Curriculum Overview

MIDDLE SCHOOL GRADES

6-8

CORE CURRICULUM

CCSD
CLARK COUNTY
SCHOOL DISTRICT

GAC 3836.4

CCSD
CLARK COUNTY
SCHOOL DISTRICT

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Dear Parents,

This *Curriculum Overview* has been developed to help parents understand what is expected of students at each grade level in the core subject areas of English language arts, mathematics, science, and social studies. It provides a listing of skills and concepts to be taught at each grade level. The Nevada State Board of Education adopted the Common Core State Standards in English language arts and mathematics in October 2010. The Common Core State Standards are a progression of learning expectations and are designed to prepare students for college and career readiness. They include rigorous content with an application of knowledge through high-order skills. The *Nevada Transition Plan* outlines the implementation of the Common Core State Standards in the State of Nevada. The Common Core State Standards in English language arts will serve as the focus of instruction in grades K–8 for the 2011–2012 school year. While in mathematics for the 2011–2012 school year, the Common Core State Standards will serve as the focus of instruction in grades K–2 and a combination of the Nevada Content Standards and the Common Core State Standards will serve as the focus in grades 3–8. High school students will begin to experience the Common Core State Standards in the 2012–2013 school year. In science and social studies, the Nevada Content Standards remain as the focus of instruction.

For more information regarding the *Nevada Transition Plan* of the Common Core State Standards in the State of Nevada you may access the Nevada State Department of Education's Website at https://bighorn.doe.nv.gov/sites/CommonCore/default.aspx. To read more about the Common Core State Standards you may visit http://www.corestandards.org.

The information contained in this *Curriculum Overview* may serve as a guide to help you evaluate the progress of your child in these subjects. Furthermore, the communication of these expectations fosters accountability in our schools and helps ensure that we provide all children with a quality education. More comprehensive information about the curricula for all subject areas may be obtained from your school's teachers and administrators.

It is recognized that effective educational programs depend upon a strong partnership between parents, the community, and the school. We believe that parental involvement enriches the academic experiences of children. Your participation is encouraged and welcomed, and you are invited to contact District staff, your school principal, or your child's teacher if you have any suggestions or questions.

Many thanks for your commitment to your child's education.

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 (2011)	1
U.S. HISTORY	1
U.S. GOVERNMENT	1
PHYSICAL EDUCATION	2
HEALTH	½
USE OF COMPUTERS	½
ELECTIVES (Includes one Arts/Humanities or Career & Technical Education Course)	5½
TOTAL	**22½**

The 21st Century Course of Study Expectations provides the following for students:

- Opens doors to post-secondary education and workforce opportunities
- Meets Nevada System of Higher Education (NSHE) University admissions
  - Grade Point Average (GPA) and Core Curriculum Requirements are:
    - 3.00 GPA (weighted or unweighted) ***in the core curriculum***
    - Approved NSHE 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 are:
    - 3.25 ***cumulative*** GPA (weighted or unweighted) ***and the core curriculum***
    - Approved NSHE Core Curriculum (4 English, 4 Math – including Algebra II, 3 Natural Science, 3 Social Science & History = 14 units)

NEVADA DEPARTMENT OF EDUCATION
CODE OF HONOR

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.

Student Signature:_____Student Number:_____

Print Student Name:_____Date: _____

Parent/Legal Guardian Signature: _____Date:_____

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.

Resources: Cheating policies from Clark and Washoe County School Districts' secondary schools; Foothill Community College.

Revised 4/11

CCSD CLARK COUNTY SCHOOL DISTRICT

TABLE OF CONTENTS

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.

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 2011–2012 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 2011–2012 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 2011–2012 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 2011–2012 school year must complete three semesters with a passing grade in mathematics, three semesters with a passing grade in English or

reading, two semesters with a passing grade in science, and two semesters with a passing grade in 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.

June 2011

NEVADA CONTENT STANDARDS AND COMMON CORE STATE STANDARDS

The standards define what all students are expected to know and be able to do. These concepts and skills represent a cumulative progression designed to enable students to meet college and career readiness expectations no later than the end of high school.

ENGLISH LANGUAGE ARTS

Reading: Text complexity and the growth of comprehension*

READING LITERATURE

Students will read widely and deeply from a broad range of high-quality, increasingly challenging literary texts such as stories, dramas, poems, and myths from diverse cultures and different time periods.

