

GRADE FIVE Grade Level Expectations

These are the core grade level expectations that should be taught and learned during grade five based on the McRel standards and benchmarks. They are written from the student point of view. These grade level expectations are aligned with McRel standards and the standards-based progress report. The number listed is in reference to McRel 3rd edition; the number listed for Religion standard is in reference to *By Their Fruits You Shall Know Them*, Lorraine Ozar. In grades 3-12, the ITBS/ITED grade level expectations for reading, math, and science promulgated at the beginning of the 2003-04 school year by the Department of Education are noted in italics. Because of students' developmental levels, not all standards are addressed at every grade level. If a standard is not appropriate at a given grade level, it is omitted or it is marked with an NA (not appropriate). **The Iowa Core Curriculum essential concepts have been embedded at appropriate places, bolded, and identified with (ICC). Not all ICC may be appropriate at a given grade level, but by the time a student reaches fifth grade, all the primary ICC core concepts will have been taught.**

RELIGION

1. Reads, interprets, and applies Scripture to life.
 - Participates in discussion*
 - Has knowledge of content*
 - Continues to explore how the Ten Commandments, Beatitudes, Works of Mercy and theological virtues are lived out in one's life
2. Presents a reasoned rationale, based on faith and knowledge, for being a Catholic.
3. Illustrates basic understanding of Catholic dogma and doctrine in light of the "Catechism for the Catholic Church."
 - Continues to develop a deeper realization of role of Mary's Motherhood of Jesus, of the Church, our mother, and the greatest model of holiness
 - Develops an appreciation of the importance of the Holy Spirit in one's life and in the Church
 - Knows that the symbols of the Holy Spirit are wind, breath, and fire
 - Continues to articulate more about the doctrine of the Catholic faith
 - Explores the mystery of the Trinity
 - Knows the precepts of the Church
4. Demonstrates the importance of sacraments, with an emphasis on the centrality of the Eucharist in the life of Catholics.
 - Knows the Seven Sacraments; recognizes that the sacraments give grace to help us grow spiritually
 - Develops and appreciates God's special gift of life (grace) to us, especially through prayer and the Sacraments
 - Develops a greater appreciation, gratitude, and joy in participating in Mass and reverence in receiving the Eucharist
 - Recognizes the relationship of the Eucharistic sacrifice to Calvary
 - Understands it is important to reflect on what it means to live a sacramental life
5. Makes moral decisions consistent with Church teachings.
 - Realizes that God's plan is that people be good in order to live with God forever in heaven
 - Realizes that God gave humans the special gift of free will
 - Recognizes that God gives us rules for living a life of love
 - Understands that forming one's conscience is a lifelong responsibility
6. Illustrates a basic understanding of the history of the Church.
7. Acknowledges and affirms the diverse cultural expressions of Catholicism.
 - Recognizes the many gifts, talents and abilities that God has provided each of us
 - Recognizes that one needs to develop integrity of body, mind and spirit in order to recognize objects/situations that can cause harm to a person
8. Applies Catholic principles to interpersonal relations (e.g., family, peers, work, society, Church, etc.)
 - Practices Christian action toward others*
 - Understands that the spiritual and corporal works of mercy are ways to show love for others
9. Demonstrates an appreciation for faith community as the way we come to know God.
 - Continues an awareness of various roles and ministries in the Church
 - Recognizes that the Church is a visible sign of the kingdom of God
10. Uses effective community building skills in relating with others.
 - Applies skills to concrete life situations - is considerate of others and their feelings*
 - Understands that God's gift of life needs to be protected and nurtured from conception to death
 - Understands that respect and care must be shown for the biological processes/changes of one's own body and that of others
 - Recognizes the importance of reflecting on what it means to live in relationship with God and to live a moral life
 - Recognizes that there are positive ways to handle negative peer pressure and stress

11. Critiques societal structures in light of Catholic social justice principles and apply to social and personal situations.
12. Engages in service to the community (e.g., family, parish, local, national and global) in response to the Gospel call.
 - Participates in parish and community service projects*
 - Is made aware of various roles and ministries in the Church
 - Recognizes that the Work of the Church is to show love, peace, and justice in the world
13. Exercises responsible stewardship for the gift of creation.
 - Practices Christian action toward others*
 - Responds joyfully to God’s call to give of one’s self in love to God and others (stewardship)
 - Continues to study the meaning of stewardship, i.e., “Receive God’s gifts gratefully, cultivate them responsibly, share them lovingly in justice with others, and return them with increase to the Lord.”
14. Examines the variety of Christian life styles as ways to respond to the baptismal call to a life of service.
 - Participates in parish and community service projects
15. Demonstrates the relationship between faith and culture through arts, social sciences, sciences, and technology.
16. Uses appropriate resources to plan and participate in liturgy and other prayer experiences.
 - Participates in planning liturgies and para-liturgies on student level of growth and awareness
17. Uses a variety of prayer forms (e.g., traditional, spontaneous, devotional, multicultural) to enrich and express personal and communal spirituality.
 - Recognizes that Christians express their belief in the Holy Trinity in the Apostle’s Creed and the Nicene Creed
 - Develops a personal relationship with Jesus that evokes a response of generous love
 - Can recite and use the designated prayers for this grade level on the Prayer/Basic Beliefs and Practices listing. Other prayers of cultural/liturgical significance may be designated by the local site.*
18. Celebrates the presence of the Sacred in experiences of sacramentals, symbols, and rituals.
 - Knows that the Church has designated sacred signs, such as holy water, medals, and especially blessings as sacramentals
19. Demonstrates an understanding of liturgical seasons and feasts.
 - Increases knowledge of Church’s liturgical seasons of Advent, Christmas, Lent and Easter
 - Participates at their own level of growth and awareness in liturgical celebrations and other forms of prayer
 - Recognizes that the Church year celebrates Jesus as Savior of the world and gives honor to Mary and all the Saints, living and dead
 - Knows that two important beliefs and feasts about Mary are the Immaculate Conception and the Assumption

