



NORTHERN VALLEY SCHOOLS CONSORTIUM

Closter, Demarest, Harrington Park,
Haworth, Northvale, Norwood,
Old Tappan, and the
Northern Valley Regional High School District

CURRICULUM OBJECTIVES: GRADE EIGHT

COMPREHENSIVE HEALTH

LANGUAGE ARTS

MATHEMATICS

MUSIC

PHYSICAL EDUCATION

SCIENCE

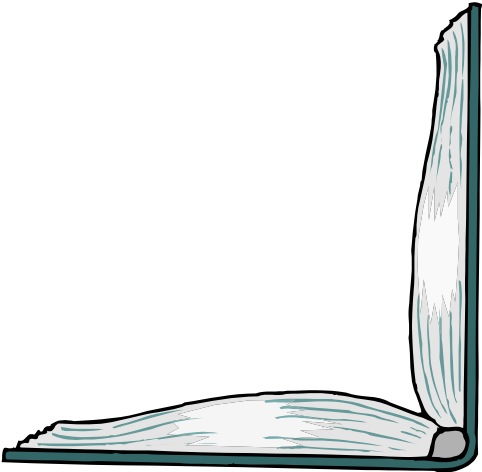
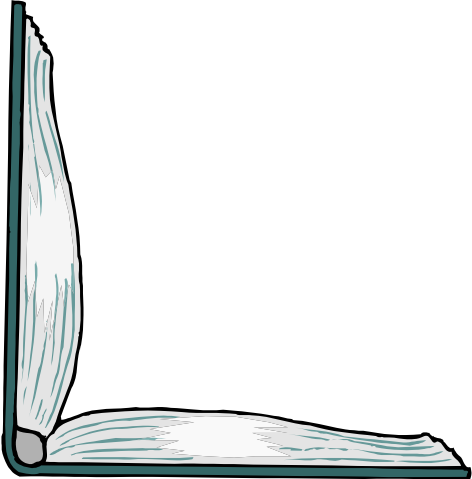
SOCIAL STUDIES

TECHNOLOGY

VISUAL ARTS

WORLD LANGUAGES

2014 - 2015



**NORTHERN VALLEY SCHOOLS CONSORTIUM
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COMPREHENSIVE HEALTH



WELLNESS

I. Personal Health

1. Interpret health data to make predictions about wellness.
2. Evaluate how technology and medical advances impact wellness.

II. Growth and Development

1. Investigate the physical, social, emotional, and intellectual changes that occur at each life stage and how those changes impact wellness.
2. Recognize stages of grief associated with both children and adults.

III. Nutrition

1. Describe healthy ways to lose, gain or maintain weight.
2. Revisit the impact of nutrients on the functioning of human body systems.
3. Analyze how healthy eating patterns throughout life can reduce the risk of heart disease and high cholesterol, cancer, osteoporosis, and other health conditions.

IV. Diseases and Health Conditions

1. Investigate current and emerging methods to diagnose and treat diseases and health conditions.
2. Classify disease and health conditions as communicable, non-communicable, acute, chronic, or inherited.
3. Compare and contrast diseases and health conditions including hepatitis, STDs/STIs, HIV/AIDS, breast cancer, and testicular cancer.
4. Recall various forms of mental illness including impulse disorders such as gambling or shopping, depression, eating disorders, and bipolar disorders.

V. Safety

1. Discuss the short and long term physical, social, and emotional impacts of all forms of abuse.

VI. Social and Emotional Health

1. Analyze how personal assets, resiliency, and protective factors support healthy social and emotional development.
2. Investigate internal and external factors that influence resiliency.
3. Discuss the developmental tasks of adolescence, including the development of mature relationships, gender identification, a healthy body image, emotional independence, and life skills.
4. Debate the consequences of conflict and violence on the individual, the family, and community.
5. Analyze how culture influences the ways families and groups cope with crisis and change, loss and grief.

INTEGRATED SKILLS

I. Communication

1. Analyze health ideas, opinions, and issues from a variety of valid and reliable health sources.
2. Analyze the economic and political purposes and impacts of health messages found in the media.

