B. **Mathematical Communication:** Students will develop their ability to communicate mathematically by solving problems where there is a need to obtain information from the real world through reading, listening, and observing.
- C. **Mathematical Reasoning:** Students will develop their ability to reason mathematically by solving problems where there is a need to investigate mathematical ideas and construct their own learning in all content areas.
- D. **Mathematical Connections:** Students will develop the ability to make mathematical connections by solving problems where there is a need to view mathematics as an integrated whole.

SCIENCE

By the end of 8th grade:

Nature of Science

- 1. Students understand that scientific knowledge requires critical consideration of verifiable evidence obtained from inquiry and appropriate investigations.
- 2. Students understand the interactions of science and society in an ever-changing world.

Physical Science

- 1. Students understand the properties and changes of properties in matter.
- 2. Students understand that position and motion of an object result from the net effect of the different forces acting on it.
- 3. Students understand transfer of energy.

Earth and Space Science

- 1. Students understand the relationship between the Earth's atmosphere, topography, weather and climate.
- 2. Students understand characteristics of our solar system that is part of the Milky Way galaxy.
- 3. Students understand that landforms result from a combination of constructive and destructive processes.

Life Science

- 1. Students understand the role of genetic information in the continuation of a species.
- 2. Students understand that living things are composed of cells, which are specialized in multicellular organisms to perform a variety of life functions.
- 3. Students understand how living and non-living components of ecosystems interact.
- 4. Students understand that life forms change over time, contributing to the variety of organisms found on the Earth.

NEVADA STATE CONTENT STANDARDS

SOCIAL STUDIES

- HISTORY 1.0** **People, Cultures, and Civilizations:** Students understand the development, characteristics, and interaction of people, cultures, societies, religion, and ideas.
- HISTORY 2.0** **Nation Building and Development:** Students understand the people, events, ideas, and conflicts that lead to the evolution of nations, empires, distinctive cultures, and political and economic ideas.
- HISTORY 3.0** **Social Responsibility & Change:** Students understand how social ideas and individual action lead to social, political, economic, and technological change.
- HISTORY 4.0** **International Relationships & Power:** Students understand the interaction and interdependence of nations around the world. Students understand the impact of economics, politics, religion, and culture on international relationships.
- GEOGRAPHY 5.0** **The World in Spatial Terms:** Students use maps, globes, and other geographic tools and technologies to locate and extrapolate information about people, places, and environments.
- GEOGRAPHY 6.0** **Places & Regions:** Students understand the physical and human features of places and use this information to define and study regions and their patterns of change.
- GEOGRAPHY 7.0** **Human Systems:** Students understand how economic, political, and cultural processes interact to shape patterns of human migration and settlement, influence and interdependence, and conflict and cooperation.
- GEOGRAPHY 8.0** **Environment and Society:** Students understand effects of interactions between human and physical systems and the changes in use, distribution, and importance of resources.
- ECONOMICS 9.0** **The Market Economy:** Students will understand how scarcity and incentives affect choices, how markets work, why markets form, how supply and demand interact to determine the market price, and how changes in prices act as economic signals to coordinate trade.
- ECONOMICS 10.0** **The U.S. Economy As A Whole:** Students will identify indicators used to measure economic performance, understand key aspects of how the economy acts as a system, and understand the roles of money, interest rates, savers, and borrowers, financial institutions, and the central bank in our economy.
- ECONOMICS 11.0** **The Dynamic Economy:** Students will identify the causes of economic change, explain how the U.S. economic system responds to those changes; and explain how other economic systems respond to change.
- ECONOMICS 12.0** **The International Economy:** Students will explore trends in international trade, the impact of trade on the U.S. economy, and the role of exchange rates.
- CIVICS 13.0** **Citizenship and the Law:** Students know why society needs rules, laws, and government and understand the roles, rights, and responsibilities of citizens.

NEVADA STATE CONTENT STANDARDS

SOCIAL STUDIES (CONT.)

- CIVICS 14.0** **The Federal System: U.S., State, and Local Governments:** Students understand the U.S. Constitution and the government it creates, including the relationship between national and sub-national governments, as well as the structure and function of state and local governments.
- CIVICS 15.0** **The Political Process:** Students describe the roles of political parties, elections, interest groups, media, and public opinion in the democratic process.
- CIVICS 16.0** **Global Relations:** Students explain the different political systems in the world and how those systems relate to the United States and its citizens.

GUIDANCE AND COUNSELING PROGRAM MIDDLE SCHOOL

All schools offer a comprehensive guidance and counseling program which is integrated with the middle school academic curriculum and based on the National Standards of the American School Counselor Association. Counselors are professionally trained in the educational, social, emotional and career development of middle school students. Likewise, counselors throughout the Clark County School District follow guidelines of an Annual Guaranteed Level of Service for students, while having district-wide, grade-level goals to provide a level of consistency throughout the district.

Middle school guidance counselors assist students with:

- Educational planning
- Interpretation of test scores
- Career information
- Social/emotional growth
- High school and post-secondary options

PLANNING RESOURCES

Several planning resources are made available to students and parents to help young people transition successfully to high school and to their post-secondary endeavors.

- **Moving On High School Transitional Planning Guide**

Eighth grade students receive this guide to help them prepare for high school, to be more aware of the importance of having an educational plan, and to start thinking about post-secondary education and career choices. The Transitional Planning Guide includes a wealth of information for middle school students regarding diploma requirements, time management tips for high school success, magnet school information, college readiness, and recommended courses of study.