LANGUAGE ARTS

Writing

1. Uses general skills and strategies in the writing process
 - **Uses an effective writing process (ICC)**
 - Applies the writing process*
 - Prewriting, drafting and revising, editing and publishing, evaluating peers’ and own writing
 - Identifies strengths and weaknesses in own writing
 - Organizes thoughts and expresses opinions and knowledge in a clear manner using complete sentences
 - Writes using numerous related paragraphs, each including a topic sentence, supporting details, and concluding sentence
 - **Uses knowledge of purpose, audience, format, and medium in developing written communication (ICC)**
 - Writes for a variety of audiences and purposes which include report of information, use of narratives, essays, poetry, and creative writing*
 - **Applies writing skills and strategies to communicate effectively in a variety of genres with various audiences (ICC)**
 - **Is able to write on demand (ICC)**
 - **Incorporates technology as a tool to enhance writing (ICC)**
 - Handwriting - Writes legibly using proper size and spacing*
2. Uses stylistic and rhetorical techniques in written composition
 - Demonstrates an understanding of the English language, i.e., usage, punctuation, capitalization, and spelling*
 - Spells high frequency words correctly*
 - Identifies and correctly uses all parts of speech
 - Identifies and uses figurative language, e.g., simile, alliteration, personification
3. Writes with a command of the grammatical and mechanical conventions of composition*
 - **Adheres to conventions generally established in spelling, punctuation, grammar, usage, syntax and style (ICC)**
 - Applies rules of grammar usage, punctuation, and capitalization in writing
 - Identifies and uses nouns, pronouns, verbs, adjectives and prepositions

- Writes with a command of punctuation, e.g., periods, commas, quotation marks, etc.
4. Gathers and uses information for research purposes
- **Uses writing as a tool for learning (ICC)**
 - **Engages in the information literacy process: accesses, evaluates, and communicates information and ideas (ICC)**
 - Effectively uses media resources to gather information*
 - Uses the library/media center on a regular basis and properly uses a variety of resources for research topics; dictionary, glossary, encyclopedia, atlas, and Internet
 - Develops the use of outline format and note taking

Reading

5. Reading Process - Uses the general skills and strategies of the reading process*
- **Uses multiple decoding strategies to accurately read words in text (ICC)**
 - Increases the ability of decoding skills*
 - Applies context, phonics, and structural word skills (e.g., prefixes, suffixes)*
 - Monitors own reading strategies and makes modifications
 - **Uses a variety of strategies to develop and expand reading vocabulary (ICC)**
 - Previews text
 - Adjusts speed of reading to suit purpose and difficulty of material
 - **Independently reads a significant number of books and text each year. This reading should include both fiction and nonfiction in a variety of genres (ICC)**
 - Makes appropriate book selections to gain knowledge and for personal enjoyment
 - Makes, confirms, and revises simple predictions
 - Continues to develop a desire to read; engages in daily silent reading
 - **Reads with fluency silently and aloud to support comprehension (ICC)**
 - Reads aloud familiar stories, poems, and passages with fluency and expression (e.g., rhythm, flow, meter, tempo, pitch, tone intonation)*
 - **Reads for a variety of purposes and across content areas (ICC)**
6. Reading Comprehension - Uses reading skills and strategies to understand and interpret a variety of literary works*
- **Uses a variety of strategies and skills to comprehend and interpret fiction (ICC)**
 - Responds to literary and informational texts (oral, written, artistic)*
 - *Understands and comprehends stated information*
 - *Determines the meaning of new words from their context - vocabulary**
 - *Draws conclusions, makes inferences, and deduces meaning**
 - *Interprets information in new contexts*
 - *Interprets non literal language*
 - *Determines the main idea of a text*
 - Continues to develop and use a variety of comprehension strategies, cause/effect; compare/contrast; classify/categorize, drawing conclusion, predicting outcomes, and giving details of main idea
 - Identifies with increasing complexity the author's views or purposes
 - *Analyzes the style or structure of a text; uses text organizers*
 - Identifies theme, characters, setting, plot, sequence of events, conflicts and resolutions
 - Connects literary characters/events with people or events in own life
 - *Infers traits, feelings, and motives of characters*
 - Makes and confirms inferences and predictions about events in a story
 - Reads and identifies various genre of literature
7. Reading Comprehension - Uses reading skills and strategies to understand and interpret a variety of informational texts*
- **Uses a variety of skills and strategies to comprehend non-fiction and informational text (ICC)**
 - Responds to literary and informational texts (oral, written, artistic)*
 - *Understands and comprehends stated information*
 - *Determines the meaning of new words from their context - vocabulary**
 - *Draws conclusions, makes inferences, and deduces meaning*
 - *Interprets information in new contexts*
 - *Interprets non literal language*
 - *Determines the main idea of a text*
 - Continues to develop and use a variety of comprehension strategies, cause/effect; compare/contrast; classify/categorize, drawing conclusion, predicting outcomes, and giving details of main idea

- Identifies with increasing complexity the author's views or purposes
- *Analyzes the style or structure of a text*; uses text organizers*
- Can readily use the parts of a book to locate information, i.e. index, table of contents, glossary, appendix
- Can effectively use the structures in information texts; uses text organizers to determine the main ideas or locate information
- Summarizes and paraphrases information in texts in all content areas