II. Decision Making

1. Discuss how ethical decision-making requires careful thought and action.
2. Critique significant national and global health decisions and discuss how the outcome(s) might have changed if the appropriate communication and decision-making skills had been employed.

III. Character Development

1. Identify the characteristics of various role models and core ethical values they represent.
2. Explain how community and public service supports the development of core ethical values.
3. Analyze personal and group adherence to student codes of conduct.

IV. Leadership, Advocacy and Service

1. Plan and implement volunteer activities to benefit a health organization or cause.
2. Develop and defend a position or opinion on a health issue or problem and educate students and parents about a health issue or cause.

V. Health Services and Careers

1. Compare and contrast health and fitness services available in the school and community, demonstrate how to access them, and evaluate each comparing benefits and costs.
2. Investigate community and mental health services.
3. Describe the school's role in helping a student and his/her family get help for a problem.
4. Compare and contrast preparation and job requirements for health and fitness.
5. Apply research skills to career exploration.
6. Describe and demonstrate appropriate work habits and interpersonal skills needed to obtain and retain employment

DRUGS AND MEDICINE

I. Medicines

1. Compare and contrast the benefits and dangers of naturally occurring substances, such as herbs, organics, and supplements.

II. Alcohol, Tobacco, and other Drugs

1. Compare and contrast the physical and behavioral effects of each classification of drugs.
2. Analyze health risks associated with injecting drug use.
3. Investigate the legal and financial consequences of the use, sale, and possession of illegal substances.
4. Discuss how the use of alcohol and other drugs influences decision-making and places one at risk for sexual assault, pregnancy, and STDs/STIs.
5. Revisit the abuse and illegal possession of prescription drugs.

III. Dependency, Addiction, and Treatment

1. Describe ways to quit using substances and discuss factors that support the ability to quit.
2. Discuss how tolerance, synergistic effects, and antagonistic effects have an impact on the use of drugs and medicines.
3. Discuss theories about dependency, such as genetic predisposition, gender-related predisposition, and multiple risks.

HUMAN RELATIONSHIPS AND SEXUALITY

I. Relationships

1. Discuss the potential short and long-term physical, emotional, and social impacts of adolescent sexual activity.
2. Describe how various cultures date or select life partners.
3. Differentiate among affection, love, commitment, and sexual attraction.
4. Describe the signs of an unhealthy relationship and develop strategies to end it.
5. Develop standards for dating situations such as dating in groups, setting limits or only dating someone of the same age.

II. Sexuality

1. Analyze internal and external pressures to become sexually active.
2. Describe the physical, emotional, and social benefits of sexual abstinence and develop strategies to resist pressure to become sexually active.
3. Discuss the potential short and long-term physical, emotional, and social impacts of adolescent sexual activity.
4. Analyze how certain behaviors place one at greater risk of HIV/AIDS, STDs/STIs and unintended pregnancy.
5. Compare and contrast methods of contraception, risk reduction, and risk elimination and explain how reliability, religious beliefs, age, gender, health history, and cost may influence their use.
6. Recall topics regarding sexual orientation.
7. Discuss the importance of routine healthcare procedures such as breast self-examination and testicular examination.

III. Pregnancy and Parenting

1. Describe fertilization and each stage of embryonic and fetal development
2. Discuss the signs and symptoms of pregnancy and explain how pregnancy is confirmed.
3. Analyze the physical and emotional changes that occur during each stage of pregnancy, including the stages of labor and childbirth.
4. Discuss the importance of regular prenatal care to help prevent complications that may occur during pregnancy and childbirth.
5. Describe the potential impact of alcohol, tobacco, other drugs, medicines, diseases, and environmental hazards on pre-natal and post-natal development.
6. Describe the physical, economic, emotional, social, cultural, and intellectual responsibilities of parenthood.
7. Describe effective parenting strategies and resource for help with parenting.
8. Analyze the challenges and responsibilities of being a teen mother and/or teen father.