READING INFORMATIONAL TEXT

Students will read widely and deeply from a broad range of high-quality, increasingly challenging informational texts such as biographies, speeches, historical and scientific texts.

WRITING: TEXT TYPES, RESPONDING TO READING, AND RESEARCH

Students will use writing to communicate clearly by offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying real and imagined experiences and events.

SPEAKING AND LISTENING: FLEXIBLE COMMUNICATION AND COLLABORATION

Students will develop a range of useful oral communication and interpersonal skills in order to work together, express and listen carefully to ideas, and evaluate what they hear.

LANGUAGE: CONVENTIONS, KNOWLEDGE, AND VOCABULARY

Students will learn the essential rules of standard written and spoken English, and they will acquire and accurately use a range of words and phrases sufficient for reading, writing, speaking, and listening.

**The reading standards place equal emphasis on the sophistication of what students read and the skill with which they read.*

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

MATHEMATICS (CONT.)

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 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.

STANDARDS FOR MATHEMATICAL PRACTICE

It is expected students will:

- make sense of problems and persevere in solving them.
- reason abstractly and quantitatively.
- construct viable arguments and critique the reasoning of others.
- model with mathematics.
- use appropriate tools strategically.
- attend to precision.
- look for and make use of structure.
- look for and express regularity in repeated reasoning.

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.

SCIENCE (CONT.)

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.

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.

SOCIAL STUDIES (CONT.)

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.

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.

Curriculum Professional Development Division
Guidance and Counseling

CCSD
CLARK COUNTY
SCHOOL DISTRICT

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:

____ Arts/Humanities
____ Business/Management
____ Health Services
____ Human Resources
____ Natural Resources
____ 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:

____ Apprenticeship
____ Community/Two-Year College
____ Military Service
____ Technical/Trade School
____ University/Four-Year College
____ 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:

____ Trade/Technical/Work
____ Advanced Diploma
____ College Prep
____ 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

These courses develop students' reading, writing, speaking, listening, and research skills. They apply skills learned in earlier grades to make sense of longer, more challenging books and articles. That includes learning about how authors try to influence readers and find reasons to support their ideas. Focusing on how authors make their points and support their arguments with evidence and reasoning helps sixth grade students sharpen their ability to write and speak with more clarity and coherence. Students also will expand their vocabularies and use new words in their stories, reports, and essays.

READING: TEXT COMPLEXITY AND THE GROWTH OF COMPREHENSION*

READING LITERATURE

It is expected students will:

- cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- explain how an author develops the point of view of the narrator or speaker in a text.
- compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.

READING INFORMATIONAL TEXT

It is expected students will:

- determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
- determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
- trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.

**The reading standards place equal emphasis on the sophistication of what students read and the skill with which they read.*

WRITING: TEXT TYPES, RESPONDING TO READING, AND RESEARCH

It is expected students will:

- write arguments to support claims with clear reasons and relevant evidence.
- write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- write narrative pieces to develop real or imagined experiences or events using effective techniques, relevant descriptive details, and well-structured event sequences.

- use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others.
- conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

SPEAKING AND LISTENING: FLEXIBLE COMMUNICATION AND COLLABORATION

It is expected students will:

- engage effectively in a range of collaborative discussions on sixth grade topics, texts, and issues, building on others' ideas and expressing their own ideas clearly.
- present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
- adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

LANGUAGE: CONVENTIONS, KNOWLEDGE, AND VOCABULARY

It is expected students will:

- demonstrate command of grade-appropriate conventions of standard English grammar and usage when writing or speaking.
- demonstrate command of grade-appropriate conventions of standard English capitalization, punctuation, and spelling when writing.
- determine or clarify the meaning of unknown and multiple-meaning words and phrases based on sixth grade reading and content.

MATHEMATICS
SIXTH GRADE

This course is designed to focus on four critical areas: 1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; 2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; 3) writing, interpreting, and using expressions and equations; and 4) developing understanding of statistical thinking. The use of manipulatives, mathematical tools, and technology, including calculators and computer software, is 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.
- apply and extend previous understandings of multiplication and division to divide fractions by fractions.

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.
- understand ratio concepts and use ratio reasoning to solve problems.

MEASUREMENT

It is expected students will:

- 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.

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.

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.
- summarize and describe distributions.
- 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.

- 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.