Listening and Speaking

8. Uses listening and speaking strategies for different purposes; listens actively*

- **Produces a coherent message (ICC)**
- Expresses ideas clearly*
- **Participates in a variety of communication situations (ICC)**
- **Participates appropriately in one-on-one situations and groups settings (ICC)**
- Participates effectively in group discussion*
- Listens, views, and asks questions to collect information
- **Considers audience and variables in the speaking situation (ICC)**
- **Uses appropriate content and conventions for purpose, audience, occasion, and context (ICC)**
- **Demonstrates use of presentation skills to communicate (ICC)**
- **Recognizes the role of evaluation in oral communication (ICC)**
- **Recognizes the role of response in oral communication (ICC)**

- **Listens for information and understanding (ICC)**
- **Listens for interpretation, analysis, and evaluation (ICC)**
- **Listens to establish, maintain and enhance relationships (ICC)**

Viewing

9. Uses viewing skills and strategies to understand and interpret visual media

- **Uses a range of strategies to interpret visual media (ICC)**
- Understands different messages conveyed through visual media
- Responds orally and in writing to higher order thinking questions in all content areas
- Understands basic elements of advertising in visual media
- **Applies a variety of criteria to evaluate informational media (ICC)**
- **Understands how literary forms can be represented in visual narratives (ICC)**

Media

10. Understands the characteristics and components of the media

- Understands that media, messages, and products are composed of a series of separate elements, e.g., sections of a newspaper, etc.
- Enhances the understanding of the similarities and differences among a variety of media, e.g., how documentaries, Internet, television, and radio present a story in a different way
- **Analyzes the effects of visual media on society and culture (ICC)**

MATH

1. **Problem solving** - Uses a variety of strategies in the problem-solving process*

- *Solves single-step and multiple-step math problems*
- Brainstorms possible approaches before starting a problem
- *Identifies extraneous or insufficient information in problems*
- *Chooses a method for solving a problem* - some methods more helpful than others
- Checks reasonableness of results through estimation
- Constructs physical representations for complex problems

2. **Concept of Numbers** - Understands and applies basic and advanced properties of the concept of numbers*

- **Develops the ability to estimate the results of computation with whole numbers, fractions or decimals, and be able to judge reasonableness (ICC)**
- Checks reasonableness of results through estimation - *estimates measurements with appropriate precision*
 - *Uses standard rounding to estimate*
 - *Uses order of magnitude to estimate*
 - *Uses number sense to estimate*

- *Represents, compares, and orders numbers**
 - *Describes and applies properties of numbers*
 - *Classifies numbers by divisibility*
 - *Demonstrates ways of performing operations*
 - *Uses place value; writes numbers in standard, expanded, and exponential form*
 - **Extends place value concepts to represent and compare both whole numbers and decimals (ICC)**
 - *Uses and interprets operational and relationship symbols**
 - *Solves equations and inequalities*
 - *Uses variable expressions to model situations*
 - *Explores numerical patterns*
 - **Uses benchmarks to help develop number sense (ICC)**
 - Understands the basic relationship of fractions to decimals and fractions to whole numbers
 - Writes improper fractions as mixed numbers
 - Finds the least common denominator of two or three fractions; the greatest common factor of two or three numbers
 - Compares and orders decimals and fractions
 - Uses number lines to model a variety of numbers
 - Identifies prime and composite numbers
 - Reads, writes, estimates whole numbers through nine digits and decimals to thousandths
 - Communicates mathematical concepts through writing and speaking
 - Knows basic facts*
3. **Computation** - Uses basic and advanced procedures while performing the process of computation*
- **Develops an understanding of multiplication and division concepts and strategies for basic multiplication facts and related division facts (ICC)**
 - **Develops fluency and quick recall of multiplication facts and related division facts and fluency with multi-digit multiplication and division (ICC)**
 - **Develops an understanding of commonly used fractions, decimals, and percents, including recognizing and generating equivalent representations (ICC)**
 - **Develops an understanding of and fluency with addition and subtraction of fractions and decimals (ICC)**
 - Adds and subtracts fractions and mixed numbers having like and unlike denominators
 - Adds, subtracts, multiplies and divides money problems
 - Adds, subtracts, multiplies, and divides whole numbers and decimals with accuracy
 - Translates between decimals and commonly encountered fractions - halves, thirds, fourths, fifths, tenths, and hundredths
 - Reduces fractions to lowest terms
 - Knows multiplication and division facts through 12
 - Multiplies three-digit numbers
 - Divides using two-digit numbers
 - Understands that choices must be made when determining which operation to use.
 - Counts and shows amounts of money to \$10.00
4. **Measurement** - Understands and applies basic and advanced properties of the concept of measurement*
- Tells time to the nearest minute
 - *Measures length/distance, time, temperature, weight, mass, and volume*
 - *Identifies and uses appropriate units of measurement*
 - Selects and uses appropriate units of measurement according to type and size of unit (standard and metric)
 - Converts units within a system, e.g. feet to inches, quarts to pints, hours to minutes
 - **Selects and applies appropriate standard (customary and metric) units and tools to measure length, area, volume, weight, time, temperature, and size of angles (ICC)**
 - Understands the relationship among area, volume, and weight, and between time and cost
 - Understands that scale drawings can be used to represent shapes and compare locations of things very different in size
 - **Selects and uses benchmarks (1/2 inch, 2 liters, 5 pounds, etc.) to estimate measurements (ICC)**
 - Estimates, calculates, and compares perimeter, area, and volume
5. **Geometry** - Understands and applies basic and advanced properties of the concepts of geometry*
- Finds perimeter, area and volume of figures
 - Recognizes and classifies angles, points, lines, rays and segments
 - Identifies radius, diameter, chord, and central angle of a circle
 - Identifies congruent and symmetrical figures
 - **Describes, analyzes and classifies two-dimensional and three-dimensional shapes (ICC)**

