

EIGHTH GRADE CONTENT STANDARDS Parent Handbook

Sacramento Diocese of Catholic Schools Content Standards for EIGHTH GRADE

Why Content Standards?

With the adoption of content standards, California is stating—explicitly—the content that students need to acquire at each grade level from Kindergarten through grade twelve. With student mastery of this content, schools will be equal to those in the best educational systems in other states and nations.

How to Improve Student Performance?

Strong performance on standardized tests is an increasingly important part of life for all students. Access to higher education, most specialized employment licenses, and many public and private occupational opportunities depend on acceptable performance of one form or another on standardized tests.

The goal is to focus instruction on Standards, coordinate instruction between classrooms, and use common student assessments. These must emphasize both the content and assessment format students may face in the future in order to significantly increase student learning and student achievement on formal and informal assessments.

Goals for your Child's Education

Research has proven that student learning and overall productivity increases with the implementation of a Standards-based educational system. Standards define the curriculum for each grade level, a curriculum that is coordinated from grade level to grade level and one that identifies the level of instruction appropriate for each grade. As teachers and parents understand the curriculum expectations at a specific grade level, they can provide the type of learning experiences that will allow the student successful achievement in all Standards.

How to Use this Parent Handbook

Use this handbook as a guide to your child's education in Eighth Grade by:

- Reading the Standards your child should learn during the year.
- Helping your child learn the different Standards by doing the suggested Home Activities and providing instruction when your child is having trouble with his/her homework.
- Tracking your child's progress during the year using the "Student Progress Chart" found in this document.
- Taking this Handbook to your child's parent/teacher conference. At this time, compare the teacher's Student Progress Chart with your own chart, and discuss the Standards that the child needs to master.

Parent Handbook Components

This document contains:

- Eighth Grade Standards for Religion, Language Arts, Mathematics, History–Social Science and Science
- Home Atmosphere Suggestions for improved student performance
- Home Activities for Language Arts, Mathematics, History–Social Science and Science
- Student Tracking Forms to show student progress throughout the year

RELIGION STANDARDS

Grade Eight

THEME:

Understanding and appreciating the history, character, and future of our Church community.

OBJECTIVES:

- A. To learn about the history of the Church.
- B. To assist children in understanding their role in the Church community.
- C. To understand that all people are called to further the Kingdom by living the Good News of the Gospel.

1.0 MESSAGE: The past, present, and future of our Church community are to be valued.

1.1 God

- 1.1.1 To understand that Jesus devoted His life to freeing people from every form of slavery and to believe that we are called to stand, like Jesus, for and with the poor in the struggle against injustice and oppression and to free them from every form of slavery.
- 1.1.2 To understand that Jesus models respect and reverence for human life.

1.2 Scripture

- 1.2.1 To reinforce that the Bible is a collection of books that tell the story of God and His people.
- 1.2.2 To become proficient at searching the Bible as a book divided into books, chapters, and verses.
- 1.2.3 To reinforce the knowledge of authorship of Christian Scripture.
- 1.2.4 To reinforce that when we read the Bible, we listen to God speaking to us.
- 1.2.5 To deepen the understanding of the Gospel as the Good News.
- 1.2.6 To reinforce that scripture is an element in revelation.

1.3 Doctrine

- 1.3.1 To know that Jesus formed a community of disciples to continue God's saving presence.
- 1.3.2 To learn that the Holy Spirit inspires and guides the reform of the Church.

2.0 WORSHIP: We experience God's love through signs and symbols.

2.1 Sacraments

- 2.1.1 To review that the seven sacraments are special signs of Christ's grace and our faith.
- 2.1.2 To learn that the sacraments are actions of the risen Christ working through His Church to love, heal, and call us to change.
- 2.1.3 To know that sacraments celebrate the presence of Christ in our most important life experiences.
- 2.1.4 To reinforce that the Eucharist is the central celebration of our Church.
- 2.1.5 To understand how sacraments express and intensify values important to

teenagers.

2.2 Prayer

2.2.1 To incorporate prayer as part of our daily living.

2.2.2 To know the following prayers: (1) Sign of the Cross; (2) Nicene Creed; (3) Lord's Prayer; (4) Prayer of St. Francis; (5) Hail Mary; (6) Acts of Faith, Hope, and Love; (7) Doxology (Glory to the Father...); (8) Hail Holy Queen; (9) Grace before and after meals; and (10) An Act of Contrition

2.2.3 To have the opportunity to participate in a variety of prayer forms such as: (1) recitation; (2) spontaneous prayer; (3) petitions; (4) guided meditation; (5) gestures; (6) song, and (7) dance.

2.3 Liturgy

2.3.1 To review the specific parts and order of the Mass - the Liturgy of the Word and the Liturgy of the Eucharist - and to be able to properly use the responses.

2.3.2 To review liturgies associated with feasts and seasons of the Church year.

2.3.3 To take leadership in planning liturgies and paraliturgies.

2.4 Liturgical Year

2.4.1 To review the colors, customs, and signs of celebrations that are traditional for the Catholic Church.

2.4.2 To review the liturgical calendar.

2.5 Feast Days

2.5.1 To review how the Catholic Church celebrates feast days.

2.5.2 To celebrate the lives of past and modern day saints.

2.6 Traditions

2.6.1 To understand in greater depth the Church as one, holy, catholic, and apostolic.

2.6.2 To understand rituals and traditions of the one, holy, catholic, apostolic Church.

2.6.3 To understand how ritual and traditions change to meet the needs of people.

2.6.4 To understand there are many ways to express one's faith within the Catholic Church.

3.0 MORALITY: We witness our life as Christians in faith and service.

3.1 To understand how our Christian values help us make social, economic, and political choices.

3.2 To understand that we have a conscience that sends us a signal when it is disturbed.

3.3 To be aware that some sins are collective, the wrongful acts of a group.

3.4 To realize the quality of our eternal life depends upon how we live now.

3.5 To understand that the Beatitudes are the summary of Christian morality.

4.0 CATHOLIC SOCIAL TEACHING: Live the Christian message by service to

others.

4.1 Justice

- 4.1.1 To continue to learn to practice the values of the Gospel toward others.
- 4.1.2 To continue to learn to treat others as we want to be treated.
- 4.1.3 To continue to practice the Corporal and Spiritual Works of Mercy.
- 4.1.4 To recognize that Gospel justice can be in conflict with the secular world.

4.2 Peace

- 4.2.1 To learn to build the kingdom of God with our brothers and sisters throughout the world.
- 4.2.2 To continue to work for peace.

4.3 Local Needs

- 4.3.1 To recognize the needs of others, both in our own community and throughout the world.
- 4.3.2 To participate in school and class service projects.