STANDARDS FOR MATHEMATICAL PRACTICE

It is expected students will:

- make sense of problems and persevere in solving them.
- reason abstractly and quantitatively.
- construct viable arguments and critique the reasoning of others.
- model with mathematics.
- use appropriate tools strategically.
- attend to precision.
- look for and make use of structure.
- look for and express regularity in repeated reasoning.

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:

- ⦿ identify and critically evaluate information in data, tables, and graphs.
- ⦿ critically evaluate information to distinguish between fact and opinion.
- ⦿ recognize that different explanations can be given for the same evidence.
- ⦿ explain that scientific inquiry includes evaluating results of scientific investigations, experiments, observations, theoretical and mathematical models, and explanations proposed by other scientists.
- ⦿ use multiple methods for organizing items and information.
- ⦿ describe advantages and disadvantages of using technology.
- ⦿ explain that scientific knowledge is revised through a process of incorporating new evidence gained through on-going investigation and collaborative discussion.

HEREDITY

It is expected students will:

- ⦿ explain that heredity is the passage of genetic instructions from one generation to the next.
- ⦿ recognize that changes in genes of eggs and sperm can cause changes in inherited characteristics.
- ⦿ list some characteristics of an organism that are the result of a combination of interaction with the environment and genetic information.

STRUCTURE OF LIFE

It is expected students will:

- ⦿ explain that all organisms are composed of cells, which are the fundamental units of life.
- ⦿ explain that cells grow, divide, and take in nutrients which they use to provide energy for cell functions.
- ⦿ recognize that some organisms are made of just one cell and that multicellular organisms can consist of thousands to millions of cells working together.
- ⦿ describe how cells combine to form tissues that combine to form organs and organ systems that are specialized to perform life functions.
- ⦿ explain that disease can result from defects in body systems or from damage caused by infection.

ORGANISMS AND THEIR ENVIRONMENT

It is expected students will:

- represent how matter and energy are transferred through food webs in an ecosystem.
- characterize organisms in any ecosystem by their functions.
- evaluate how changes in environments can be beneficial or harmful.
- list inter-related factors that affect the number and type of organisms and ecosystem can support.

DIVERSITY OF LIFE

It is expected students will:

- identify and classify species based upon their characteristics.
- explain that fossils provide evidence of how life and environment conditions have changed throughout geologic time.
- recognize that an organism's behavior is based on both experience and on the species' evolutionary history.

SOLAR SYSTEM AND UNIVERSE

It is expected students will:

- describe Earth as part of a solar system located within the Milky Way Galaxy.

ENGLISH AND READING
SEVENTH GRADE

These courses develop students' ability to analyze, define, compare, and evaluate ideas when reading, writing, speaking, and listening. Students continue to analyze how themes in fiction and nonfiction develop over the course of a book or article. Readings will include classic and contemporary pieces that represent diverse perspectives. Seventh grade students' ability to cite specific evidence when offering an interpretation of a text matures. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to readers or listeners or constructively evaluating others' use of evidence.

READING: TEXT COMPLEXITY AND THE GROWTH OF COMPREHENSION*

READING LITERATURE

It is expected students will:

- cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.
- analyze how an author develops and contrasts the points of view of different characters or narrators in a text.
- compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.

READING INFORMATIONAL TEXT

It is expected students will:

- determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.
- analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.
- trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
- analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

**The reading standards place equal emphasis on the sophistication of what students read and the skill with which they read.*

WRITING: TEXT TYPES, RESPONDING TO READING, AND RESEARCH

It is expected students will:

- write arguments to support claims with clear reasons and relevant evidence.

- write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.
- conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

SPEAKING AND LISTENING: FLEXIBLE COMMUNICATION AND COLLABORATION

It is expected students will:

- engage effectively in a range of collaborative discussions on seventh grade topics, texts, and issues, building on others' ideas and expressing their own ideas clearly.
- delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.
- present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

LANGUAGE: CONVENTIONS, KNOWLEDGE, AND VOCABULARY

It is expected students will:

- demonstrate command of grade-appropriate conventions of standard English grammar and usage when writing or speaking.
- demonstrate command of grade-appropriate conventions of standard English capitalization, punctuation, and spelling when writing.
- determine or clarify the meaning of unknown and multiple-meaning words and phrases based on seventh grade reading and content.