- Compares shapes in terms of such concepts as parallel, perpendicular, congruence, and symmetry
 - Understands the basic characteristics of the concept of three dimensions
 - **Predicts and describes the results of sliding (translation), flipping (reflection), and turning (rotation) two-dimensional shapes (ICC)**
 - Uses motion geometry, e.g., turns, flips, slides to investigate concepts of symmetry, similarity, and congruence
 - **Explores congruence and similarity (ICC)**
 - *Identifies, classifies, and compares geometric figures*
 - **Uses geometric models to solve problems, such as determining perimeter, area, volume, and surface area (ICC)**
 - *Describes geometric properties, patterns, and relationships*
 - *Applies the concepts of perimeter, area, and volume*
 - **Uses ordered pairs on a coordinate grid to describe points or paths (first quadrant) (ICC)**
6. **Data analysis** - Understands and applies basic and advanced concepts of statistics and data analysis
- Gathers and records data to make generalizations*
 - **Represents and analyzes data using tallies, pictographs, tables, line plots, bar graphs, circle graphs and line graphs (ICC)**
 - **Describes the distribution of the data using mean, median, mode or range (ICC)**
 - **Proposes and justifies conclusions and predictions based on data (ICC)**
 - Understands that data comes in many different forms and that collecting, organizing and displaying data can be done in many ways
 - *Reads amounts on scales of bar and line graphs*
 - Reads and constructs bar, line, pie charts, and pictographs
 - Given a table of data, selects the correct graphic representation for the data
 - *Locates amounts in specific cells of a table*
 - *Compares quantities to determine ranks, sums, or differences and to find ratios*
 - *Uses tables and graphs to determine rates or identify trends, understand underlying or functional relationships, and generalize or draw conclusions*
7. **Probability** - Understands and applies basic concepts of probability
- **Predicts the probability of simple experiments and tests the predictions (ICC)**
 - **Describes events as likely or unlikely and discusses the degree of likelihood using words like certain, equally likely, and impossible (ICC)**
 - *Applies probability concepts and counting rules*
 - Predicts outcome of events
 - Determines the probability of events
 - *Understands and applies measures of central tendency and variability*
 - Understands that summary predictions about large collections are more accurate than about just a few events
8. **Functions and Algebra** - Understands and applies basic concepts of functions and algebra
- **Represents and analyzes patterns and relationships involving multiplication and division to introduce multiplicative reasoning (ICC)**
 - Recognizes and extends basic number patterns
 - Uses patterns and relationships to represent mathematical situations
 - Constructs a pattern and articulates why the pattern works
 - **Identifies the commutative, associative, and distributive properties and uses them to compute with whole numbers (ICC)**
 - **Understands and applies the idea of a variable as an unknown quantity and expresses mathematical relationships using equations (ICC)**
 - **Represents and analyzes patterns and functions, using words, tables, and graphs (ICC)**
9. **Nature of Mathematics** - Understands the general nature and uses of mathematics

SCIENCE/HEALTH

Earth and Space - Students can understand concepts and relationships in Earth/space sciences.*

1. Understands atmospheric processes and water cycle
 - **Understands and demonstrates knowledge of processes and changes on or in the earth's land, oceans, and atmosphere (ICC)**
 - **Understands and demonstrates knowledge of weather and weather patterns (ICC)**
 - Illustrates and labels the weather cycle
 - Explains how land and water affect climate differently
 - Explains why the earth's surface is heated unevenly
 - Records measurements with weather instruments
 - Illustrates how weather systems develop and explains information weather maps
 - Predicts weather patterns by interpreting weather maps
2. *Understands Earth's composition and structure*
 - **Understands and demonstrates knowledge of properties and uses of earth materials (ICC)**
 - **Understands and demonstrates knowledge of fossils and the evidence they provide of past life on earth (ICC)**
 - *Understands essential ideas about the composition/structure of the universe and the earth's place in it*
 - *Can understand changes in and around the Earth*
 - Knows that the surface of the earth changes, e.g., due to erosion, landslides, weathering
 - Describes the different kinds of rocks and how they change
 - Describes the different kinds of pollution and ways to prevent it
3. Understands the composition and structure of the universe and the Earth's place in it
 - **Understands and demonstrates knowledge of the properties, movements, and locations of objects in our solar system (ICC)**
 - *Can understand concepts relating to the universe*
 - Knows that the rotation of the earth causes different patterns in the sky
 - Describes how distances are measured in space
 - Knows that telescopes magnify distant objects in the sky and dramatically increase the number of stars we can see
 - Knows that planets look like stars, but over time they appear to wander among the constellations

*Life Science - Students can understand concepts and relationships in life science.**