LANGUAGE ARTS

Reading Standards for Literature

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Reading Standards for Informational Text

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
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9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Writing Standards

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Speaking and Listening Standards

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Language Standards

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression

Reading Standards for Literacy in History/Social Studies

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
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6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Reading Standards for Literacy in Science and Technical Subjects

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Writing Standards for Literacy in History/Social Studies, Science and Technical Subjects

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

Text Types and Purposes

3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.



MATHEMATICS



The Number System

1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2).

Expressions and Equations

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.*
2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities

Understand the connections between proportional relationships, lines, and linear equations.

5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
6. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .

Analyze and solve linear equations and pairs of simultaneous linear equations.

7. Solve linear equations in one variable.
 - a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
 - b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and combining like terms.
 - c. Apply linear equations to real world problems. Ex: consecutive integer, perimeter, translating verbal expressions
8. Analyze and solve pairs of simultaneous linear equations.

- a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
- b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.
- c. Solve real-world and mathematical problems leading to two linear equations in two variables.

Functions

Define, evaluate, and compare functions.

1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.
2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
3. Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.

Use functions to model relationships between quantities.

4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally. Understand domain and range of a function.

Geometry

Understand congruence and similarity using physical models, transparencies, or geometry software.

1. Verify experimentally the properties of rotations, reflections, and translations:
 - a. Lines are taken to lines, and line segments to line segments of the same length.
 - b. Angles are taken to angles of the same measure.
 - c. Parallel lines are taken to parallel lines.
2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

Understand and apply the Pythagorean Theorem.

6. Explain a proof of the Pythagorean Theorem and its converse.

7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

9. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems

Statistics and Probability

Investigate patterns of association in bivariate data.

1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.
4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.



MUSIC
General Music



Performance

- a. Examine works of music that communicate significant cultural beliefs or sets of values.
- b. Use specific vocabulary relating to symbolism, genre and performance techniques in all music areas.
- c. Perform independently and in groups a repertoire of diverse music.
- d. Improvise music in a selected genre or style, using the elements of music that are consistent with basic playing and/or singing techniques in that genre or style.
- e. Perform instrumental or vocal compositions using complex standard and non-standard Western, non-Western, and avant-garde notation.

Reading and notation

- a. Perform compositions containing progressively complex notations.
- b. Improvise original melodies and/or rhythms.

Listening and responding

- a. Distinguish among musical styles, trends and movements in various musical forms.
- b. Examine how aspects of meter, rhythm, tonality, intervals, and chords are organized to establish unity and variety in musical compositions.
- c. Compare and contrast musical works from specific historical periods.
- d. Analyze the elements of music in a diversity of musical works.

Critiquing

- a. Compare and contrast musical works from specific historical periods using the progression of description, analysis, interpretation, and evaluation.
- b. Evaluate the judgment of others based on the process of critique.
- c. Compare and contrast the technical proficiency of artists.

History and Culture

- a. Analyze how technological changes have influenced the development of music.
- b. Identify the common musical elements that help define a given historical period.
- c. Examine social, political, and cultural influence on art.

Connections

- a. Identify careers and lifelong opportunities in the music field.
- b. Describe various roles that musicians perform and identify representative individuals and their achievements that have functioned in each role.

Instrumental Music

Performance

- a. Examine works of music that communicate significant cultural beliefs or sets of values.
- b. Use specific vocabulary relating to symbolism, genre, and performance techniques in all music areas.
- c. Play independently and in groups a repertoire of diverse music

Reading and notation

- a. Play compositions containing progressively complex notations
- b. Communicate ideas about the social and personal value of music.

Listening and responding

- a. Distinguish among musical styles, trends, and movements in various musical forms.
- b. Examine how aspects of meter, rhythm, tonality, intervals and chords are organized to establish unity and variety in musical compositions.
- c. Compare and contrast musical works from specific historical periods.

Critiquing

- a. Analyze the elements of music in a diversity of musical works.
- b. Evaluate the effectiveness of a work of art by differentiating between the artist's technical proficiency and the work's content or form.
- c. Compare and contrast musical works from specific historical periods using the progression of description, analysis, interpretation, and evaluation.
- d. Compare and contrast the technical proficiency of artists.
- e. Listen to and analyze recorded lessons, rehearsals, and performances using digital tools, and media-rich resources to enhance musical knowledge.