5.0 COMMUNITY: Understand the Church community and its relationship to the world.

5.1 Models of Church

- 5.1.1 To understand how the Holy Spirit has developed the Church from yesterday to today and guides it to tomorrow.
- 5.1.2 To reinforce that the Church is family.
- 5.1.3 To know that we are all disciples of God.
- 5.1.4 To learn how the Church is an institution within national and global communities.
- 5.1.5 To understand that the Church, though having central leadership, is built on individual commitment.
- 5.1.6 To know about the role of the various groups in the Church: laity, Pope, cardinals, bishops, diocese.
- 5.1.7 To understand the history, work, and role of religious orders and the call to religious life today.

5.2 Church History

- 5.2.1 To learn that tradition is ongoing and yet evolving.
- 5.2.2 To understand the role of the Roman Catholic Church in world history.
- 5.2.3 To know that the Holy Spirit guides the Church.
- 5.2.4 To learn about models of Church government.

5.3 Mary/Saints

- 5.3.1 To recognize Mary as patroness of the Church in the United States and the Americas.
- 5.3.2 To continue to learn about the lives of the saints.

6.0 FAMILY LIFE: Relationships and commitment valued by Catholic teenagers.

6.1 Human Dignity

- 6.1.1 To understand about decision-making within a family.
- 6.1.2 To learn about relationships as a growing adolescent.
- 6.1.3 To respect, value, and care for all life on earth.
- 6.1.4 To study current issues that relate to a teenager's life.
- 6.1.5 To understand feelings in communicating with others.

7.0 **TERMINOLOGY:**

7.1 To become aware of the following terms in relationship to the Church:

alms	Catholic action	canon law	Christian
cardinals	Church Fathers		
catacombs	collegiality	catechumenate	
Catholic	Creed	Communion of Saints	contemplation curia
ecumenical			
faith	gentile	Mass	
martyr	meditation	monastery	
monastic life	heresy	hermit	icons justice option
for the poor		ritual liturgy	religious pluralism
sacrament	sacramentals	Liturgy of the Hours	
social justice	social doctrine	liberation theology	symboltriune
marks of the Church		Trinity	signs of the times
Catholic Social Teaching			

8.0 **SCRIPTURE REFERENCES to be used to develop the themes of the religion standards.**

Genesis 12: 1-2	God's promise to Abraham; begin to gather the people of God
Exodus 1: 1-8	God initiates the covenant with Israel
Isaiah 2: 2-5	The Church is part of this fulfilment
Isaiah 55: 3,	
Jeremiah 31: 31-34	Promise of a new covenant
Isaiah 65: 17- 25	Image of the Kingdom proclaimed by Jesus
Isaiah 66: 18-21	God will gather all nations
Matthew 28: 16-20	Commissioning of the apostles
Acts 9: 1-9	Vision of Saul (Paul)
1 Corinthians 12: 4-13	Variety of Gifts
John 13: 34-36	The new Law of Love
John 6: 35-40	The Way, the Truth, and the Life
Luke 22: 14-20	The Holy Eucharist
Acts 2: 42-47	The fervor of the early Church

Hebrew Scripture Books (46):

Pentateuch: Genesis, Exodus, Leviticus, Numbers, and Deuteronomy

Historical Books: Joshua, Judges, Ruth, 1 and 2 Samuel, 1 and 2 Kings

Chroniclers History and the Later Histories:

1 and 2 Chronicles, Ezra and Nehemiah, Tobit, Judith, Esther, 1 and 2 Maccabees

Wisdom Books: Job, Psalms, Proverbs, Ecclesiastes, Song of Songs, Wisdom, Sirach

Major Prophets: Isaiah, Jeremiah, Lamentations (Jeremiah), Baruch, Ezekial, and Daniel

Minor Prophets: Hosea, Joel, Amos, Obadiah, Jonah, Micah, Nahum, Habakkuk, Zephaniah, Haggai, Zechariah, and Malachi

Christian Scriptures (26):

Gospels: Matthew, Mark, Luke and John

Other Writings: Acts of the Apostles and Revelation

Letters: Romans, 1 and 2 Corinthians, Galatians, Ephesians, Philippians, Colossians, 1 and 2 Thessalonians, 1 and 2 Timothy, Titus, Philemon, Hebrews, James, 1 and 2 Peter, 1, 2, and 3 John, and Jude

LANGUAGE ARTS STANDARDS

Grade Eight

Reading

1.0 Word Analysis, Fluency, and Systematic Vocabulary Development

Students use their knowledge of word origins and word relationships, as well as historical and literary context clues, to determine the meaning of specialized vocabulary and to understand the precise meaning of grade-level-appropriate words.

By the end of eighth grade, your child will:

- 1.1 Analyze idioms, analogies, metaphors, and similes to infer the literal and figurative meanings of phrases.
- 1.2 Understand the most important points in the history of English language and use common word origins to determine the historical influences on English word meanings.
- 1.3 Use word meanings within the appropriate context and show ability to verify those meanings by definition, restatement, example, comparison, or contrast.

2.0 Reading Comprehension (Focus on Informational Materials)

Students read and understand grade-level appropriate material and student Bibles. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. In addition, by grade eight, students read one million words annually on their own, including a good representation of narrative and expository text (e.g., classic and contemporary literature, magazines, newspapers, online information).

By the end of eighth grade, your child will:

- 2.1 Compare and contrast the features and elements of consumer materials to gain meaning from documents (e.g., warranties, contracts, product information, instruction manuals).
- 2.2 Analyze text that uses proposition and support patterns.
- 2.3 Find similarities and differences between texts in the treatment, scope, or organization of ideas.
- 2.4 Compare the original text to a summary to determine whether the summary

accurately captures the main ideas, includes critical details, and conveys the underlying meaning.

- 2.5 Understand and explain the use of a complex mechanical device by following technical directions.
- 2.6 Use information from a variety of consumer, workplace, and public documents to explain a situation or decision and to solve a problem.
- 2.7 Evaluate the unity, coherence, logic, internal consistency, and structural patterns of text.

3.0 Literary Response and Analysis

Students read and respond to historically or culturally significant works of literature, including the Bible, that reflect and enhance their studies of history and social science. They clarify the ideas and connect them to other literary works.

By the end of eighth grade, your child will:

- 3.1 Determine and articulate the relationship between the purposes and characteristics of different forms of poetry (e.g., ballad, lyric, couplet, epic, elegy, ode, sonnet).
- 3.2 Evaluate the structural elements of the plot (e.g., subplots, parallel episodes, climax), the plot's development, and the way in which conflicts are (or are not) addressed and resolved.
- 3.3 Compare and contrast motivations and reactions of literary characters from different historical eras confronting similar situations or conflicts.
- 3.4 Analyze the relevance of the setting (e.g., place, time, customs) to the mood, tone, and meaning of the text.
- 3.5 Identify and analyze recurring themes (e.g., good versus evil) across traditional and contemporary works.
- 3.6 Identify significant literary devices (e.g., metaphor, symbolism, dialect, irony) that define a writer's style and use those elements to interpret the work.
- 3.7 Analyze a work of literature, showing how it reflects the heritage, traditions, attitudes, and beliefs of its author (Biographical approach).