4. Understands the principles of heredity and related concepts
 - Knows that characteristics of an organism are inherited from the parents or interactions with the environment
5. Understands the structure and function of cells and organisms
 - *Can understand structures of living things*
 - *Knows that plants and animals have life cycles and are different for different organisms*
 - *Can understand life cycles - Describes the life cycle and processes*
 - Explains the process of photosynthesis
 - Describes the different ways that plants reproduce
 - **Understands and demonstrates knowledge of basic human body systems and how they work together (ICC)**
 - Explains the role of the respiratory and excretory systems
 - Identifies the structure and care of the skeletal and muscular systems
 - Knows that the behavior of individual organisms is influenced by internal cues and external cues and that humans and other organisms have senses that help them to detect these cues
 - **Understands and demonstrates knowledge of personal health and wellness issues (ICC)**
6. Understands relationships among organisms and their physical environment
 - **Understands and demonstrates knowledge of structures, characteristics, and adaptations or organisms that allow them to function and survive within their habitats (ICC)**
 - Knows that an organism's patterns of behavior are related to the nature of that organism's environment
 - *Recognizes animal adaptation to their environment*
 - *Can understand environmental interaction and adaptation*
 - **Understands and demonstrates knowledge of how individual organisms are influenced by internal and external factors (ICC)**
 - **Understands and demonstrates knowledge of the relationships among living and nonliving factors in terrestrial and aquatic ecosystems (ICC)**
 - **Understands and demonstrates knowledge of environmental stewardship (ICC)**
 - Knows that all organisms including humans cause changes in the environment where they live; some of these change are detrimental to themselves or other organisms, and others are beneficial
7. Understands biological evolution and diversity of life

- Knows different ways in which living things can be grouped and purposed of different groupings
- Identifies characteristics of vertebrates and the eight phyla of invertebrates

Physical Sciences - Students can understand concepts and relationships in physical science.*

8. Understands the structure and properties of matter

- **Understands and demonstrates knowledge of how to describe and identify substances based on characteristic properties (ICC)**
- *Identifies and describes the chemical and physical properties of matter*
- Describes compounds and molecules
- Describes the difference between a chemical change and a physical change
- Knows that materials may be composed of parts that are too small to be seen without magnification
- **Understands and demonstrates knowledge of states of matter and changes in states of matter (ICC)**
- **Understands and demonstrates knowledge of the concept of conservation of mass/matter (ICC)**

9. Understands the sources and properties of energy

- **Understands and demonstrates knowledge of the characteristic properties of sound, light, electricity, magnetism, and heat (ICC)**
- *Can understand and apply the concept of energy*
- *Describes the different forms of energy, e.g., electrical, heat, light, and magnetism*
- Demonstrates how energy can change forms
- Researches various energy resources and their effects on our world
- Compares and contrasts conduction, convection, and radiation
- Knows that electrical circuits require a complete loop; demonstrates the ability to connect simple electric circuits
- Explains the importance of electricity and its uses
- 10. Understands forces and motion
- **Understands and demonstrates knowledge of how forces are related to an object's motion (ICC)**
- *Can understand and apply concepts related to mechanics, forces, and motion*
- *Knows the properties of motion*
- Knows how to measure properties of objects using rulers, balances, thermometers, and other technological tools
- Knows that an object's motion can be described by tracing and measuring its position over time
- Knows that when a force is applied to an object, the object either speeds up, slows down, or goes in a different direction

10. Understands forces and motion

- **Understands and demonstrates knowledge of how forces are related to an object's motion (ICC)**
- *Can understand and apply concepts related to mechanics, forces, and motion*
- *Knows the properties of motion*
- Knows how to measure properties of objects using rulers, balances, thermometers, and other technological tools
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- Knows that when a force is applied to an object, the object either speeds up, slows down, or goes in a different direction

Nature of Science - Students can understand and apply skills used in scientific inquiry.*

11. Understands the nature of scientific knowledge

- Knows that scientists make the results of their investigations public; they describe the investigations in ways that enable others to repeat the investigations

12. Understands the nature of scientific inquiry

- *Uses scientific method (asks questions observes records and interprets results)**
- Plans and conducts simple investigations
- Uses appropriate tools and simple equipment to gather scientific data and extend the senses
- **Generates questions that can be answered through scientific investigations (ICC)**
- **Recognizes that scientists perform different kinds of investigations (ICC)**
- **Plans and conducts scientific investigations (ICC)**
- **Uses appropriate tools and techniques to gather, process, and analyze data (ICC)**
- **Incorporates mathematics in science inquiries (ICC)**
- **Uses evidence to develop reasonable explanations (ICC)**
- **Communicates scientific procedures and explanations (ICC)**
- **Follows appropriate safety procedures when conducting investigations (ICC)**

13. Understands the scientific enterprise

- *Can analyze and interpret scientific information*

- Draws conclusions, identifies, patterns, generalities and trends, and makes inferences
- Knows that although people using scientific inquiry have learned much about the objects, events, and phenomena in nature, science is an ongoing process and will never be finished

HEALTH - Students can understand concepts and relationships in health.*

1. Knows the availability and effective use of health services, products, and information
 - Knows a variety of consumer influences and how those influences affect decisions regarding health resources, products, and services
2. Knows environmental and external factors that affect individual and community health
 - Knows how personal health can be influenced by society and science
3. Understands the relationship of family health to individual health
 - Knows characteristics needed to be a responsible friend and family member
4. Knows how to maintain mental and emotional health
 - Identifies and shares feelings in appropriate ways
 - Knows strategies for resisting negative peer pressure
5. Knows essential concepts and practices concerning injury prevention and safety
 - Knows the difference between positive and negative behaviors used in conflict situation
 - Knows basic first aid procedures appropriate to common emergencies in home, school, and community
 - Knows basic safety topics
6. Understands essential concepts about nutrition and diet
 - Knows healthy eating practices
 - Knows factors that influence food choices
7. Knows how to maintain and promote personal health
 - Identifies practices that promote good health
 - Sets personal health goal and makes progress towards its achievement
 - Knows behaviors that are safe, risky, or harmful to self and others
8. Knows essential concepts about the prevention and control of disease
 - Knows ways in which a person can prevent or reduce the risk of disease and disability
9. Understands aspects of substance use and abuse
 - Knows ways to avoid, recognize, and respond to negative social influences and pressure to use alcohol, tobacco, or other drugs
10. Understands the fundamental concepts of growth and development
 - Knows that the rate of change during puberty varies with each individual and that people vary widely in size, height, shape, and rate of maturation