History and culture

- a. Analyze how technological changes have influenced the development of music.
- b. Identify the common musical elements that help define a given historical period.
- c. Differentiate the history of music in world cultures



PHYSICAL EDUCATION

A. Movement Skills and Concepts

1. Explain and demonstrate the transition of movement skills from isolated settings (i.e., skill practice) into applied settings (i.e., games, sports, dance, and recreational activities).
2. Apply the concepts of force and motion (weight transfer, power, speed, agility, range of motion) to impact performance.
3. Create, explain, and demonstrate, as a small group, a planned movement sequence that includes changes in rhythm, tempo, and musical style (creative, cultural, social, and fitness dance).
4. Detect, analyze, and correct errors and apply to refine movement skills.

B. Strategy

1. Compare and contrast the use of offensive, defensive, and cooperative strategies in a variety of settings.
2. Assess the effectiveness of specific mental strategies applied to improve performance.
3. Analyze individual and team effectiveness in achieving a goal and make recommendations for improvement.

C. Sportsmanship, Rules, and Safety

1. Assess player behavior for evidence of sportsmanship in individual, small-group, and team activities.
2. Summarize types of equipment, products, procedures, and rules that contribute to the safety of specific individual, small-group, and team activities.
3. Analyze the impact of different world cultures on present-day games, sports, and dance.

D. Fitness and Physical Activity

1. Summarize the short- and long-term physical, social, and emotional benefits of regular physical activity.
2. Use health data to develop and implement a personal fitness plan and evaluate its effectiveness.
3. Analyze how medical and technological advances impact personal fitness.
4. Determine ways to achieve a healthy body composition through healthy eating, physical activity, and other lifestyle behaviors.
5. Use the primary principles of training (FITT) for the purposes of modifying personal levels of fitness.
6. Determine the physical, behavioral, legal, and ethical consequences of the use of anabolic steroids and other performance-enhancing substances.

Attitudes and Values

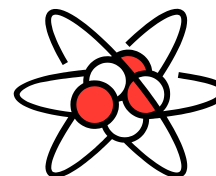
1. Demonstrate positive feelings toward safety in physical education.
2. Demonstrate good sportsmanship.
3. Demonstrate positive attitude and behaviors toward self and others in physical education.
4. Appreciate physical activities for creating an avenue of self-expression.
5. Demonstrate a knowledge of rules, which enhances the success of the activity.
6. Understand the importance of maintaining physical fitness.
7. Appreciate physical activity for promoting mental and physical well-being.



SCIENCE

A. Scientific Processes

1. Identify scientific questions that can be answered through experimentation.
2. Form a hypothesis based on prior knowledge and observations.
3. Design and conduct investigations.
4. Identify the independent and dependent variables as well as the factors which must be kept constant.
5. Represent data using tables and graphs.
6. Use measures of central tendency.
7. Draw appropriate conclusions based on experimental results.
8. Communicate experimental findings.
9. Recognize the importance of replication of experimental procedures.



B. Scientific Safety

1. Demonstrate proper safety procedures during scientific investigations.
2. Demonstrate appropriate use of laboratory equipment.

C. Scientific Measurement

1. Express quantities using appropriate metric units.
2. Utilize dimensional analysis (factor unit label method) to convert from fundamental to derivative units.
3. Recognize that the precision of a measurement will be limited by the capabilities of the instrument.

D. Scientific Literacy

1. Evaluate strengths and weaknesses of scientific claims.
2. Recognize that curiosity, skepticism, open-mindedness, and honesty are attributes of scientists.
3. Discuss current events in science.

E. Cultural Contributions

1. Recognize that scientific contributions are made by men and women from many different cultures and time periods.
2. Know that scientists work together to solve problems.