Writing

1.0 Writing Strategies

Students write clear, coherent, and focused essays. The writing exhibits students' awareness of audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students progress through the stages of the writing process as needed.

By the end of eighth grade, your child will:

- 1.1 Create compositions that establish a controlling impression, have a coherent thesis, and end with a clear and well-supported conclusion.
- 1.2 Establish coherence within and among paragraphs through effective transitions, parallel structures, and similar writing techniques.
- 1.3 Support theses or conclusions with analogies, paraphrases, quotations, opinions from authorities, comparisons, and similar devices.
- 1.4 Plan and conduct multiple-stop information searches by using computer networks and modems.
- 1.5 Achieve an effective balance between researched information and original ideas.
- 1.6 Revise writing for word choice; appropriate organization; consistent point of view; and transitions between paragraphs, passages, and ideas.
- 1.7 Write fluidly and legibly in cursive or joined italic.

2.0 Writing Applications (Genres and Their Characteristics)

Students write narrative, expository, persuasive, and descriptive essays of at least 500 to 700 words in each genre. Student writing demonstrates a command of standard American English and the research, organizational, and drafting strategies outlined in Writing Standard 1.0.

Using the writing strategies of grade eight outlined in Writing Standard 1.0, students:

- 2.1 Write biographies, autobiographies, short stories, or narratives:
 - a. Relate a clear, coherent incident, event, or situation by using well-chosen details.
 - b. Reveal the significance of, or the writer's attitude about, the subject.
 - c. Employ narrative and descriptive strategies (e.g., relevant dialogue, specific action, physical description, background description, comparison or contrast of characters).

- 2.2 Write responses to literature and the Bible:
 - a. Exhibit careful reading and insight in their interpretations.
 - b. Connect the student's own responses to the writer's techniques and to specific textual references.
 - c. Draw supported inferences about the effects of a literary work on its audience.
 - d. Support judgments through references to the text, other works, other authors, or to personal knowledge.
- 2.3 Write research reports:
 - a. Define a thesis.
 - b. Record important ideas, concepts, and direct quotations from significant information sources and paraphrase and summarize all perspectives on the topic, as appropriate.
 - c. Use a variety of primary and secondary sources and distinguish the nature and value of each.
 - d. Organize and display information on charts, maps, and graphs.
- 2.4 Write persuasive compositions:
 - a. Include a well-defined thesis (i.e., one that makes a clear and knowledgeable judgment).
 - b. Present detailed evidence, examples, and reasoning to support arguments, differentiating between facts and opinion.
 - c. Provide details, reasons, and examples, arranging them effectively by anticipating and answering reader concerns and counter-arguments.
- 2.5 Write documents related to career development, including simple business letters and job applications:
 - a. Present information purposefully and succinctly and meet the needs of the intended audience.
 - b. Follow the conventional format for the type of document (e.g., letter of inquiry, memorandum).
- 2.6 Write technical documents:
 - a. Identify the sequence of activities needed to design a system, operate a tool, or explain the bylaws of an organization.
 - b. Include all the factors and variables that need to be considered.
 - c. Use formatting techniques (e.g., headings, differing fonts) to aid comprehension.
- 2.7 Write Church petitions.

Written and Oral English Language Conventions

The standards for written and oral English language conventions have been placed between those for writing and for listening and speaking because these conventions are essential to both sets of skills.

1.0 Written and Oral English Language Conventions

Students write and speak with a command of Standard English conventions appropriate to this grade level.

By the end of eighth grade, your child will:

- 1.1 Use correct and varied sentence types and sentence openings to present a lively and effective personal style.
- 1.2 Identify and use parallelism, including similar grammatical forms, in all written discourse to present items in a series and items juxtaposed for emphasis.
- 1.3 Use subordination, coordination, apposition, and other devices to indicate clearly the relationship between ideas.
- 1.4 Edit written manuscripts to ensure that correct grammar is used.
- 1.5 Use correct punctuation and capitalization.
- 1.6 Use correct spelling conventions.

Listening and Speaking

1.0 Listening and Speaking Strategies

Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication.

By the end of eighth grade, your child will:

- 1.1 Analyze oral interpretations of literature, including language choice and delivery, and the effect of the interpretations on the listener.
- 1.2 Paraphrase a speaker's purpose and point of view and ask relevant questions concerning the speaker's content, delivery, and purpose.
- 1.3 Organize information to achieve particular purposes by matching the message, vocabulary, voice modulation, expression, and tone to the audience and purpose.
- 1.4 Prepare a speech outline based upon a chosen pattern of organization, which generally includes an introduction; transitions, previews, and summaries; a logically developed body; and an effective conclusion.
- 1.5 Use precise language, action verbs, sensory details, appropriate and colorful modifiers, and the active rather than the passive voice in ways that enliven oral presentations.
- 1.6 Use appropriate grammar, word choice, enunciation, and pace during formal presentations.
- 1.7 Use audience feedback (e.g., verbal and nonverbal clues):
 - a. Reconsider and modify the organizational structure or plan.
 - b. Rearrange words and sentences to clarify the meaning.
- 1.8 Evaluate the credibility of a speaker (e.g., hidden agendas, slanted or biased material).
- 1.9 Interpret and evaluate the various ways in which visual image-makers (e.g., graphic artists, illustrators, news photographers) communicate information and affect impressions and opinions.
- 1.10 Weigh media messages against the moral and religious standards of the Catholic Church.

2.0 Speaking Applications (Genres and Their Characteristics)

Students deliver well-organized formal presentations employing traditional rhetorical strategies (e.g., narration, exposition, persuasion, description). Student speaking demonstrates a command of standard American English and the organizational and delivery strategies outlined in Listening and Speaking Standard 1.0.

Using the speaking strategies of grade eight outlined in Listening and Speaking Standard 1.0, students:

- 2.1 Deliver narrative presentations (e.g., biographical, autobiographical):
 - a. Relate a clear, coherent incident, event, or situation by using well-chosen details.
 - b. Reveal the significance of, and the subject's attitude about, the incident,

event, or situation.

- c. Employ narrative and descriptive strategies (e.g., relevant dialogue, specific actions, physical description, background description, comparison or contrast of characters).