Progress report descriptors deal with relevant concepts studied, participating appropriately in experiments, asking questions and demonstrating curiosity, and interpreting/recording the information.*

SOCIAL STUDIES - listed by strands (ICC)

1. **Political Science/Civic Literacy**
 - **Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action. (ICC)**
 - **Understand how the government established by the Constitution embodies the enduring values and principles of democracy and republicanism. (ICC)**
 - **Understand the purpose and function of each of the three branches of government established by the U.S. Constitution. (ICC)**
 - **Understand the differences among local, state, and national government. (ICC)**
 - **Understand the role of the United States in current world affairs. (ICC)**
 - Understands and discusses the personal and community impact of current events
 - Understands differences and similarities among people of different cultures
 - Knows the basic tenets of democracy and the symbols that represent it
 - Knows current issues involving the constitution
2. **Economics**
 - **Understand the role of scarcity and economic trade-offs and how economic conditions impact people's lives. (ICC)**
 - **Understand the functions of economic institutions. (ICC)**
 - **Understand how governments throughout the world influence economic behavior. (ICC)**
 - **Understand factors that create patterns of interdependence in the world economy. (ICC)**
 - **Understand that advancing technologies impact the global economy. (ICC)**

- **Understand that all economies throughout the world rely upon universal concepts. (ICC)**

3. Geography

- **Understand the use of geographic tools to locate and analyze information about people, places, and environments. (ICC)**
- **Understand how geographic and human characteristics create culture and define regions. (ICC)**
- **Understand how human factors and the distribution of resources affect the development society and the movement of populations. (ICC)**
- **Understand how physical processes and human actions modify the environment and how the environment affects humans. (ICC)**
- Understands the spatial organization of places through such concepts as location, distance, direction, scale, movement and region
- Knows the processes people use to divide earth's surface into political and/or economic units (e.g., states in the United States and Mexico; provinces in Canada; countries in North and South American; and countries linked in cooperative relationships such as the European union)

4. Historical Understanding

- **Understand historical patterns, periods of time, and the relationships among these elements. (ICC)**
- **Understand how and why people create, maintain, or change systems of power, authority, and governance. (ICC)**
- **Understand the role of culture and cultural diffusion on the development and maintenance of societies. (ICC)**
- **Understand the role of individuals and groups within a society as promoters of change or the status quo. (ICC)**
- **Understand the effect of economic needs and wants on individual and group decisions. (ICC)**
- **Understand the effects of geographic factors on historical events. (ICC)**
- **Understand the role of innovation on the development and interaction of societies. (ICC)**
- **Understand cause and effect relationships and other historical thinking skills in order to interpret events and issues. (ICC)**
- Understands the people, events, and problems that were significant in creating the history of the state.
 - Topics included in Iowa History are: the physical landscape, Native Americanism, European contacts, pioneer life on the prairie, proving a government, transportation, the Civil War, settlers from many lands, education, religion, agriculture and rural life in the early 20th century, urbanization, technological change in the early 20th century, business and industry in Iowa, World War I and its impact, Depression and World War II, postwar adjustments, 1955 - farm crisis of 1980s, and transition to the 21st century, farm crisis to 2002
 - See Iowa History online at <http://fp.uni.edu/iowaonline/main.htm>

5. Behavioral Sciences

- **Understand the changing nature of society. (ICC)**
- **Understand the influences on individual and group behavior and group decision making. (ICC)**
- **Understand how personality and socialization impact the individual. (ICC)**
- **Understand the process of how humans develop, learn, adapt to the environment, and internalize their culture. (ICC)**
- **Understand current social issues to determine how the individual formulates opinions and responds to issues. (ICC)**
- **Understand how to evaluate social research and information. (ICC)**

Progress report descriptors deal with analyzing and applying information using concepts of history, geography, civics, and economics; demonstrating knowledge of social studies content standards; showing understanding of the connections to the world around them; and sharing ideas in class and group discussions.*

MUSIC

1. Sings alone and with others, a varied repertoire of music*

- Sings partner songs and rounds in small groups and able to sing own part
- Participates and contributes in class activities
- Sings expressively with appropriate dynamics, phrasing, and interpretation
- Sings on pitch in rhythm with appropriate dynamics and timbre, and maintains a steady tempo
- Matches pitch
- Listens and follows directions
- Responds to the cues of the conductor when singing as part of a group

2. Performs on instruments alone and together, a varied repertoire of music*

- Finds and performs steady beat
- Performs rhythm patterns from notation

- Creates movement to accompany music or poems
 - Aurally identifies instruments of the orchestra and band including percussion instruments
3. Improvises melodies, variations, and accompaniments.
 - Improvises short songs and instrumental pieces.
 4. Composes and arranges music within specified guidelines
 - Creates musical accompaniments
 - Improvises short four bar rhythms and melodies
 5. Reads and notates music
 - Understands musical notations*
 - Distinguishes between major and minor keys
 - Defines standard musical symbols
 - Identifies note names
 - Identifies half steps
 6. Knows and applies criteria to music and musical performances
 - Appreciates music and is able to analyze in simple terms
 7. Understands relationships between music and history and culture*
 - Knows and demonstrates appropriate audience behavior
 - Understands the role of musicians (i.e., song leader, conductor, composer, and performer) in various musical settings and culture
 - Understands that music preferences reflect one's own personal experiences