G. Chemistry: Structure and Properties of Matter

1. Explain how all matter is made of atoms.
2. Investigate the modern and historical models of atomic structure including the contributions of Democritus, Dalton, Thomson, Rutherford, and Bohr.
3. Identify the charge and relative mass of three subatomic particles: proton, neutron, and electron.
4. Recognize that phase of matter is determined by arrangement and motion of atoms and compounds and is related to the energy of the system.
5. Recognize that Boyle's Law and Charles's Law describe the behavior of gases.
6. Distinguish between graphic representations of Boyle's and Charles's Law.
7. Recognize that matter can be classified as elements, compounds, and mixtures. Mixtures can be separated by physical properties. Distinguish between heterogeneous and homogeneous mixtures (solution, colloid). Note factors that affect solubility.
8. Explain how elements can be represented by chemical symbols, and compounds can be represented by chemical formulae.
9. Understand that matter can be described by its chemical (reactivity, combustibility, acidity, basicity) and physical properties (mass, weight, volume, solubility, density, color, shape, odor, melting point, boiling point)
10. Recognize that some properties are characteristic and do not depend on the size of the sample. (Intensive and extensive properties)
11. Find the mass and volume of substances and calculate their densities.
12. Recognize that all substances are composed of one or more of the approximately 100 naturally occurring elements.
13. Investigate and understand the organization of the periodic table of elements to obtain information including symbols, atomic mass, groups and periods.
14. Classify elements as metals, nonmetals, and metalloids.

15. Understand that the Periodic Table organizes the elements into families of elements with similar properties. Use the periodic table to predict chemical bonding.
16. Recognize that the number of valence electrons determines an element's chemical properties and reactivity.
17. Compare and contrast the properties of ionic and covalent compounds.
18. Understand that compounds can be classified as acids and bases.
19. Analyze and classify the pH of a solution.
20. Define isotope and calculate atomic mass.

Chemical Reactions

1. Recognize that substances can combine chemically to form new substances with chemical and physical properties different from the original substances. Use chemical equations to demonstrate chemical reactions.
3. Distinguish between graphic representations of exothermic and endothermic reactions.
4. Recognize factors that affect the rate of a chemical reaction.
5. Balance a chemical equation to demonstrate the Law of Conservation of Mass.
6. Classify a chemical reaction as a synthesis, decomposition, single replacement or double replacement.

Energy

H. Physics

1. Recognize that the sun is a major source of the Earth's energy and that solar energy includes visible, infrared and ultraviolet radiation; explain how solar energy can be converted into electrical energy.
2. Investigate and understand forms of energy and how energy is transferred and transformed.
3. Describe the various forms of energy including heat, light, sound, chemical, mechanical and electrical and how energy transforms from one form to another. (Law of Conservation of Energy)
4. Know that in any energy conversion, some of the energy is lost to the environment as heat.
6. Describe the interrelationship between kinetic and potential energy. (ex. rollercoaster)
7. Describe how heat can be conducted through materials or transferred across space by radiation, and how if the material is a fluid, convection currents may aid the transfer of heat.
8. Convert measurements between Fahrenheit, Celsius and Kelvin Scales.
9. Understand the concept of absolute zero.
10. Describe the role of energy in phase changes.
11. Interpret graphic representations of state changes.
12. Distinguish between heat and temperature.
13. Explain the relationship between heat capacity and specific heat of a substance.
14. Calculate heat capacity.
15. Recognize that all waves exhibit certain characteristics: wavelength, frequency, and amplitude.
16. Calculate wave speed, frequency and wavelength when provided with two of the three variables.
17. Understand that light travels in straight lines until it strikes an object where it can be reflected, refracted, absorbed or transmitted.
18. Explain how the light that an object reflects determines its colors.
19. Use the electromagnetic spectrum to compare the electromagnetic waves.

Motion and Forces

1. Apply the concepts of speed, velocity and acceleration when describing motion.
2. Design a device (car, rocket, paper airplane, roller coaster, etc.); obtain quantitative measurements of its motion; determine if the design could be altered to improve the outcome.
3. Predict how friction will affect the motion of an object.
4. Construct and interpret graphs that relate distance and time, and velocity and time.
5. Identify situations that illustrate Newton's Laws of Motion.
6. Use Newton's second law of motion to relate force, mass and acceleration.
7. Calculate net force.
8. Distinguish between the effect of balanced and unbalanced forces on motion.
9. Distinguish between mass and weight.
10. Recognize that gravitational attraction depends on combined mass and distance between objects.
11. Understand how Kepler's Laws describe orbital motion and can explained by gravitational forces.
12. Calculate the velocity or time for an object in freefall.