2.2 Deliver oral responses to literature:

- a. Interpret a reading and provide insight.
- b. Connect the students' own responses to the writer's techniques and to specific textual references.
- c. Draw supported inferences about the effects of a literary work on its audience.
- d. Support judgments through references to the text, other works, other authors, or personal knowledge.

- 2.3 Deliver research presentations:
 - a. Define a thesis.
 - b. Record important ideas, concepts, and direct quotations from significant information sources and paraphrase and summarize all relevant perspectives on the topic, as appropriate.
 - c. Use a variety of primary and secondary sources and distinguish the nature and value of each.
 - d. Organize and record information on charts, maps, and graphs.
- 2.4 Deliver persuasive presentations:
 - a. Include a well-defined thesis (i.e., one that makes a clear and knowledgeable judgment).
 - b. Differentiate fact from opinion and support arguments with detailed evidence, examples, and reasoning.
 - c. Anticipate and answer listener concerns and counter-arguments effectively through the inclusion and arrangement of details, reasons, examples, and other elements.
 - d. Maintain a reasonable tone.
- 2.5 Recite poems (of four to six stanzas), sections of speeches, or dramatic soliloquies, using voice modulation, tone, and gestures expressively to enhance the meaning.
- 2.6 Read in Mass or present a Mass reading in class.

MATHEMATICS STANDARDS

Grade Eight

Algebra I

By the end of Algebra I, your child will:

- 1.0 Identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable.
 - 1.1 Use properties of numbers to demonstrate whether assertions are true or false.
- 2.0 Understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. Also understand and use the rules of exponents.
- 3.0 Solve equations and inequalities involving absolute values.
- 4.0 Simplify expressions before solving linear equations and inequalities in one variable, such as $3(2x-5) + 4(x-2) = 12$.
- 5.0 Solve multi-step problems, including word problems, that involve linear equations and linear inequalities in one variable and provide justification for each step.
- 6.0 Graph a linear equation and compute the x - and y -intercepts (e.g., graph $2x + 6y = 4$). Also sketch the region defined by linear inequalities (e.g., they sketch the

region defined by $2r + 6y < 4$).

- 7.0 Verify that a point lies on a line, given an equation of the line and derive linear equations by using the point-slope formula.
- 8.0 Understand the concepts of parallel lines and perpendicular lines and how those slopes are related. Also find the equation of a line perpendicular to a given line that passes through a given point.
- 9.0 Solve a system of two linear equations in two variable algebraically and interpret the answer graphically. Also solve a system of two linear inequalities in two variables and sketch the solution sets.
- 10.0 Add, subtract, multiply, and divide monomials and polynomials. Also solve multi-step problems, including word problems, by using these techniques.
- 11.0 Apply basic factoring techniques to second- and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognize perfect squares of binomials.

- 12.0 Simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.
- 13.0 Add, subtract, multiply, and divide rational expressions and functions. Also solve both computationally and conceptually challenging problems by using these techniques.
- 14.0 Solve a quadratic equation by factoring or completing the square.
- 15.0 Apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.
- 16.0 Understand the concepts of a relation and a function, determining whether a given relation defines a function, and give pertinent information about given relations and functions.
- 17.0 Determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression.
- 18.0 Determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion.
- 19.0 Know the quadratic formula and be familiar with its proof by completing the square.
- 20.0 Use the quadratic formula to find the roots of a second-degree polynomial and solve quadratic equations.
- 21.0 Graph quadratic functions and know that their roots are the x -intercepts.
- 22.0 Use the quadratic formula or factoring techniques or both to determine whether the graph of a quadratic function will intersect the x -axis in zero, one, or two points.
- 23.0 Apply quadratic equations to physical problems, such as the motion of an object under the force of gravity.
- 24.0 Use and know simple aspects of a logical argument including:
 - 24.1 Explain the difference between inductive and deductive reasoning and identify and provide examples of each.
 - 24.2 Identify the hypothesis and conclusion in logical deduction.
 - 24.3 Use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion.
- 25.0 Use properties of the number system to judge the validity of results, justify each step of a procedure, and prove or disprove statements such as:
 - 25.1 Use properties of numbers to construct simple, valid arguments (direct and indirect) for, or formulate counterexamples to, claimed assertions.
 - 25.2 Judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step.
 - 25.3 Given a specific algebraic statement that involve linear, quadratic, or absolute value expressions, equations or inequalities, determine whether

the statement is true sometimes, always, or never.

HISTORY/SOCIAL SCIENCE STANDARDS

Grade Eight

United States History and Geography: Growth and Conflict

Students in grade eight study ideas, issues, and events from the framing of the Constitution up to World War I, with an emphasis on America's role in the war. After reviewing the development of America's democratic institutions founded in the Judeo-Christian heritage and English parliamentary traditions, particularly the shaping of the Constitution, students trace the development of American politics, society, culture and economy and relate them to the emergence of major regional differences. They learn about the challenges facing the new nation, with an emphasis on the causes, course and consequences of the Civil War. They make connections between the rise of industrialization and contemporary social and economic conditions.

8.1 Students understand the major events preceding the founding of the nation and relate their significance to the development of American constitutional democracy, in terms of:

1. The relationship between the moral and political ideas of the Great Awakening and the development of revolutionary fervor.
2. The philosophy of government expressed in the Declaration of Independence with an emphasis on government as a means of securing individual rights (e.g., key phrases such as "...all Men are created equal, that they are endowed by their Creator with certain unalienable Rights").
3. The significance of the American Revolution as it affected other nations especially France.
4. Its blend of civic republicanism, classical liberal principles, and English parliamentary traditions.
5. Pursuit of religious freedom by Protestants and Catholics contributed to freedom of religious guarantees by the government.

8.2 Students analyze the political principles underlying the U.S. Constitution and compare the enumerated and implied powers of the federal government, in terms of:

1. The significance of the Magna Carta, the English Bill of Rights, and the Mayflower Compact.
2. The Articles of the Confederation and the Constitution, and the success of each in implementing the ideals of the Declaration of Independence.
3. The major debates that occurred during the development of the Constitution and their ultimate resolutions on areas such as shared power among institutions, divided state-federal power, slavery, and the rights of individuals and states (later addressed by the addition of the Bill of Rights).

4. The political philosophy underpinning the U.S. Constitution as specified in *The Federalist* (authored by James Madison, Alexander Hamilton, and John Jay) and the role of such leaders as James Madison, George Washington, Roger Sherman, Gouverneur Morris, and James Wilson in the writing and ratification of the Constitution.
5. The significance of Jefferson's Statute for Religious Freedom as a forerunner of the First Amendment, and the origins, purpose and differing views of the founding fathers on the separation of church and state doctrine.
6. The powers of government enumerated in the Constitution and the fundamental liberties ensured by the Bill of Rights
7. The principles of federalism, dual sovereignty, separation of powers, checks and balances, the nature and purpose of majority rule, and how the American idea of constitutionalism preserves individual rights.
8. The impact of Revolutionary War era religious leaders. E.g. Bishop John Carroll of Baltimore, on internal structure of that religion in America and its relationship to government.