ART

1. Understands and applies media techniques and processes related to visual arts*
 - Maintains an imaginative approach while following simple instructions
 - Use a wider variety of tools safely and economically
 - Enjoys using different art media
 - Transfers an idea from a 2-D drawing into a 3-D form
 - Expands in the use of different media and techniques
 - Understands, critiques, and uses self-evaluation tools both oral and written
2. Knows how to use structures and functions of art
 - Follows simple instructions, but maintains an imagination while creating art
 - Applies the elements (line, shape, color, space, texture, form) and principles of design (proportion, rhythm, dominance, positive and negative space, balance and/or unity)
 - Expresses creativity through art projects*
3. Knows range of subject matter.
 - Understands the techniques of prominent artists and the art of still life painting
 - Creates a still-life painting
 - Develops a composition showing foreground, middle ground, background, overlapping and center of interest
 - Uses cartooning techniques and creates an original cartoon character
 - Continues to grow in art vocabulary
4. Understands the visual arts in relation to history and cultures*
 - Identifies specific works of art as belonging to particular cultures, times, and places - art appreciation
 - Becomes knowledgeable of famous artists and their work
 - Knows how women and men, and different cultures, past and present, have shaped our world
5. Understands the characteristics and merits of one's own artwork and the artwork of others
 - Understands that specific art works can elicit different responses

PHYSICAL EDUCATION

1. Uses a variety of basic and advanced movement forms (running, skipping, hopping, eye-hand/eye-foot coordination-dribbling while running)
 - Demonstrates knowledge of concepts*
 - Demonstrates fundamental skills*
 - Demonstrates kinesthetic awareness (balance, personal space, base of support, objects, dodges, chases) while participating in games and activities
 - Is able to adapt a skill to the demands of a dynamic, unpredictable environment, i.e., passes ball ahead of moving player
2. Uses movement concepts and principles in development of motor skills

- Understands a variety of relationships with objects (over/under, behind, through, etc.)
 - Demonstrates throwing objects for both accuracy and force
 - Uses basic offensive and defensive strategies in unstructured game environments
3. Understands benefits and costs associated with participation in physical activity
- Chooses physical activities based on a variety of factors, e.g., personal interests and capabilities, challenge and enjoyment
 - Knows factors that inhibit participation in physical activity, e.g., substance abuse
 - Uses external and internal information to improve performance
 - Celebrates personal successes and achievements as well as those of others
4. Understands how to monitor and maintain a healthy enhanced level of physical fitness
- Understands wellness - demonstrate benefits of healthy life style*
 - Identifies the health benefits and participation in physical activity
 - Selects and participates regularly in physical activities for the purpose of improving skill and health
 - Demonstrates proper warm up and cool down techniques
5. Understands the social and personal responsibility associated with participation in physical activity
- Demonstrates the willingness to join in an activity*
 - Demonstrates good sportsmanship*
 - Understands safety concepts*
 - Plays and cooperates with others regardless of personal differences
 - Follows appropriate rules, procedures, and behaviors with few reminders while participating in games/activities; accepts the teacher's decision regarding a personal rule infraction without displaying negative reactions toward others
 - Knows how to develop rules, procedures, and etiquette that are safe and effective for specific activity situations
 - Demonstrates acceptance of the skills and abilities of others through verbal and nonverbal behavior

TECHNOLOGY - References McRel with new NETS standards, updated June, 2007; see standard listing

1. Knows characteristics and computer hardware and operating systems (NETS 6)
- Knows and is able to properly use the more advanced features of the computer keyboard
 - Uses proper fingering for all keys, beginning from home row, maintaining proper posture while using the keyboard
 - Learns to use scanner
 - Learns to uses digital camera
 - Applies technology skills*
2. Knows the characteristics and uses of computer software programs (NETS 6)
- Practices responsible use of technology systems and software
 - Uses a word processor to edit, copy, move, save and print text with some formatting, e.g., centering lines, using tabs, forming paragraphs
 - Learns basic word processing skills in order to print a document containing a paragraph
 - Knows basic and more advanced features of databases
 - Uses menu options and commands
 - Contributes to a group/teacher made presentation program
 - Defines the basic elements of a multimedia presentation
 - Places text into a simple, static screen
 - Uses grade-appropriate software
3. Understands relationships among science, technology, society, and the individual (NETS 1, 2, 3, 4, 5,)
- Works cooperatively and collaboratively with peers, family members, and others when using technology
 - Effectively uses media resources to gather information*
 - Demonstrates positive social and ethical behaviors when using technology, e.g., illegally copying software, software piracy, copyright laws*
 - Discusses basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use
 - Effectively uses media resources to gather and display information*
 - Knows areas in which technology has improved human lives, e.g., transportation, nutrition, health care, entertainment
 - Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide
 - Understands the history of computers and related careers
4. Understands the nature of technological design (NETS 2, 4, 5)
- Accesses, cuts, copies, and pastes text and clip art
 - Evaluates product and design and makes modifications
5. Understands the nature and operation of systems (NETS 1, 2, 3, 4, 5, 6)

- Gathers information and communicates with others using telecommunications, with support from teachers, family members, or student partners.
6. Understands the nature and uses of different forms of technology (NETS 3, 6)
- Defines how technology is used today in medicine, transportation, banking, agriculture, architecture, etc.
 - Uses technology productivity tools to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum.
 - Uses telecommunications efficiently and effectively to access remote information.