- **CCSD Guidance & Counseling Website**

The Guidance and Counseling Website is designed to provide students and parents with information on counseling services provided by the school district. It also serves as a support reference for preparing students for their future educational decisions regarding post-secondary planning. Starting with elementary school, parents and students are able to review a checklist of activities on "How to Support Your Child's Education." These activities will assist with school success and will also prepare children for college, apprenticeships, trade and technical schools, military opportunities, or to go directly to work. Current scholarships and college events for high school students are also updated weekly on the website. For details visit: www.ccsd.net, select Guidance and Counseling from the student menu for the information.

MIDDLE SCHOOL ACADEMIC PLAN

Student Name: _____ Student Number: _____

What kind of work do I want to do after high school? I am interested in the following career cluster:

- | | |
|--|--|
| <input type="checkbox"/> Arts/Humanities | <input type="checkbox"/> Human Resources |
| <input type="checkbox"/> Business/Management | <input type="checkbox"/> Natural Resources |
| <input type="checkbox"/> Health Services | <input type="checkbox"/> Technology/Industry |

For more career information, visit your school's library and use the Nevada Career Information System (NCIS) at www.nvcis.intocareers.org/junior (User name: bighorn; Password: sheep)

What is my goal for after graduation? My plans after high school may include the following:

- | | |
|---|---|
| <input type="checkbox"/> Apprenticeship | <input type="checkbox"/> Technical/Trade School |
| <input type="checkbox"/> Community/Two-Year College | <input type="checkbox"/> University/Four-Year College |
| <input type="checkbox"/> Military Service | <input type="checkbox"/> Work |

What kind of classes do I need to take in high school to be prepared for my goal? I am interested in the following school pathway:

- | | |
|---|---|
| <input type="checkbox"/> Trade/Technical/Work | <input type="checkbox"/> College Prep |
| <input type="checkbox"/> Advanced Diploma | <input type="checkbox"/> Honors Diploma |

Grade 6

- English
- Reading
- Mathematics
- Science
- Computer Literacy/Physical Education
- Elective

Grade 7

- English
- Reading*
- Mathematics
- Science
- U.S. History
- Elective/Physical Education*

Grade 8

- English
- Mathematics
- Science
- World Geography
- Health/Physical Education
- Elective

*Course offerings may vary at middle school sites.

In addition please complete the Clark County School District On-line Web-based Academic Plan at: <http://eduplan.ccsd.net>

Parent Signature _____ Date _____

*Please note that this signature will be transferred to the academic website as an electronic signature record.

ENGLISH AND READING

SIXTH GRADE

This course develops students' reading, writing, speaking, listening, research, and study skills. Grammar, usage, and mechanics are taught as necessary elements of the writing process. Literature serves as a model for writing and critical thinking.

WORD ANALYSIS

It is expected students will:

- ⊙ build and extend vocabulary using context clues and resources
- ⊙ analyze the different parts of a word to build and extend vocabulary
- ⊙ build and apply vocabulary learned in all content areas

READING STRATEGIES

It is expected students will:

- ⊙ select and use strategies before, during, and after reading a text
 - develop and understand the purpose of a text
 - differentiate between main ideas and supporting details
 - summarize information from several sources
 - evaluate the effectiveness of reading strategies

LITERARY TEXT

It is expected students will:

- ⊙ identify the characteristics and elements of fiction
- ⊙ explain the methods an author uses to create a character
- ⊙ use evidence from a story to support inferences about a character
- ⊙ identify and explain a theme in a work of literature
- ⊙ identify and explain the different points of view an author can use in writing a story
- ⊙ make and revise predictions and inferences to draw conclusions about a work of literature
- ⊙ explain the use of imagery, figurative language, and stylistic devices in a work of literature
- ⊙ explain how an author uses words and phrases to reveal tone and create mood
- ⊙ analyze the social, historical, and cultural influences on works of literature
 - make connections to self, other texts, and/or the world

EXPOSITORY TEXT

It is expected students will:

- ⊙ identify and use the features of a text to understand information and an author's purpose
- ⊙ explain the use of figurative language and analogies
- ⊙ explain the language an author uses to persuade
- ⊙ identify words and phrases that reveal an author's tone
- ⊙ identify the main idea of text and trace the development of an author's viewpoint, argument, or perspective
- ⊙ describe a theme based on evidence
 - explain the social, historical, and cultural influences on the expository writing of various authors
- ⊙ use information to answer questions

ENGLISH SIXTH GRADE (Continued)

- ⊙ make and revise predictions and inferences to draw conclusions in expository writing
- ⊙ evaluate the author's use of facts and/or opinions
- ⊙ evaluate a cause and its effect on an event
- ⊙ evaluate a problem and develop its solution
 - make connections to self, other text, and/or the world
 - summarize information

EFFECTIVE WRITING

It is expected students will:

- ⊙ use prewriting strategies to plan written work
- ⊙ draft, revise, and edit rough drafts of multiple-paragraph compositions
- ⊙ use correct grammar, mechanics, and word usage in writing
- ⊙ use a variety of sentence structures in writing
- ⊙ edit sentences for elimination of fragments and run-ons
- ⊙ prepare a final draft for publication appropriate to audience and purpose

TYPES OF WRITING

It is expected students will:

- ⊙ write expository texts using a variety of organizational structures for different audiences and with different purposes
- ⊙ write narrative and descriptive texts for different audiences and purposes
- ⊙ write analyses of both literary and expository texts
- ⊙ write persuasive essays and compositions
- ⊙ write different types of communications in a variety of formats
 - formulate research questions and develop a plan to gather information for a research paper
 - evaluate possible sources for credibility and usefulness for a research paper
 - cite sources of information correctly using a standard form of research documentation
- ⊙ write a research paper
- ⊙ summarize literary and expository information

LISTENING

It is expected students will:

- ⊙ practice effective listening skills
- ⊙ listen to and evaluate constructive feedback
 - expand vocabulary through listening
- ⊙ use data to solve problems
- follow oral directions accurately

SPEAKING

It is expected students will:

- ⊙ give oral directions effectively to complete tasks and procedures
- ⊙ use precise language to describe and elicit a response
 - apply Standard English to communicate orally
- ⊙ develop, deliver, and evaluate a variety of oral presentations
- ⊙ express and defend a position

MATHEMATICS

SIXTH GRADE

This course builds on previously learned concepts in developing new skills and mathematical fluency with fractions, decimals, percents, ratios, measurement, geometry, data analysis, probability, spatial relationships, and patterns. Problem solving, connections, reasoning, and communication are integrated throughout this course. The use of manipulatives, mathematical tools, and technology, including calculators and computer software, are an integral part of this course.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected students will:

- ⦿ read, write, compare, and order groups of fractions, groups of decimals, and groups of percents
- ⦿ identify equivalent expressions between and among fractions, decimals, and percents
- ⦿ estimate using fractions, decimals, and percents
- ⦿ use estimation strategies in mathematical and practical situations
- ⦿ calculate using fractions, decimals, and percents in mathematical and practical situations
- ⦿ use order of operations to evaluate expressions with integers
- ⦿ use the concepts of number theory, including prime and composite numbers, factors, multiples, and the rules of divisibility to solve problems

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected students will:

- ⦿ when given a rule relating two variables, create a table and represent the ordered pairs on a coordinate plane
- ⦿ use and create tables and charts to extend a pattern in order to describe a rule for input/output tables and to find missing terms in a sequence
- ⦿ evaluate formulas and algebraic expressions using whole number values
- ⦿ solve and graphically represent equations and simple inequalities in one variable
 - write simple expressions and equations using variables to represent mathematical situations

MEASUREMENT

It is expected students will:

- ⦿ estimate and compare corresponding units of measure for temperature, length, and weight/mass between customary and metric systems
- ⦿ given two measurements of the same object, select the one that is more precise
- ⦿ explain how the size of the unit of measure used affects precision
- ⦿ select, model, and apply formulas to find the perimeter, circumference, and area of plane figures
- ⦿ compare and use unit cost in practical situations
- ⦿ write and apply ratios in mathematical and practical problems involving measurement and monetary conversions
- ⦿ use equivalent periods of time to solve practical problems

MATHEMATICS SIXTH GRADE (Continued)

SPATIAL RELATIONSHIPS, GEOMETRY, AND LOGIC

It is expected students will:

- ⊙ measure angles using a protractor
- ⊙ identify, classify, compare, and draw regular and irregular quadrilaterals
- ⊙ determine actual measurements represented on scale drawings
- ⊙ convert actual measurements to scale
- ⊙ using a coordinate plane, identify, and locate points
 - model slope (pitch, angle of inclination) using concrete objects and practical examples
 - determine the measure of missing angles of triangles based on the Triangle Sum Theorem
 - identify, draw, and use central angles to represent fractions of a circle

DATA ANALYSIS

It is expected students will:

- ⊙ interpret data and make predications using circle graphs and scatter plots
- ⊙ analyze the effect a change of graph type has on the interpretation of a set of data
- ⊙ find the number of outcomes for a specific event by constructing sample spaces and tree diagrams
- ⊙ find experimental probability using concrete materials
- ⊙ analyze various representations of a set of data to draw conclusions and make predictions
- ⊙ describe the limitations of various graphical representations

PROBLEM SOLVING

It is expected students will:

- ⊙ generalize solutions and apply previous knowledge to new problem solving situations
- ⊙ determine an efficient strategy, verify, interpret, and evaluate the results with respect to the original problem
- ⊙ apply problem solving strategies until a solution is found or it is clear that no solution exists
- ⊙ interpret and solve a variety of mathematical problems by paraphrasing
- ⊙ check the reasonableness of a solution

MATHEMATICAL COMMUNICATION

It is expected students will:

- ⊙ use formulas, algorithms, inquiry, and other techniques to solve mathematical problems
- ⊙ evaluate written and oral presentations in mathematics
- ⊙ identify and translate key words and phrases that imply mathematical operations
- ⊙ model and explain mathematical relationships using oral, written, graphic, and algebraic methods

MATHEMATICAL REASONING

It is expected students will:

- ⊙ recognize and apply deductive and inductive reasoning

MATHEMATICS SIXTH GRADE (Continued)

- ⦿ review and refine the assumptions and steps used to derive conclusions in mathematical arguments
- ⦿ justify answers and the steps taken to solve problems with and without manipulatives and physical models

MATHEMATICAL CONNECTIONS

It is expected students will:

- ⦿ use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics
- ⦿ use manipulatives and physical models to explain the relationships between concepts and procedures
- ⦿ use the connections among mathematical topics to develop multiple approaches to problems
- ⦿ apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science

SCIENCE

SIXTH GRADE

This one-year course for sixth-grade students focuses on understanding the living systems on Earth. Students will use scientific processes, protocols, and tools, including inquiry, to build understandings of living things and the interactions between living and non-living things. Critical thinking, collaboration, accuracy, and communication skills will be used as students develop a foundation for scientific literacy.