MATHEMATICS
SEVENTH GRADE

This course is designed to focus on four critical areas: 1) developing understanding of and applying proportional relationships; 2) developing understanding of operations with rational numbers and working with expressions and linear equations; 3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and 4) drawing inferences about populations based on samples. Instructional practices incorporate integration of diversity awareness including appreciation of all cultures and their important contributions to society. The use of manipulatives, mathematical tools, and technology, including calculators and computer software, is 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:

- analyze proportional relationships and use them to solve real-world and mathematical problems.
- 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.
- 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.
- draw, construct, and describe geometrical figures and describe the relationships between them.

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 predictions 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.

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.

STANDARDS FOR MATHEMATICAL PRACTICE

It is expected students will:

- make sense of problems and persevere in solving them.
- reason abstractly and quantitatively.
- construct viable arguments and critique the reasoning of others.
- model with mathematics.
- use appropriate tools strategically.
- attend to precision.
- look for and make use of structure.
- look for and express regularity in repeated reasoning.

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:

- ⦿ identify and critically evaluate information in data, tables, and graphs.
- ⦿ critically evaluate information to distinguish between fact and opinion.
- ⦿ recognize that different explanations can be given for the same evidence.
- ⦿ explain that scientific inquiry includes evaluating results of scientific investigations, experiments, observations, theoretical and mathematical models, and explanations proposed by other scientists.
- ⦿ use multiple methods for organizing items and information.
- ⦿ describe advantages and disadvantages of using technology.
- ⦿ explain that scientific knowledge is revised through a process of incorporating new evidence gained through on-going investigation and collaborative discussion.

ATMOSPHERIC PROCESSES AND THE WATER CYCLE

It is expected students will:

- ⦿ explain that seasons are caused by variations in the amounts of the Sun's energy reaching Earth's surface due to the planet's axial tilt.
- ⦿ describe how the processes involved in the water cycle affect climatic patterns.
- ⦿ describe the properties that make water an essential component of the Earth system.
- ⦿ understand the composition of Earth's atmosphere, emphasizing the role of the atmosphere in Earth's weather and climate.
- ⦿ explain the difference between local weather and regional climate.
- ⦿ relate topography and patterns of global and local atmospheric movement and how they influence local weather.

SOLAR SYSTEM AND UNIVERSE

It is expected students will:

- ⦿ recognize that the solar system includes a great variety of planetary moons, asteroids, and comets.
- ⦿ describe characteristics of the planets in our solar system.
- ⦿ recognize that Earth is part of a solar system located within the Milky Way Galaxy.
- ⦿ use regular and predictable motions of Earth around the Sun and the Moon around the Earth to explain such phenomena as the day, the year, phases of the Moon, and eclipses.

EARTH'S COMPOSITION AND STRUCTURE

It is expected students will:

- ⦿ recognize that sedimentary rocks and fossils provide evidence for changing environments and the constancy of geologic processes.
- ⦿ explain that rocks at Earth's surface weather, forming sediments that are buried, then compacted, heated and often re-crystallized into new rock.
- ⦿ explain that Earth is composed of a crust, mantle, and core.
- ⦿ relate the very slow movement of large crustal plates to geological events.
- ⦿ relate geologic processes to state and regional topography.
- ⦿ relate the properties and distributions of minerals to how they form.
- ⦿ describe the characteristics, abundances, and location of renewable and nonrenewable resources found in Nevada.
- ⦿ relate the properties of soils to how they form.

DIVERSITY OF LIFE

It is expected students will:

- ⦿ recognize that fossils provide evidence of how life and environmental conditions have changed throughout geologic time.

FORCES AND MOTION

It is expected students will:

- ⦿ explain that every object exerts gravitational force on every other object, and the magnitude of this force depends on the mass of the objects and their distance from one another.

ENERGY

It is expected students will:

- ⦿ demonstrate how vibrations (e.g., sounds, earthquakes) move at different speeds in different materials, have different wave lengths, and set up wave-like disturbances that spread away from the source uniformly.

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 strengthen students' critical reading and writing skills. In eighth grade English, students work diligently to understand precisely what an author or speaker is saying. They learn to question an author's or speaker's assumptions and assess the accuracy of his or her claims. Students report findings from their own research and analysis of sources in a clear manner.

READING: TEXT COMPLEXITY AND THE GROWTH OF COMPREHENSION*

READING LITERATURE

It is expected students will:

- cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
- determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
- compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
- analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.