GUIDANCE/HUMAN GROWTH AND DEVELOPMENT - listed by strands

Working with Others

- Contributes to the overall effort of a group
- Uses conflict-resolution techniques
- Works well with diverse individuals and in diverse situations
- Displays effective interpersonal communication skills
- Demonstrates leadership skills

Self-Regulation

- Sets and manages goals
- Performs self-appraisal
- Considers risks
- Maintains a healthy self-concept
- Restrains impulsivity

Human Growth and Development - derived in part from *Growing in Love*, Harcourt Religion Publishers

- Understands that being created by God is the basis for respect for self and others
- Recognizes that men and women are different, but complementary and equal in God's eyes
- Recognizes that everyone is responsible for protecting and nurturing God's gift of life
- Recognizes that Jesus shows us how to live in chaste relationships
- Understands tenets of a safe environment

PERSONAL DEVELOPMENT/SOCIAL RESPONSIBILITY/CITIZENSHIP

(All items are referenced on the progress report.)

- Interacts respectfully with others
- Works effectively as a team member
- Makes an effort to solve social problems
- Participates appropriately
- Follows directions
- Works independently
- Completes high quality work
- Completes homework assignments

Iowa Core Curriculum - 21st Century Concepts and Skills

As each Iowa student is provided access to essential concepts and meaningful learning experiences in the core academic content areas, it is imperative that we also look to 21st century skills to build capacity in students so they are prepared to lead productive, satisfying lives. According to Ken Kay, president of the Partnership for 21st Century Skills, the 21st century skills set "is the ticket to economic upward mobility in the new economy" (Gewertz, 2007). Business and industry is providing a very clear message that students need the skills to "work comfortably with people from other cultures, solve problems creatively, write and speak well, think in a multidisciplinary way, and evaluate information critically. And they need to be punctual, dependable, and industrious." (Gewertz, 2007).

The Framework for 21st Century Learning stated, "We believe schools must move beyond a focus on basic competency in core subjects to promoting understanding of academic content at much higher levels by weaving 21st century interdisciplinary themes into core subjects" (2007). 21st century skills bridge the knowledge, skills, and dispositions of students from the core academic areas to real life application.

"The primary aim of education is not to enable students to do well in school, but to help them do well in the lives they lead outside of the school."

-Ray McNulty, ICLE
Iowa High School Summit, December 10, 2007

Descriptions of the new global reality are plentiful, and the need for new, 21st century skills in an increasingly complex environment is well documented. In one form or another, authors cite (1) the globalization of economics; (2) the explosion of scientific and technological knowledge; (3) the increasingly international dimensions of the issues we face, i.e. global warming and pandemic diseases; and (4) changing demographic as the major trends that have resulted in a future world much different from the one that many of us faced when we graduated from high school (Friedman, 2005 and Stewart, 2007). The trends are very clear that each Iowa students will need essential 21st century skills to lead satisfying lives in this current reality.

Descriptions of what constitute essential 21st century skills are plentiful as well. In the 2007 session, the Iowa Legislature established the Iowa 21st century framework as:

- * civic literacy
- * employability skills
- * financial literacy
- * health literacy
- * technology literacy

Within this 21st century skill framework are the common strands of learning and innovation; communication, information, and technology; and, life and career skills. The development of the Iowa 21st century essential concepts and skills was a collaborative process engaging the expertise of p — 16 educators, business, and industry representatives. Sources used for this work included the 1991 SCANS report, What Work Requires of Schools, and Framework for 21st Century Learning, from the Partnership for 21st Century Skills. The committee surveyed the literature and endeavored to bring together the common elements of these frameworks. The members have outlined the concepts, dispositions and habits of mind believed essential for success in the 21st century.

The reality of building capacity for the 21st century is that we do not know what the work of the future will be like (Darling-Hammond, 2007) or how technology will influence health and financial issues. The challenge is to prepare students to think critically, to engage in mental activity, or habits of mind, that "use facts to plan, order, and work toward an end; seek meaning or explanations; are self-reflective; and use reason to question claims and make judgments" (Noddings, 2008). It may be that our task is not only to prepare students to "fit into the future" but to shape it. "If the complex questions of the future are to be determined by human beings making one choice rather than another, we should educate youths - all of them - to join in the conversation about those choices and to influence that future" (Meier, 2008)

Civic Literacy

NOTE: The Essential Concepts and Skills listed in 21st Century - Civic Literacy are the same as the Essential Concepts and Skills listed in Social Studies - Political Science/Civic Literacy

Employability Skills

- **Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work.**
- **Adjust to various roles and responsibilities and understand the need to be flexible to change.**
- **Practice leadership skills, and demonstrate integrity, ethical behavior, and social responsibility in all activities.**
- **Demonstrate initiative, creativity, self-direction, and entrepreneurial thinking to produce successful outcomes.**
- **Demonstrates productivity and accountability by producing quality work.**

Financial Literacy

- **Create long and short term goals based on a prioritization of wants and needs.**
- **Recognize how one's personal career choice and attitude can impact financial planning decisions.**
- **Identify the concept of debt and an individual's responsibility for that debt.**
- **Recognize common risks to one's identity and demonstrate the ability to protect that identity.**
- **Determine the importance of saving/investing in relation to future needs.**
- **Recognize that spending choices differ between groups of people and settings.**

Health Literacy

- **Obtain, interpret, understand and use basic health concepts to enhance personal, family, and community health.**
- **Utilize interactive literacy and social skills to establish personal family, and community health goals.**
- **Demonstrate critical literacy/thinking skills related to personal, family, and community wellness.**
- **Recognize that media and other influences affect personal, family and community health.**
- **Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society.**

Technology Literacy

- **Use technology resources to create original products, identify patterns and problems, make predictions, and propose solutions.**
- **Use interactive technologies in a collaborative group to produce digital presentations or products in a curricular area.**
- **Utilize digital tools and resources to investigate real-world issues, answer questions, or solve problems.**
- **Use technological resources to develop and refine questions for investigation.**
- **Understand and practice appropriate, legal, and safe uses of technology for lifelong learning.**
- **Understand technology hardware and software system operations and their application.**