NATURE OF SCIENCE

It is expected students will:

- ⦿ design and conduct a controlled experiment
- ⦿ develop abilities and understanding necessary to safely engage in structured scientific inquiry
- ⦿ relate classroom science experiences to the work of scientists
- ⦿ use data or evidence to develop explanations and models

DIVERSITY OF LIFE

It is expected students will:

- ⦿ describe characteristics of living things
- ⦿ explain the hierarchal organization of multicellular organisms (cells, tissues, organs, organ systems)
- ⦿ describe characteristics of cells and their functions
- ⦿ classify living things by their similarities and functions

SYSTEMS OF LIVING THINGS

It is expected students will:

- ⦿ describe interactions between living things and their environments
- ⦿ analyze trade-offs in changes to environments
 - relate Earth's characteristics to needs of living things
- ⦿ recognize scientific evidence for changes in organisms and environmental conditions over time
 - describe how living organisms adjust to changes in their environments
- ⦿ describe how energy is transformed and flows through systems

ENGLISH AND READING

SEVENTH GRADE

This course focuses on expanding students' reading, writing, speaking, listening, and research skills. It strengthens critical thinking and study skills. Grammar, usage, and mechanics are taught as necessary elements of the writing process. Literature is used to stimulate discussion and to model good writing.

WORD ANALYSIS

It is expected students will:

- ⊙ build and extend vocabulary using context clues and resources
- ⊙ analyze the different parts of a word to build and extend vocabulary
- ⊙ build and apply vocabulary learned in all content areas

READING STRATEGIES

It is expected students will:

- ⊙ select and use comprehension strategies before, during, and after reading a text
 - develop and understand the purpose of a text
 - differentiate between main ideas and supporting details
 - summarize information from several sources
 - evaluate the effectiveness of reading strategies

LITERARY TEXT

It is expected students will:

- ⊙ identify the characteristics and elements of fiction
- ⊙ explain the methods an author uses to create a character
- ⊙ describe the motivation for a character's actions
- ⊙ use evidence from a story to support inferences about a character
- ⊙ identify and explain themes in a work of literature
- ⊙ identify and explain the different points of view an author can use in writing a story
- ⊙ make and revise predictions and inferences to draw conclusions about a work of literature
- ⊙ analyze and explain the use of imagery, figurative language, and stylistic devices in a work of literature
- ⊙ explain how an author uses words and phrases to reveal tone and create mood
- ⊙ analyze the social, historical, and cultural influences on an author's work
 - make connections to self, other text, and/or the world

EXPOSITORY TEXT

It is expected students will:

- ⊙ identify, evaluate, and use the features of a text to understand information and an author's purpose
- ⊙ describe and explain the language an author uses to persuade
- ⊙ identify words and phrases that reveal an author's tone
- ⊙ identify the main idea of text and trace the development of an author's viewpoint, argument, or perspective

ENGLISH SEVENTH GRADE (Continued)

- ⊙ describe a theme based on evidence
- explain the social, historical, and cultural influences in expository writing
- ⊙ use information to answer questions
- ⊙ make and revise predictions and inferences to draw conclusions in expository writing
- ⊙ evaluate the author's use of facts and/or opinions
- ⊙ evaluate a cause and its effect on an event
- ⊙ evaluate a problem and develop its solution
- read and follow directions to complete tasks or procedures
- make connections to self, other text, and/or the world
- summarize information

EFFECTIVE WRITING

It is expected students will:

- ⊙ use prewriting strategies to plan written work
- ⊙ draft, revise, and edit rough drafts of multiple-paragraph compositions
- ⊙ use correct grammar, mechanics, and word usage in writing
- ⊙ use a variety of sentence structures in writing
- ⊙ edit sentences for elimination of fragments and run-ons
- ⊙ prepare a final draft for publication appropriate to audience and purpose

TYPES OF WRITING

It is expected students will:

- ⊙ write expository texts using a variety of organizational structures for different audiences and with different purposes
- ⊙ write narrative and descriptive texts for different audiences and purposes
- ⊙ write analyses of both literary and expository texts
 - write responses that demonstrate an understanding of expository and literary texts supported by evidence
- ⊙ write persuasive essays and compositions
- ⊙ write different types of communications in a variety of formats
- ⊙ formulate research questions and develop a plan to gather information for a research paper
- ⊙ evaluate possible sources for credibility and usefulness for a research paper
- ⊙ cite sources of information correctly using a standard form of research documentation
- ⊙ write a research paper
- ⊙ summarize literary and expository information

LISTENING

It is expected students will:

- ⊙ practice effective listening skills
- ⊙ listen to and evaluate constructive feedback
- ⊙ evaluate and use data to solve problems
 - listen for and distinguish fact from opinion
 - listen for and evaluate oral communications by considering tone and the logic of a speaker's argument(s)

ENGLISH SEVENTH GRADE (Continued)

SPEAKING

It is expected students will:

- give oral directions effectively to complete tasks and procedures
- use precise language to describe and elicit a response
 - apply Standard English to communicate orally
- develop, deliver, and evaluate a variety of oral presentations
- express and defend a position
 - provide and receive constructive feedback when participating in conversations and discussions

MATHEMATICS

SEVENTH GRADE

This course builds on the concepts of number operations with integers, decimals, and rational numbers, problem solving and reasoning skills, data analysis, probability, geometry, measurement, spatial relationships, patterns, and algebraic concepts. The use of manipulatives, mathematical tools, and technology, including calculators and computer software, are an integral part of this course.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected students will:

- ⊙ translate among fractions, decimals, and percents including fractional percents
- ⊙ compare and order a combination of rational numbers, including fractions, decimals, percents, and integers in mathematical and practical situations
- ⊙ select and round to the appropriate significant digit
- ⊙ calculate with integers and other rational numbers to solve mathematical and practical situations
- ⊙ identify and apply the distributive, commutative, and associative properties of rational numbers to solve problems

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected students will:

- ⊙ use and create tables, charts, and graphs to extend a pattern in order to describe a linear rule, including integer values
- ⊙ evaluate formulas and algebraic expressions for given integer values
- ⊙ solve and graphically represent equations and inequalities in one variable with integer solutions
- ⊙ generate and graph a set of ordered pairs to represent a linear equation
- ⊙ identify linear equations and inequalities
- ⊙ model and solve equations using concrete and visual representations

MEASUREMENT

It is expected students will:

- ⊙ estimate and compare corresponding units of measure for area and volume/capacity between customary and metric systems
- ⊙ select, model, and apply formulas to find the volume and surface area of solid figures
- ⊙ calculate simple interest in monetary problems
- ⊙ write and apply proportions to solve mathematical and practical problems involving measurement and monetary conversions

SPATIAL RELATIONSHIPS, GEOMETRY, AND LOGIC

It is expected students will:

- ⊙ identify, classify, compare, and draw regular and irregular polygons
- ⊙ find and verify the sum of the measure of interior angles of triangles and quadrilaterals
- ⊙ demonstrate translation, reflection, and rotation using coordinate geometry and models
- ⊙ describe the location of the original figure and its transformation on a coordinate plane

MATHEMATICS SEVENTH GRADE (Continued)

- ⊙ determine slope of a line, midpoint of a segment, and the horizontal and vertical distance between two points using coordinate geometry
- ⊙ describe the geometric relationships of parallel lines, perpendicular lines, triangles, quadrilaterals and bisectors
- ⊙ model the pythagorean theorem and solve for the hypotenuse
 - make scale drawings using ratios and proportions

DATA ANALYSIS

It is expected students will:

- ⊙ formulate questions that guide the collection of data
- ⊙ organize, display, and read data using the appropriate graphical representations (with and without technology)
- ⊙ interpret graphical representations of data to describe patterns, trends, and data distribution
- ⊙ find the number of permutations possible for an event in mathematical and practical situations
- ⊙ find the theoretical probability of an event using different counting methods including sample spaces and compare that probability with experimental results
- ⊙ represent the probability of an event as a number between 0 and 1
- ⊙ interpolate and extrapolate from data to make predications for a given set of data

PROBLEM SOLVING

It is expected students will:

- ⊙ generalize solutions and apply previous knowledge to new problem solving situations
- ⊙ determine an efficient strategy, verify, interpret, and evaluate the results with respect to the original problem
- ⊙ apply problem solving strategies until a solution is found or it is clear that no solution exists
- ⊙ interpret and solve a variety of mathematical problems by paraphrasing
- ⊙ check the reasonableness of a solution

MATHEMATICAL COMMUNICATION

It is expected students will:

- ⊙ use formulas, algorithms, inquiry, and other techniques to solve mathematical problems
- ⊙ evaluate written and oral presentations in mathematics
- ⊙ identify and translate key words and phrases that imply mathematical operations
- ⊙ model and explain mathematical relationships using oral, written, graphic, and algebraic methods

MATHEMATICAL REASONING

It is expected students will:

- ⊙ recognize and apply deductive and inductive reasoning
- ⊙ review and refine the assumptions and steps used to derive conclusions in mathematical arguments
- ⊙ justify answers and the steps taken to solve problems with and without manipulatives and physical models

MATHEMATICS SEVENTH GRADE (Continued)

MATHEMATICAL CONNECTIONS

It is expected students will:

- use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics
- use manipulatives and physical models to explain the relationships between concepts and procedures
- use the connections among mathematical topics to develop multiple approaches to problems
- apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science

SCIENCE

SEVENTH GRADE

This year-long course for seventh grade students focuses on understanding Earth and space science systems. Students will use scientific processes, protocols, and tools, including inquiry, to build understanding of Earth's structure and place in the Solar System, atmospheric processes, and composition of matter. Critical thinking, collaboration, accuracy, and communication skills will be practiced as students extend their scientific literacy.