READING INFORMATIONAL TEXT

It is expected students will:

- analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).
- determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
- delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
- analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

**The reading standards place equal emphasis on the sophistication of what students read and the skill with which they read.*

WRITING: TEXT TYPES, RESPONDING TO READING, AND RESEARCH

It is expected students will:

- write arguments to support claims with clear reasons and relevant evidence.
- write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

- produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

SPEAKING AND LISTENING: FLEXIBLE COMMUNICATION AND COLLABORATION

It is expected students will:

- analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.
- delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.
- present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

LANGUAGE: CONVENTIONS, KNOWLEDGE, AND VOCABULARY

It is expected students will:

- demonstrate command of grade-appropriate conventions of standard English grammar and usage when writing or speaking.
- demonstrate command of grade-appropriate conventions of standard English capitalization, punctuation, and spelling when writing.
- determine or clarify the meaning of unknown and multiple-meaning words or phrases based on eighth grade reading and content.

MATHEMATICS
EIGHTH GRADE

This course is designed to focus on four critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. Instructional practices incorporate integration of diversity awareness, including appreciation of all cultures and their important contributions to our society. The use of manipulatives, mathematical tools, and technology, including calculators and computer software, is 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.
- know that there are numbers that are not rational, and approximate them by rational numbers.
- work with radicals and integer exponents.

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).
- add and subtract binomials.
- solve and graphically represent equations in one variable.
- analyze and solve linear equations and pairs of simultaneous linear equations.
- define, evaluate, and compare functions.

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).
- understand and apply the Pythagorean Theorem.

DATA ANALYSIS

It is expected students will:

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

STANDARDS FOR MATHEMATICAL PRACTICE

It is expected students will:

- make sense of problems and persevere in solving them.
- reason abstractly and quantitatively.
- construct viable arguments and critique the reasoning of others.
- model with mathematics.
- use appropriate tools strategically.
- attend to precision.
- look for and make use of structure.
- look for and express regularity in repeated reasoning.

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.

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:

- ⦿ identify and critically evaluate information in data, tables, and graphs.
- ⦿ critically evaluate information to distinguish between fact and opinion.
- ⦿ recognize that different explanations can be given for the same evidence.
- ⦿ explain that scientific inquiry includes evaluating results of scientific investigations, experiments, observations, theoretical and mathematical models, and explanations proposed by other scientists.
- ⦿ use multiple methods for organizing items and information.
- ⦿ describe advantages and disadvantages of using technology.
- ⦿ explain that scientific knowledge is revised through a process of incorporating new evidence gained through on-going investigation and collaborative discussion.

MATTER

It is expected students will:

- ⦿ recognize that particles are arranged differently in solids, liquids, and gases of the same substance.
- ⦿ explain how elements can be arranged in the periodic table showing repeating patterns that group elements with similar properties.
- ⦿ use various methods for separating mixtures based on the properties of the components.
- ⦿ describe how atoms often combine to form molecules, and that compounds form when two or more different kinds of atoms chemically bond.
- ⦿ explain that mass is conserved in physical and chemical changes.
- ⦿ recognize that matter is made up of tiny particles called atoms.
- ⦿ describe the characteristics of electrons, protons, and neutrons.
- ⦿ explain that substances containing only one kind of atom are elements which cannot be broken into smaller pieces by normal laboratory processes.

FORCES AND MOTION

It is expected students will:

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

ENERGY

It is expected students will:

- explain that visible light is a narrow band within the electromagnetic spectrum.
- describe how vibrations (e.g., sounds, earthquakes) move at different speeds in different materials, have different wave lengths, and set up wave-like disturbances that spread away from the source uniformly.
- explain that physical, chemical, and nuclear changes involve a transfer of energy.
- recognize that energy cannot be created or destroyed, in a chemical or physical reaction, but only changed from one form to another.
- describe how heat energy flows from warmer materials or regions to cooler ones through conduction, convection, and radiation.
- explain that electrical circuits provide a means of transferring electrical energy to produce heat, light, sound, and chemical changes.

ATMOSPHERIC PROCESSES AND THE WATER CYCLE

It is expected students will:

- describe the properties that make water an essential component of the Earth system.

WORLD GEOGRAPHY
EIGHTH GRADE

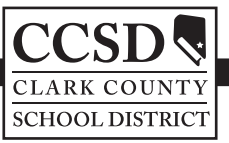
This one-year course is the study of the world's cultures, economics, history, regions, and geographic features from the development of ancient civilizations through the Age of Exploration. Students examine the earth from the scale of states, nations, countries, and continents creating connections to 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



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