8.3 Students understand the foundation of the American political system and the ways in which citizens participate in it, in term of:

1. The principles and concepts codified in the state constitutions between 1777 and 1781 that create the context out of which American political institutions and ideas developed.
2. How the ordinances of 1785 and 1787 privatized national resources and transferred federally owned lands into private holdings, townships and states.
3. The advantages of a "common market" among the states as foreseen and protected by the Constitution's clauses on interstate commerce, common coinage, and full-faith and credit.
4. The conflicts between Thomas Jefferson and Alexander Hamilton that resulted in the emergence of two political parties (e.g., view of foreign policy, Alien and Sedition Acts, economic policy, National Bank, funding and assumption of the revolutionary debt).
5. The significance of domestic resistance movements and ways in which the central government responded to such movements (e.g., Shay's Rebellion, the Whiskey Rebellion).
6. The basic law-making process and how the design of the U.S. Constitution provides numerous opportunities for citizens to participate in the political process and to monitor and influence government (e.g., function of elections, political parties, interest groups).
7. The function and responsibilities of a free press.

8.4 Students analyze the aspirations and ideals of the people of the new nation, in terms of:

1. Its physical landscapes and political divisions and the territorial expansion of the U.S. during the terms of the first four presidents.
2. The policy significance of famous speeches (e.g., George Washington's Farewell Address, Jefferson's Inaugural, John Q. Adams Fourth of July 1821 Address).

3. The rise of capitalism and the economic problems and conflicts that arose (e.g., Jackson's opposition to the National Bank; early decisions of the U.S. Supreme Court that reinforced the sanctity of contracts and a capitalist economic system of law).
4. The daily lives of people, including the traditions in art, music, and literature of early national America (e.g., writings by Washington Irving, James Fenimore Cooper).

8.5 Students analyze the aspirations and ideals of the people of the new nation, in terms of:

1. The political and economic causes and consequences of the War of 1812 and the major battles, leaders and events leading to a final peace.
2. The changing boundaries and the principle relationships between the United States, its neighbors (current Mexico and Canada) and Europe, including the influence of the Monroe Doctrine, and how those relationships influenced westward expansion and the Mexican American War.
3. The major treaties with Indian nations during the administrations of the first four presidents and their varying outcomes.

8.6 Students analyze the divergent paths of the American people from 1800 to the mid-1800's and the challenges they faced, with emphasis on the Northeast, in terms of:

1. The influence of industrialization and technological developments on the region, including human modification of the landscape and how physical geography shaped human actions (e.g., growth of cities, deforestation, farming, mineral extraction).
2. The importance of, and the geographic factors faced in building a network of roads, canals and railroads.
3. The reasons of the wave of immigration from Northern Europe to the U.S. and growth in the number, size, and spatial arrangements of cities (e.g., Irish immigrants and the potato famine).
4. The lives of black Americans who gained freedom in the North and founded schools and churches to advance black rights and communities.
5. The development of American public education from its earliest roots, including Horace Mann's campaign for free public education and its unifying role in American culture.
6. The women's suffrage movement (e.g., biographies, writings, and speeches of Elizabeth Cady Stanton, Margaret Fuller, Lucretia Mott, Susan B. Anthony).
7. Common themes in American art as well as Transcendentalism and individualism (e.g., writings about and by Emerson, Thoreau, Melville, Alcott, Hawthorne, Longfellow).

8.7 Students analyze the divergent paths of the American people from 1880 to the mid 1880s and the challenges they faced, with emphasis on the South, in terms of:

1. The development of the agrarian economy in the South, the location of the cotton

- producing states and the role of cotton and the cotton gin.
2. The origins and development of the institution of slavery; its effects of black Americans and on the region's political, social, religious, economic, and cultural development; and the various attempted strategies to both overturn and preserve it (e.g., biographies of Nat Turner, Denmark Vessey).
 3. The different characteristics of white Southern society and how the physical environment influenced events and conditions prior to the Civil War).
 4. The lives and opportunities of free-blacks in the North as compared with free blacks in the South.

8.8 Students analyze the divergent paths of the American people from 1880 to the mid 1800s and the challenges they faced, with emphasis on the West, in terms of:

1. The election of Andrew Jackson in 1828, the importance of Jacksonian democracy and his actions as president (e.g., spoils system, veto of National bank, policy of Indian removal, opposition to Supreme court).
2. The purpose, challenges and economic incentives associated with westward expansion including the concept of Manifest Destiny (e.g., Lewis and Clark expedition, accounts of the removal of Indians and the Cherokees' "Trail of Tears," settlement of the Great Plains) and the territorial acquisitions that spanned numerous decades.
3. The role of pioneer women and the new status that western women achieved (e.g., biographies, journals, diaries and other original documents on Sacagawea, Annie Bidwell, slave women gaining freedom in the West, Wyoming granting suffrage to women in 1869).
4. The role of the great rivers and the struggle over water rights.
5. Mexican settlements (i.e., their locations cultural traditions, attitudes toward slavery, land-grant system, the economies they established).
6. The Texas War for Independence and the Mexican American War (i.e., territorial settlements, the aftermath of the wars and the effect on the lives of Americans, including Mexican Americans today).
7. The significance of the second Great Awakening to California.

8.9 Students analyze the early and steady attempts to abolish slavery and realize the ideals of the Declaration of Independence, in terms of:

1. The leaders of the movement (e.g., biographies and other literature on John Quincy Adams and his proposed constitutional amendment, John Brown and the armed resistance, Harriet Tubman and the underground railroad, Benjamin Franklin, Theodore Weld, William Lloyd Garrison, Fredrick Douglass).
2. How early state constitutions abolished slavery.
3. The role of the Northwest Ordinance in education and in banning slavery in new states north of the Ohio river.
4. The slavery issue as raised by the annexation of Texas and the effect of California coming into the union as a free state as part of the Compromise of 1850.

5. The significance of the States' Rights Doctrine, Missouri Compromise (1820), Wilmot Proviso (1846), the Compromise of 1850, the Kansas-Nebraska Act (1854), the Dred Scott case (1857), and the Lincoln-Douglas debates (1858).
6. The lives of free blacks and the laws that curbed their freedom and economic opportunity.
7. The position of various religious denominations on the issue of slavery and a comparison to the US Bishops pastoral letter, 1997, on racism, "Brothers and Sisters to Us."