NATURE OF SCIENCE

It is expected students will:

- ⦿ extend abilities and understanding necessary to safely engage in structured and original scientific inquiry
- relate classroom science experiences to the work of scientists and explore the role of scientists
- ⦿ critique explanations and evidence given for explanations
- ⦿ use appropriate technology and laboratory procedures safely for observing, measuring, recording, and analyzing data
- ⦿ use multiple methods for organizing items and information
- ⦿ identify and critically evaluate information in data, tables, and groups
- ⦿ design and conduct a controlled experiment

EARTH SCIENCE

It is expected students will:

- ⦿ describe constructive and destructive forces resulting in Earth's landforms and features
- ⦿ describe the structure of the Earth
- ⦿ distinguish between weather and climate in relation to Earth's atmosphere and landforms
- ⦿ describe the distribution and circulation of water on Earth
- ⦿ distinguish between renewable and nonrenewable resources, especially in Nevada
- ⦿ develop a view of Earth as a dynamic system involving the flow of matter and energy in cyclical processes

SPACE SCIENCE

It is expected students will:

- ⦿ describe the characteristics of the Solar System and its influences on Earth
- ⦿ explain the relationships between celestial objects because of gravity

U. S./NEVADA HISTORY SEVENTH GRADE

This one-year course is a study of Nevada from statehood to present day and American history from the time of the American Revolution through World War II. Students explore and evaluate challenges facing the new nation and make connections between the rise of industrialization and contemporary social and economic conditions. The history of Nevada is integrated throughout the year. This is a required course for all seventh grade students.

It is expected students will:

- evaluate the significant social, cultural, economic, and political changes in the United States and Nevada from the American Revolution through World War II
- summarize the contributions made by diverse cultures to the United States and Nevada
- assess the concepts of tolerance and respect
- cite evidence supporting the development of the state of Nevada and its unique features
- explain the effects of new technologies on the development of the United States and Nevada
- investigate the value of responsible citizenship
- apply the content literacy skills necessary to analyze historical documents, artifacts, and concepts
- use information, media, and technology literacy skills necessary to research, communicate, and demonstrate critical thinking

ENGLISH

EIGHTH GRADE

This course continues to expand students' reading, writing, speaking, listening, and research skills. It strengthens critical thinking and study skills. Grammar, usage, and mechanics are taught as necessary elements of the writing process. Literature serves as a model for writing and critical thinking.

WORD ANALYSIS

It is expected students will:

- ⦿ build and extend vocabulary using context clues and resources
- ⦿ analyze the different parts of a word to build and extend vocabulary
- ⦿ build and apply vocabulary learned in all content areas
 - evaluate author's use of connotation and denotation in text

READING STRATEGIES

It is expected students will:

- ⦿ select and use comprehension strategies before, during, and after reading a text
 - develop and understand the purpose of a text
 - differentiate between main ideas and supporting details
 - summarize information from several sources
 - evaluate the effectiveness of reading strategies

LITERARY TEXT

It is expected students will:

- ⦿ identify the characteristics and elements of fiction
- ⦿ explain the methods an author uses to create a character
- ⦿ describe and analyze the motivation for a character's actions
- ⦿ use evidence from a story to support inferences about a character
- ⦿ identify and explain themes in a work of literature
- ⦿ identify and explain the different points of view an author can use in writing a story
- ⦿ make and revise predictions and inferences to draw conclusions about a work of literature
- ⦿ analyze and explain the use of imagery, figurative language, and stylistic devices in a work of literature
- ⦿ explain how an author uses words and phrases to reveal tone and create mood
- ⦿ explain the use of irony
 - analyze the social, historical, and cultural influences on works of literature
 - make connections to self, other text, and/or the world

EXPOSITORY TEXT

It is expected students will:

- ⦿ identify, evaluate, and use the features of a text to understand information and an author's purpose
- ⦿ describe and explain the language an author uses to persuade
- ⦿ identify words and phrases that reveal an author's tone
 - analyze intended and unintended effects of persuasive writing

ENGLISH EIGHTH GRADE (Continued)

- ⊙ identify the main idea of text and trace the development of an author's viewpoint, argument, or perspective
- ⊙ describe and analyze a theme based on evidence
 - explain the social, historical, and cultural influences in expository writing
- ⊙ use information to answer questions
- ⊙ make and revise predictions and inferences to draw conclusions in expository writing
- ⊙ evaluate the author's use of facts and/or opinions
- ⊙ evaluate a cause and its effect on an event
- ⊙ evaluate a problem and develop its solution
 - read, evaluate, and follow directions to complete tasks or procedures
 - make connections to self, other, text, and/or the world
 - summarize information

EFFECTIVE WRITING

It is expected students will:

- ⊙ use prewriting strategies to plan written work
- ⊙ draft, revise, and edit rough drafts of multiple-paragraph compositions
- ⊙ use correct grammar, mechanics, and word usage in writing
- ⊙ use a variety of sentence structures in writing
- ⊙ edit sentences to eliminate fragments and run-ons
- ⊙ prepare a final draft for publication appropriate to audience and purpose

TYPES OF WRITING

It is expected students will:

- ⊙ write expository texts using a variety of organizational structures for different audiences and with different purposes
- ⊙ write narrative and descriptive texts for different audiences and purposes
- ⊙ write analyses of both literary and expository texts
 - write responses that make connections with other texts, experiences, or ideas
- ⊙ write persuasive essays and compositions
- ⊙ write different types of communications in a variety of formats
- ⊙ formulate research questions and develop a plan to gather information for a research paper
- ⊙ evaluate possible sources for credibility and usefulness for a research paper
- ⊙ cite sources of information correctly using a standard form of research documentation
- ⊙ write a research paper
- ⊙ summarize literary and expository information

LISTENING

It is expected students will:

- ⊙ practice effective listening skills
- ⊙ listen to and evaluate constructive feedback
- ⊙ evaluate and use data to solve problems
 - listen to and respond to oral communication
 - listen and identify the use of formal and informal language
 - listen for and evaluate oral communications by considering tone and the logic of a speaker's argument(s)

ENGLISH EIGHTH GRADE (Continued)

SPEAKING

It is expected students will:

- give oral directions effectively to complete tasks and procedures
- use precise language to describe and elicit a response
 - apply Standard English to communicate orally
 - defend a position applying logic and citing evidence
 - ask relevant questions to generate possible solutions to a problem
 - develop, deliver, and evaluate a variety of oral presentations

MATHEMATICS

EIGHTH GRADE

This course builds on the concepts of number operations with integers, decimals, rational numbers, data analysis, probability, geometry, measurement, spatial relationships, patterns, and algebraic concepts. The use of manipulatives, mathematical tools, and technology, including calculators and computer software, are an integral part of this course.

NUMBERS, NUMBER SENSE, AND COMPUTATION

It is expected students will:

- ⊙ translate among fractions, decimals, and percents, including percents greater than 100 and percents less than 1
- ⊙ explain and use the relationship among equivalent representations of rational numbers in mathematical and practical situations
- ⊙ calculate with real numbers to solve mathematical and practical situations
- ⊙ use order of operations to solve equations in the real number system

PATTERNS, FUNCTIONS, AND ALGEBRA

It is expected students will:

- ⊙ find the missing term in a numerical sequence or a pictorial representation of a sequence
- ⊙ evaluate formulas and algebraic expressions using rational numbers (with and without technology)
- ⊙ solve and graphically represent equations and inequalities in one variable, including absolute value
- ⊙ add and subtract binomials

MEASUREMENT

It is expected students will:

- ⊙ identify how changes in a dimension of a figure effect changes in its perimeter, area, and volume
- ⊙ calculate percents in monetary problems
- ⊙ apply ratios and proportions to calculate rates and solve mathematical and practical problems using indirect measure

SPATIAL RELATIONSHIPS, GEOMETRY, AND LOGIC

It is expected students will:

- ⊙ apply the properties of equality and proportionality to congruent or similar shapes
- ⊙ demonstrate dilation using coordinate geometry and models
- ⊙ describe the relationship between the original figure and its transformation or dilation
- ⊙ calculate slope, midpoint, and distance using equations and formulas (with and without technology)

DATA ANALYSIS

It is expected students will:

- ⊙ organize, display, and read data including box and whisker plots (with and without technology)

MATHEMATICS EIGHTH GRADE (Continued)

- ⊙ find the number of combinations possible in mathematical and practical situations
- ⊙ distinguish between permutations and combinations
- ⊙ differentiate between the probability of an event and the odds of an event
- ⊙ formulate reasonable inferences and predictions through interpolation and extrapolation of data to solve practical problems

PROBLEM SOLVING

It is expected students will:

- ⊙ generalize solutions and apply previous knowledge to new problem solving situations
- ⊙ determine an efficient strategy, verify, interpret, and evaluate the results with respect to the original problem
- ⊙ apply problem solving strategies until a solution is found or it is clear that no solution exists
- ⊙ interpret and solve a variety of mathematical problems by paraphrasing
- ⊙ check the reasonableness of a solution

MATHEMATICAL COMMUNICATION

It is expected students will:

- ⊙ use formulas, algorithms, inquiry, and other techniques to solve mathematical problems
- ⊙ evaluate written and oral presentations in mathematics
- ⊙ identify and translate key words and phrases that imply mathematical operations
- ⊙ model and explain mathematical relationships using oral, written, graphic, and algebraic methods

MATHEMATICAL REASONING

It is expected students will:

- ⊙ recognize and apply deductive and inductive reasoning
- ⊙ review and refine the assumptions and steps used to derive conclusions in mathematical arguments
- ⊙ justify answers and the steps taken to solve problems with and without manipulatives and physical models

MATHEMATICAL CONNECTIONS

It is expected students will:

- ⊙ use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics
- ⊙ use manipulatives and physical models to explain the relationships between concepts and procedures
- ⊙ use the connections among mathematical topics to develop multiple approaches to problems
- ⊙ apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science

ALGEBRA I

This one-year course is designed to provide students with the necessary knowledge and skills to be prepared for further studies in mathematics. It is intended to increase mathematical fluency in problem solving, logic, reasoning, and effective communication in the study of patterns, functions, and algebra. This course builds on the concepts of rational and irrational numbers, data analysis, probability, geometry, measurement, spatial relationships, patterns, and algebraic concepts. The use of technology, including calculators and computer software, is an integral part of this course. This course fulfills the Algebra credit required for graduation.