SOCIAL STUDIES

Current Events: Students will become familiar with local, state, national, and international news as determined by the teacher to be relevant and appropriate.

Westward Expansion (1801 – 1853)

1. Describe the methods the United States used to achieve Manifest Destiny.
2. Examine the impact of key personalities on Manifest Destiny.
3. Identify the causes that led to Westward Expansion.
4. Explain the effects of Manifest Destiny on the nation.
5. Analyze the impact of Westward Expansion from various perspectives.



Antebellum Period

1. Describe what life was like for enslaved and free African Americans.
2. Discuss the opposition to slavery.
3. Describe how the slavery became a sectional issue between the North and the South.
4. Analyze American cultural, religious, and social reforms in the antebellum period.
5. Analyze examples of hatred, prejudice, and discrimination during the Antebellum Period.
6. Explain the causes and events that led to the Civil War.

Civil War

1. Examine the role of geography, natural resources, demographics, transportation, and technology in the progress and outcome of the Civil War.
2. Analyze critical events and battles of the Civil War from multiple perspectives.
3. Examine the roles of women, African Americans, and Native Americans during the Civil War.
4. Assess the human and material costs of the Civil War in the North and South.
5. Explain how and why the Emancipation Proclamation and the Gettysburg Address continue to impact American life.

Reconstruction

1. Compare and contrast the approaches of Congress and Presidents Lincoln and Johnson toward the reconstruction of the South.
2. Analyze the economic impact of Reconstruction on the South from different perspectives.
3. Analyze the effectiveness of the 13th, 14th, and 15th Amendments to the United States Constitution from multiple perspectives.

The Emerging of the 20th Century

1. Analyze the second Industrial Revolution and its effect on the United States.
2. Explain the causes of immigration.
3. Identify the attempts of the Progressives to attack society's ills.
4. Analyze the effects of extending Manifest Destiny overseas.
5. Create a timeline of major events.
6. Describe the Women's Rights Movement.

World War I Overview

1. Describe the development by which the United States became a world power.
2. Analyze the foreign policy of the United States through World War I.
3. Examine the factors which led to the war and the entry of the U.S.
4. Evaluate the role of the United States among nations in World War I.

Interwar Period Overview

1. Explain why the war was followed by a period of social unrest and conflict throughout the world.
2. Analyze the decisions the government made in reaction to the Great Depression.
3. Summarize how the economy grew and struggled in the 1920s.

World War II Overview

1. Summarize the factors which led to World War II.
2. Describe the political background of America leading into World War II.
3. Evaluate the role of the United States in World War II.
4. Compare and contrast democracy to forms of totalitarianism, such as fascism, communism, Nazism and socialism.
5. State and discuss the immediate and long-term results of World War II.
6. Discuss how American policies following World War II developed as a result of the failures experienced and lessons learned after World War I.

Active Citizenship in the 21st Century

1. Analyze and discuss local, state, national, and international issues and events.
2. Connect local, state, national, and international events to world around them.
3. Compare and contrast the world before and after 9/11.
4. Analyze changes in American policy.



TECHNOLOGY

Grades 5-8 Objectives



I. Technology Operations and Concepts: Word Processing, Keyboarding

1. Create professional documents (e.g., newsletter, personalized learning plan, business letter or flyer) using advanced features of a word processing program.
2. Plan and create a simple database, define fields, input data, and produce a report using sort and query.
3. Create and present a multimedia presentation that includes graphics.
4. Generate a spreadsheet to calculate, graph, and present information.

5. Select and use appropriate tools and digital resources to accomplish a variety of tasks and to solve problems.

II. Creativity and Innovation

1. Synthesize and publish information about a local or global issue or event on a collaborative, web-based service (also known as a shared hosted service).

III. Communication and Collaboration

1. Participate in an online learning community with learners from other countries to understand their perspectives on a global problem or issue, and propose possible solutions.