8.10 Students analyze the multiple causes, key events and complex consequences of the Civil War, in terms of:

1. The conflicting interpretations of state and federal authority as emphasized in the speeches and writings of statesman such as Daniel Webster and John C. Calhoun.
2. The boundaries constituting "the North" and "the South", the geographical differences between the two regions, and the differences between agrarians and industrialists.
3. The constitutional issues posed by the doctrine of nullification and secession and the earliest origins of that doctrine.
4. Abraham Lincoln's presidency and his significant writings and speeches and their relationship to the Declaration of Independence such as his "House Divided" speech (1860), the Gettysburg Address (1863), the Emancipation Proclamation (1863), his inaugural address (1861 and 1865).
5. The views and lives of leaders and soldiers on both sides of the war, including black soldiers and regiments (e.g., biographies of Ulysses S. Grant, Jefferson Davis, Robert E. Lee).
6. Critical developments in the war, including the major battles, geographical advantages and obstacles, technological advances, and Lee's surrender at Appomattox.
7. How the war affected combatants, with the largest death toll of any war in American history, and the physical devastation, the effect on civilians, and the effect on future war.

8.11 Students analyze the character and lasting consequences of Reconstruction, in terms of:

1. The original aims of Reconstruction and the effects of the political and social structure of different regions
2. The push-pull factors in the movement of former slaves to the cities in the North and to the West, and differing experiences in those regions (e.g., the experiences of Buffalo Soldiers).
3. The effects of the Freedman's Bureau and the restrictions on the rights and opportunities of freedmen, including racial segregation and "Jim Crow" laws; comparison of discrimination in post-construction period with more current Catholic social teachings on life and dignity of the human person.
4. The rise and effects of the Ku Klux Klan.
5. The thirteenth, fourteenth, and fifteenth amendments to the Constitution, and their connection to Reconstruction.

8.12 Students analyze the transformation of the American economy and the changing social and political conditions in the United States in response to the Industrial Revolution, in terms of:

1. Patterns of agriculture and industrial development as they relate to climate, natural resource use, markets, and trade, including their location on a map
2. The reasons for the development of federal Indian policy and the Plains wars with American Indians and their relationship to agricultural development and industrialization
3. How states and the federal government encouraged business expansion through tariffs, banking, land grants, and subsidies
4. Entrepreneurs, industrialists, and bankers in politics, commerce, and industry (e.g., Andrew Mellon, John D. Rockefeller)
5. The location and effects of urbanization, renewed immigration, and industrialization (e.g., effects on social fabric cities, wealth and economic opportunity, and the conservation movement)

6. Child labor, working conditions, laissez-faire policies toward big business and the rise of the labor movement, including collective bargaining, strikes, and protests over labor conditions
7. The new sources of large scale immigration and the contribution of immigrants to the building of cities and the economy; the ways in which new social and economic patterns encouraged assimilation of newcomers into the mainstream amidst growing cultural diversity; and the new wave of nativism
8. The characteristics and impact of Grangerism and Populism.
9. The significant inventors and their inventions (e.g., biographies of Thomas Edison, Alexander Graham Bell) and the incentives that prompted the quality of life (e.g., inventions in transportation, communication, agriculture, industry, education, medicine)
10. Catholic social teaching regarding the poor and vulnerable and the dignity of work and the rights of workers, especially Pope Leo XIII's "Rerum Novarum", 1891
11. Religious denominations' response to social evils as resulting from personal failings and sin
12. The Social Gospel focus on improving living conditions rather than saving souls
13. Growth of charitable organizations such as the Society of St. Vincent de Paul, YMCA (1851), Salvation Army (1880), Jane Adams of Hull House, the Catholic Worker Movement, Catholic Brownson House in Los Angeles for Mexican immigration

SCIENCE STANDARDS

Grade Eight

FOCUS ON PHYSICAL SCIENCE

Motion

1.0 The velocity of an object is the rate of change of its position. As a basis for understanding this concept, students know:

- 1.1 position is defined relative to some choice of standard reference point and a set of reference directions.
- 1.2 average speed is the total distance traveled divided by the total time elapsed. The speed of an object along the path traveled can vary.
- 1.3 how to solve problems involving distance, time, and average speed.
- 1.4 that to describe the velocity of an object, one must specify both direction and speed.
- 1.5 changes in velocity can be changes in speed, direction, or both.
- 1.6 how to interpret graphs of position versus time, and speed versus time for motion in a single direction.

Forces

2.0 Unbalanced forces cause changes in velocity. As a basis for understanding this concept, students know:

- 2.1 a force has both direction and magnitude.
- 2.2 when an object is subject to two or more forces at once, the effect is the cumulative effect of all the forces.

- 2.3 when the forces on an object are balanced, the motion of the object does not change.
- 2.4 how to identify separately two or more forces acting on a single static object, including gravity, elastic forces due to tension or compression in matter, and friction.
- 2.5 when the forces on an object are unbalanced, the object will change its motion (that is, it will speed up, slow down, or change direction).
- 2.6 the greater the mass of an object, the more force is needed to achieve the same change in motion.
- 2.7 the role of gravity in forming and maintaining planets, stars, and the solar system.

Structure Of Matter

3.0 Elements have distinct properties and atomic structure in the scientific realm created by God. All matter is comprised of one or more of over 100 elements. As a basis for understanding this concept, students know:

- 3.1 the structure of the atom and how it is composed of protons, neutrons, and electrons.
- 3.2 compounds are formed by combining two or more different elements.
- 3.3 atoms and molecules form solids by building up repeating patterns such as the crystal structure of NaCl or long chain polymers.
- 3.4 the states (solid, liquid, gas) of matter depend on molecular motion.
- 3.5 in solids, the atoms are closely locked in position and can only vibrate; in liquids, the atoms and molecules are more loosely connected and can collide with and move past one another; in gases, the atoms or molecules are free to move independently, colliding frequently.
- 3.6 how to use the periodic table to identify elements in simple compounds.

Earth In The Solar System (Earth Science)

4.0 The structure and composition of the universe can be learned from the study of stars and galaxies and their evolution. As a basis for understanding this concept, students know:

- 4.1 galaxies are clusters of billions of stars, and may have different shapes.
- 4.2 the sun is one of many stars in our own Milky Way galaxy. Stars may differ in size, temperature, and color.
- 4.3 how to use astronomical units and light years as measures of distance between the sun, stars, and Earth.
- 4.4 stars are the source of light for all bright objects in outer space. The moon and planets do not shine by their own light, but by reflected sunlight.
- 4.5 the appearance, general composition, relative position and size, and motion of objects in the solar system, including planets, planetary satellites, comets, and asteroids.