PREPARATION FOR HIGH-STAKES EXAMINATIONS

It is expected students will:

- review previous-grade topics while preparing for the Nevada High School Proficiency Examination in Mathematics

REAL NUMBER SYSTEM

It is expected students will:

- ⊙ evaluate formulas and algebraic expressions using multiple strategies
- ⊙ solve problems using real numbers
- ⊙ apply properties of the real number system including exponents, radicals, and scientific notation
- ⊙ solve problems using matrix arithmetic
- ⊙ evaluate formulas and algebraic expressions, including rational expressions, using multiple strategies

FUNCTIONS, EQUATIONS, AND INEQUALITIES

It is expected students will:

- ⊙ solve problems integrating coordinate geometry and algebra
- ⊙ determine solutions for multiple-step linear equations and inequalities involving real numbers
- ⊙ graph and solve linear equations and inequalities
- ⊙ graph and solve absolute value equations and inequalities
- ⊙ graph and solve quadratic equations and inequalities involving real numbers
- ⊙ graph and solve systems of linear and non-linear equations and inequalities, with and without technology
- ⊙ perform operations on polynomials, including factoring
- ⊙ solve problems involving the domain and range of functions and relations

DATA ANALYSIS AND PROBABILITY

It is expected students will:

- ⊙ organize statistical data in tables, graphs, and matrices
- determine the probability of chance events
- apply permutations and combinations to mathematical and practical situations, including the Fundamental Counting Principle

ALGEBRA I (Continued)

PROBLEM SOLVING

It is expected students will:

- ⊙ generalize solutions and apply previous knowledge to new problem solving situations
- ⊙ determine an efficient strategy, verify, interpret, and evaluate the results with respect to the original problem
- ⊙ apply problem solving strategies until a solution is found or it is clear that no solution exists
- ⊙ interpret and solve a variety of mathematical problems by paraphrasing
- ⊙ identify necessary and extraneous information
- ⊙ check the reasonableness of a solution
- ⊙ apply technology as a tool in problem solving situations
- ⊙ apply combinations of proven strategies and previous knowledge to solve non-routine problems

MATHEMATICAL COMMUNICATION

It is expected students will:

- ⊙ use a variety of techniques to solve mathematical problems
- ⊙ evaluate written and oral presentations in mathematics
- ⊙ model and explain mathematical relationships using oral, written, graphic, and algebraic methods
- ⊙ communicate and evaluate mathematical thinking based on the use of definitions, properties, rules, and symbols in problem solving
- ⊙ use everyday language, both orally and in writing, communicate strategies and solutions to problems using appropriate mathematical language

MATHEMATICAL REASONING

It is expected students will:

- ⊙ recognize and apply deductive and inductive reasoning
- ⊙ review and refine the assumptions and steps used to derive conclusions in mathematical arguments
- ⊙ make and test conjectures about algebraic and geometric properties based on mathematical properties
- ⊙ justify the validity of an argument
- ⊙ construct a valid argument

MATHEMATICAL CONNECTIONS

It is expected students will:

- ⊙ use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics
- ⊙ explain the relationships between concepts and procedures
- ⊙ use the connections among mathematical topics to develop multiple approaches to problems
- ⊙ apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science
- ⊙ identify, explain, and apply mathematics in everyday life

SCIENCE

EIGHTH GRADE

This year-long course for eighth-grade students provides physical science explanations that extend understandings developed in previous science courses. Students will use scientific processes, protocols, and tools, including inquiry, to build understanding of structures, patterns, and relationships explained through the physical sciences. Critical thinking, collaboration, accuracy, and communication skills will be emphasized as students refine their scientific literacy.

NATURE OF SCIENCE

It is expected students will:

- safely engage in structured and original exploration of scientific questions
- ⊙ develop and defend a scientific explanation using evidence and/or data
- ⊙ describe how scientific knowledge has progressed and been revised based on collaboration and evidence
- relate classroom science experiences to the work of scientists and explore the educational requirements for careers in science
- ⊙ use multiple methods for organizing items and information
- ⊙ identify and critically evaluate information in data, tables, and groups
- ⊙ design and conduct a controlled experiment

MATTER

It is expected students will:

- ⊙ describe the properties that can be used to identify matter
- ⊙ use basics of atomic theory to describe atomic structure
- ⊙ distinguish among atoms, molecules, compounds, mixtures, and solutions

ENERGY

It is expected students will:

- ⊙ differentiate among forms of energy, energy transformations, and uses of energy
- ⊙ explore the history and use of various energy sources
- ⊙ apply knowledge of wave characteristics and behavior to sound and light
- ⊙ demonstrate and describe relationships between force and motion

FORCES AND MOTION

It is expected students will:

- ⊙ describe the effects of balanced and unbalanced forces on an objects' motion
- ⊙ use electric currents to produce magnetic forces and use magnets to cause electric currents
- ⊙ explain that every object exerts a gravitational force on every other object and that the magnitude of this force depends on the mass of the objects and their distance from one another

WORLD GEOGRAPHY

EIGHTH GRADE

This one-year course is the study of the world's cultures, economics, history, regions, and geographic features from the development of ancient civilizations through the Age of Exploration. Students examine the earth from the scale of states, nations, countries, and continents creating connections to contemporary geographic conditions. Students synthesize concepts, patterns, and interdependent relationships that make our ever-changing world diverse and dynamic. This is a required course for all eighth grade students.

It is expected students will:

- use maps, globes, and other geographic tools and technologies to locate and extrapolate information about people, places, and environments
- explain the physical and human features of places and use this information to define and study regions including patterns of change
- evaluate how economic, political, and cultural processes interact to shape patterns of human migration and settlement, influence and interdependence, and conflict and cooperation
- summarize and predict the effects of interactions between human and physical systems on the resources of the world
- compare the different political systems in the world and how those systems relate to the United States and its citizens
- cite evidence of the contributions of people and their diverse cultures
- apply the content literacy skills necessary to analyze historical documents, artifacts, and concepts
- use information, media, and technology literacy skills necessary to research, communicate, and demonstrate critical thinking

Curriculum and Professional Development Division
Las Vegas, Nevada