IV. Digital Citizenship

1. Model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.
2. Summarize the application of fair use and Creative Commons guidelines.
3. Demonstrate how information on a controversial issue may be biased.

V. Research and Information Literacy

1. Gather and analyze findings using data collection technology to produce a possible solution for a content-related or real-world problem.

VI. Critical Thinking, Problem Solving, and Decision-Making

1. Use an electronic authoring tool in collaboration with learners from other countries to evaluate and summarize the perspectives of other cultures about a current event or contemporary figure.



VISUAL ARTS

Objectives for Grades 6, 7, 8



The Creative Process:

1. Describe the intellectual and emotional significance conveyed by the application of the elements of art and principles of design in different historical eras and cultures.
2. Compare and contrast various masterworks of art from diverse cultures and identify elements of the works that relate to specific cultural heritages.

History of Arts and Culture:

1. Map historical innovations in dance, music, theatre, and visual art that were caused by the creation of new technologies.
2. Differentiate past and contemporary works of dance, music, theatre, and visual art that represent important ideas, issues, and events that are chronicled in the histories of diverse cultures.
3. Analyze the social, historical, and political impact of artists on culture and the impact of culture on the arts.

Performing

1. Incorporate various art elements and the principles of balance, harmony, unity, emphasis, proportion, and rhythm/movement in the creation of two- and three- dimensional

artworks, using a broad array of art media and art mediums to enhance the expression of creative ideas (e.g., perspective, implied space, illusionary depth, value, and pattern).

2. Apply various art media, art mediums, technologies, and processes in the creation of allegorical, theme-based, two- and three-dimensional works of art, using tools and technologies that are appropriate to the theme and goals.
3. Identify genres of art (including realism, abstract/nonobjective art, and conceptual art) within various contexts using appropriate art vocabulary, and solve hands-on visual problems using a variety of genre styles.
4. Delineate the thematic content of multicultural artworks, and plan, design, and execute multiple solutions to challenging visual arts problems, expressing similar thematic content.
5. Examine the characteristics, thematic content, and symbolism found in works of art from diverse cultural and historical eras, and use these visual statements as inspiration for original artworks.
6. Synthesize the physical properties, processes, and techniques for visual communication in multiple art media (including digital media), and apply this knowledge to the creation of original artworks.

Aesthetic Responses

1. Generate observational and emotional responses to diverse culturally and historically specific works of dance, music, theatre, and visual art
2. Identify works of dance, music, theatre, and visual art that are used for utilitarian and non-utilitarian purposes.
3. Distinguish among artistic styles, trends, and movements in dance, music, theatre, and visual art within diverse cultures and historical eras.
4. Compare and contrast changes in the accepted meanings of known artworks over time, given shifts in societal norms, beliefs, or values.
5. Interpret symbolism and metaphors embedded in works of dance, music, theatre, and visual art.
6. Differentiate between “traditional” works of art and those that do not use conventional elements of style to express new ideas.
7. Analyze the form, function, craftsmanship, and originality of representative works of dance, music, theatre, and visual art.

Critique Methodologies

1. Evaluate the effectiveness of a work of art by differentiating between the artist’s technical proficiency and the work’s content or form.
2. Differentiate among basic formal structures and technical proficiency of artists in works of dance, music, theatre, and visual art.
3. Compare and contrast examples of archetypal subject matter in works of art from diverse cultural contexts and historical eras by writing critical essays.



WORLD LANGUAGE



Health

1. Distinguish between ser and estar.
2. Communicate symptoms.
3. Express what is being done to or for someone else.
4. Differentiate between clinics in the U.S. And Spanish speaking countries.
5. Express needs in a pharmacy.

Preterite

1. Recognize the difference between past and present events.
2. Utilize preterite tense to discuss past events.

Sports

1. Discuss sporting venues.
2. Summarize activities in a sporting event.
3. Consider the universality of soccer as the preeminent sport throughout the Spanish speaking world.
4. State personal preferences.

Travel

1. Relate proper order of travel activities.
2. Distinguish the difference between saber and conocer.
3. Express activities in progress.