Reactions

5.0 Chemical reactions are processes in which atoms are rearranged into different combinations of molecules. As a basis for understanding this

concept, students know:

- 5.1 reactant atoms and molecules interact to form products with different chemical properties.
- 5.2 the idea of atoms explains the conservation of matter: in chemical reactions, the number of atoms stays the same no matter how they are arranged, so their total mass stays the same.
- 5.3 chemical reactions usually liberate heat or absorb heat.
- 5.4 physical processes include freezing and boiling, in which a material changes form with no chemical reaction.
- 5.5 how to determine whether a solution is acidic, basic or neutral.

Chemistry of Living Systems (Life Sciences)

6.0 Principles of chemistry underlie the functioning of biological systems as created by God. As a basis for understanding this concept, students know:

- 6.1 carbon, because of its ability to combine in many ways with itself and other elements, has a central role in the chemistry of living things.
- 6.2 living things are made of molecules largely consisting of carbon, hydrogen, nitrogen, oxygen, phosphorus, and sulfur.
- 6.3 living things have many different kinds of molecules, including small ones, such as water and salt, and very large ones, such as carbohydrates, fats, proteins and DNA.

Periodic Table

7.0 The organization of the periodic table is based on the properties of the elements and reflects the structure of atoms. As a basis for understanding this concept, students know:

- 7.1 how to identify regions corresponding to metals, nonmetals, and inert gases.
- 7.2 elements are defined by the number of protons in the nucleus, which is called the atomic number. Different isotopes of an element have a different number of neutrons in the nucleus.
- 7.3 substances can be classified by their properties, including melting temperature, density, hardness, heat, and electrical conductivity.

Density And Buoyancy

8.0 All objects experience a buoyant force when immersed in a fluid. As a basis for understanding this concept, students know:

- 8.1 that density is mass per unit volume and how to calculate the density of substances (regular and irregular solids and liquids) from measurements of mass and volume.
- 8.2 that the buoyant force on an object in a fluid is an upward force equal to the weight of the fluid it has displaced, and know how to apply this principle to predict whether an object will float or sink.
- 8.3 writing a research report; paraphrasing, cover page, bibliography, footnotes, and organization of resource materials.
- 8.4 application and use of scientific method for problem solving.

Investigation And Experimentation

9.0 Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in the other three strands, students should develop their own questions and perform investigations. Students will:

- 9.1 develop a hypothesis.
- 9.2 select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes and binoculars) to perform tests, collect data and display data.
- 9.3 construct appropriate graphs from data and develop qualitative statements about the relationships between variables.
- 9.4 communicate the steps and results from an investigation in written reports and verbal presentations.
- 9.5 recognize whether evidence is consistent with a proposed explanation.

- 9.6 read a topographic map and a geologic map for evidence provided on the maps, and construct and interpret a simple scale map.
- 9.7 interpret events by sequence and time from natural phenomena.
- 9.8 identify changes in natural phenomena over time without manipulating the phenomena.

ATMOSPHERE AT HOME

We encourage all parents to consider the following ideas when setting up a home environment for increasing student learning:

- 1. Provide an appropriate work space that is:**
 - Quiet with appropriate lighting.
 - Contains supplies such as paper, pencils, resources, etc.
- 2. Set up an atmosphere for studying by:**
 - Scheduling a regular, daily study time where all family members are studying.
 - Making sure the house is quiet during study time.
 - Working on establishing trust and accountability..
- 3. Be involved in your child's education by:**
 - Being a role model, setting values, and modeling good Christian values.
 - Demonstrating a positive attitude.
 - Providing help, resources, and encouragement.
 - Showing interest and supporting your child's work.
 - Upholding the school's expectations.
 - Supporting and participating in school service opportunities.
- 4. Strive to establish a Christian family atmosphere by:**
 - Encouraging your child to follow the teachings of Jesus in his/her dealing with others.
 - Encouraging regular family prayer and the celebration of religious experiences.
 - Modeling Christian values.
 - Acknowledging and supporting your child's efforts.
 - Reinforcing Christian behavior.
 - Providing opportunities for service to others.
- 5. Strengthen communication with your child by:**
 - Spending quality time with your child often.
 - Sharing resources from your community.
 - Establishing/enforcing reasonable consequences for behavior.

HOME ACTIVITIES FOR LANGUAGE ARTS

Reading

- Schedule a family reading time every night where everyone is reading books, magazines, newspaper, etc.
- Help you child get their own library card and go to the library as a family.
- Provide comfortable reading level and age appropriate materials.

- Subscribe to magazines of interest for different members of the family.
- Take the family to the library and book stores, both new and used books.
- Encourage your child to read non-fiction and informational materials.

Reading Comprehension

- Read directions and perform the activity (e.g., building a model from directions, making a cake using a recipe).
- Read maps when planning a trip.
- Research and discuss current events using various media sources.
- Research and discuss current events with political/moral implications.

Writing

- Have your child write about daily events in his/her journal.
- Have your child write personal correspondence.
- Have your child use technology to communicate to others.
- Have your child use a computer for writing, using the capabilities of the technology/software to enhance writing.
- Have your child write practical items (e.g., grocery list, history of the family).

Written and Oral English Language Conventions

- Have your child edit/correct errors found in the newspaper.
- Supervise your child editing letters they have written, looking for correct punctuation, capitalization, grammar, and sentence structure.
- Have the child edit writings by other family members.

Listening and Speaking

- Have your child read material aloud. Listen for voice inflections, seeing if the tone of the voice fits the theme being read.
- Have your child make a tape of a book by recording themselves as they read, then share this tape with someone who cannot read (e.g., older person in a rest home).
- Have your child listen to and explain the lyrics to a selection of music.

HOME ACTIVITIES FOR MATHEMATICS

Algebra

- Have your child create and solve problems using department store ads (e.g., Find three items that total \$50.00 including tax).
- Have your child solve multiple answer problems you have created (e.g., How many ways can you make a double dip ice cream cone given 5 flavors of ice cream. If 5 guests meet you at the door to your house and all six of you shake hand with each other. How many “hand-shakes” are there.).
- Have your child calculate a payment plan for paying off a home mortgage, and the difference if you paid \$50.00 more per month.
- Have your child calculate sale prices on various items found in catalogs, newspaper, etc.
- Calculate a payment plan for paying off an account (e.g., home mortgage, loan) and find the difference if the person paid \$50.00 more per month.

HOME ACTIVITIES FOR HISTORY/SOCIAL SCIENCE

The Founding of the Nation and the Development of Democracy

- As a family, discuss the Declaration of Independence, especially the phrase, “all men are created equal, that they are endowed by their creator with certain unalienable rights.” Talk about what this means in our present day society both for children and adults. Also talk about the interpretation of this document when it was written and the interpretation today.
- As a family, talk about how present day communication and transportation has changed the interpretation of the Declaration of Independence.

Political Principles Underlying the U.S. Constitution

- As a family, discuss one or two of the “Bill of Rights” and their present day interpretations. (e.g., Discuss interpretations of the right to “Freedom of Speech” as it relates to music, movies and news).
- As a family, talk about the separation of church and state. Discuss why this was important to the founding fathers, how this concept is interpreted today, and how this interpretation affects the school system.

The American Political System

- As a family, listen to some political speeches, especially during election time, and discuss what the person is really saying (e.g., What promises can this person fulfill and which are impossible).

- With your child, discuss the process for making laws in a democratic form of government. Practice this procedure when making family rules and regulations. Appoint family members the legislature, executive, and judicial branches of your family household government.

Aspirations and Ideals of the People of the New Nation

- With your child, watch a movie, based on a book by James Fenimore Cooper or Washington Irvine, showing the interpretation of daily life in early America. Discuss the life style then as compared with that of today.
- With your child, visit a museum and see some of the art of early America. Discuss his/her reaction to this type of painting.
- With your child, listen to early American folk music, listening for the story that is being told. Compare this with modern music, listening for story line and melody.

United States Foreign Policy in the Early Republic

- As a family, discuss how Americans treated Indians during the Western Movement period. Discuss how Indians are treated today.
- As a family, discuss how our state/nation treats the Mexicans and the similarities and differences from the way the Americans treated the Indians.

Divergent Paths of the American People from 1800 to the mid-1800s

- As a family, make a timeline of the different inventions from 1800 to 1900. Talk about how these inventions helped society.
- As a family, make a list of the freedoms women have today that they did not have in the early 1800's (e.g., the right to buy and sell property, right to vote). For fun, spend a weekend living as close to the standards of the 1800's as possible, having the children, mother, and father each playing their role. Discuss how each person felt in his/her role.
- As a family, discuss the roles of a slave and roles of the land owner.
- As a family, spend the weekend with each person being a slave or a land owner. Discuss how each person felt. The next weekend, change roles and again discuss how each person felt.

Causes, Key Events, and Consequences of the Civil War

- As a family, watch the movie "The Blue and the Gray." After the movie, talk about the Civil War and its effect on this country.
- If possible, visit a reenactment of the Civil War with your child and talk with the participants about this event in History.
- With your child, do an Internet search on the Civil War. Read letters written by soldiers to their families. Notice the difference in language.

Character and Consequences of Reconstruction

- With your child, do an Internet search on the Reconstruction, looking for the different types of problems that occurred (e.g., plantation management without slaves).

Transformation of the American Economy and Social/Political Conditions in

Response to the Industrial Revolution

- Discuss, as a family, the American child labor practices during the Industrial Revolution. Talk about the types of job children were expected to do and the length of their work day.
- When watching the news, or reading the newspaper, find examples of modern day child labor abuse. Discuss this as a family (e.g., The children working in India on tapestry.).

HOME ACTIVITIES FOR SCIENCE

Focus on Physical Science

Motion

Velocity of an Object, the Rate of Change of its Position

- While on a trip, have your child keep a record of time and distance traveled then compute the average speed.
- While working around the house, have your child talk about the position of different objects in relation to a reference point (e.g., The ball is a few feet from the N/W corner of the garage.).
- With your child, build a short ramp for a toy car and let the toy car roll down the ramp. Using the concept of distance and time, determine the average speed for the car (e.g., Formula for finding speed is distance divided by time = speed. The time must be written as a decimal portion of an hour.)

Forces

Unbalanced Forces cause Changes in Velocity

- With your child, play a game of pool, croquet, or marbles and talk about how the force provides motion and how this motion is passed to another object.
- With your child, build a small ramp. Pull a light object up the ramp with a spring scale. Measure the force needed. Now repeat the activity with a heavier weight. Build a chart showing the weight of the object and the force needed to pull it up the ramp.

Structure of Matter

Elements of matter have distinct properties

- With your child, talk about the concept that atoms are composed of protons, neutrons, and electrons. Then look at a Periodic Table and discuss the information listed for some of the atoms.
- Using a white sheet of paper and three different colored Jelly Bellies, help your child build models of different atoms (e.g., Hydrogen has the number 1, meaning it has one electron and one neutron. Sodium has the number of 11, meaning it has 11 electrons and 11 neutrons. The 2, 8, and 1 means there are three rings of electrons with 2 electrons in the first ring, 8 in the second, and 1 in the third.).
- With your child, use colored marshmallows and toothpicks to create a model of a sugar molecule (C₁₂H₂₂O₁₁).

Earth in the Solar System

Structure / Composition of the Universe can be Learned from Studying Stars and Galaxies

- With your child, go out at night, on a moon less night, and identify the Milky Way and different constellations using a star chart.

Reactions

Chemical Reactions

- With your child, list different fluids around the house that are acidic or basic (alkaline) and record their physical properties, uses, and what safety procedures a person uses if the substances are ingested.

Chemistry of Living Systems

Principles of Chemistry Underlie the Functioning of Biological Systems

- With your child, build a section of a DNA molecule, using something flexible so that the “ladder” can be twisted like the DNA’s double helix.

Periodic Table

Organization of the Periodic Table

- With your child, select a metal from the Periodic Table of the elements, drawing its atomic structure and listing its physical properties. Repeat this activity for a

- nonmetal and an inert gas.
- With your child, look up the Periodic Table on the Internet and discuss information learned.

Density and Buoyancy

All Objects Experience a Buoyant Force

- When swimming, have your child fill his/her lungs with air and float. Next have your child exhale and observe the results.
- Have your child develop an experiment where first he/she predicts if an object will float or sink, then test the object.

STUDENT'S RECORDS

How is your child's progress in school? Is he/she learning the required skills for their grade level? Are these questions that you have been asking? The **Student Records** on the following pages will allow you to identify the Standards your child has learned this year.

How to use the Student Records

As you see that your child has mastered one of the skills on the **Student Record**, write a date in the appropriate box. You could find out that your child knows the skill by: (1) giving them a test; (2) looking at your child's school papers; (3) observing your child perform the skill in his/her everyday life experiences, etc. Whatever the case, this **Student Record** is available for you to chart your child's progress throughout the school year.

Using the Student Record During a Teacher Conference

While talking to the teacher take out the **Student Record** and discuss your findings with the teacher. In this way, you are discussing real data about your child's knowledge of skills. During the discussion, the teacher may suggest changes to the **Student Record** because of classroom assessments or observations.

Keys to Success

Remember the following keys:

1. Always take this handbook to your teacher/parent conference so you can track your child's educational progress.
2. As your child demonstrates their knowledge of a specific skill, always write the date in the space provided.
3. Plan home activities that will help your child master one or more of the skills listed, then record his/her progress.
4. Discuss, with your child, his/her progress and set goals.

