INTERMEDIATE EDUCATION

Intermediate Education

The intermediate grades, most often viewed as grades four and five, build upon the integrated approach to curriculum that begins in a student's primary years. The intermediate program sets high expectations for all students through a rigorous curriculum that focuses on *Kentucky's Learning Goals*, *Academic Expectations* and the developmental characteristics of pre-adolescent children.

The fourth-grade program continues to address the intellectual, social, emotional, aesthetic and physical needs of fourth-grade students, thereby supporting their successful transition from the primary program. The fifth-grade program provides a continuation and extension of learning from the primary and fourth-grade programs and prepares student for transition to the middle level program.

Content charts included in this document for the intermediate level are arranged sequentially by grade. However, it is the prerogative of school councils to reorganize the content into a format that best meets the needs of the school's students. This allows schools the opportunity to create integrated, interdisciplinary or multidisciplinary programs.

Program of Studies – Inquiry and Research – Intermediate

Embedded within each content area are Inquiry and Research standards.

Big Idea: Inquiry and Research

The Big Idea for Inquiry and Research states: the inquiry process is an authentic method of learning that includes activities such as self-selecting topics, formulating authentic questions, gathering information, researching resources, crafting experiments, observing, interviewing, evaluating information, analyzing and synthesizing data, and communicating findings and conclusions. The information-gathering stage is a self-directed process that is owned by the engaged learner. Individually and collaboratively, students work for a particular purpose, such as to discuss a text, solve a problem, make a decision, reach new understandings, and/or create products.

Academic Expectations

5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.
5.2 Students use creative thinking skills to develop or invent novel, constructive ideas or products.
5.3 Students organize information to develop or change their understanding of a concept.
5.4 Students use a decision-making process to make informed decisions among options.
5.5 Students use problem-solving processes to develop solutions to relatively complex problems.
6.1 Students connect knowledge and experiences from different subject areas.
6.2 Students use what they already know to acquire new knowledge, develop new skills, or interpret new experiences.
6.3 Students expand their understanding of existing knowledge by making connections with new knowledge, skills, and experiences.
1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems.
2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.

Enduring Knowledge – Understandings

Students will understand that

- the inquiry process is used to investigate topics or questions important to the researcher. Questions are redefined throughout the learning process. The researcher may revise the question, refine a line of query, or go in a direction that the original question did not anticipate.
- many methods of and sources for investigation exist, including interview, observation, survey, viewing, experimenting, and critical reading. The ability to synthesize meaning is the creative spark that forms new knowledge.
- inquiry integrates elements and processes of reading, writing, research, creative and critical thinking, and logic, and involves communicating findings through a product.
- collaboration involves sharing new ideas with others. Shared knowledge is a community-building process, and the meaning of research/investigation takes on greater relevance in the context of the learner's society. Comparing notes, discussing conclusions, and sharing experiences are all examples of this process in action.
- reflection is ongoing and integral to the inquiry and research processes and involves taking the time to look back at the question, the research strategy, and the conclusions made. The learner evaluates, makes observations, and possibly makes new decisions.

INTERMEDIATE ARTS AND HUMANITIES

Program of Studies – Arts and Humanities – Fourth Grade

The arts and humanities program in the fourth grade continues to center on an exploration of the art forms of dance, drama/theatre, music and visual arts. Emphasis should be placed on exposing students to a variety of arts through active experiences in all four art forms. This exploration includes a beginning of literacy development in the arts content areas, basic level analysis and critique of the arts, and active creating and performing in the arts.

Students should have the opportunity to learn about the arts in the context of creating and performing. As students create and perform, they learn that the arts are basic to human communication and that they can use the arts to communicate specific meaning through their choices in the use of various arts elements and principles of design.

The arts and humanities content standards at the fourth grade level are directly aligned with Kentucky's broad standards called the **Academic Expectations**. The **Academic Expectations** are directly related to the *National Standards for Arts Education (1994)*.

Arts and humanities grade level content standards are organized around five “Big Ideas” that are important to the arts disciplines. The five big ideas in arts and humanities are: Structures in the Arts, Humanity in the Arts, Purposes for Creating the Arts, Processes in the Arts and Interrelationships Among the Arts. The Big Ideas are conceptual organizers for arts and humanities and are similar at each grade level to ensure students have multiple opportunities throughout their school careers to develop skills and concepts linked to each Big Idea.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of the arts and humanities. The understandings represent the desired results - what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for arts and humanities are fundamental to arts literacy and proficiency, and build on prior learning.

The three arts processes of creating, performing and responding to the arts provide a basis for deep understanding and appreciation of the arts. In the processes of creating and performing, a variety of technologies are employed, ranging from primitive technologies to cutting edge electronic and digital technologies.

Creating involves planning and creating new music, dance, drama/theatre or visual arts, or it may involve improvising in music, dance or drama/theatre. Improvising is the composing of new music, reciting/acting new dramatic material, or creating new dance movements on the spur of the moment.

Performing is limited to the performing arts of music, dance and drama/theatre. Performing involves presenting previously created works for an audience. Although the process of performing involves following a creative plan conceived by a composer, playwright or choreographer, there is still opportunity for creative interpretations in the performance.

Responding to the arts involves responses on multiple levels. The arts are a tool for communication and are capable of delivering meaning through literal and emotional content.

Responding to the emotional content of artworks involves actually feeling the emotion(s) set forth by the creator. Responding can also involve intellectual analysis of works of art in regard to their design, effectiveness and quality.

Academic Expectations 2.25 and 2.26 bring forward the study of the humanities in the arts. The arts reflect time, place and society and offer a mirror to the human experience. The powerful communication qualities of the arts also enable them to be a factor that can drive the human experience. Study of historical and cultural contexts in the arts is an essential and integral part of instruction across all the art forms and across all grade levels.

Fourth grade students should have the opportunity to experience the arts of various cultures around the world, but specific study should focus on influences in the early history of America and the United States, specifically Native American arts, West African arts, Appalachian arts; how the arts are part of these cultures and purposes they have served in those cultures. Students will also study European arts that influenced arts in the American Colonial period.

**Social studies content has a definitive focus on Kentucky history and culture during the fourth grade, so a heavier emphasis on the arts of Kentucky, as well as Appalachian arts and folk arts can be incorporated in the fourth grade arts and humanities curriculum.*

Big Idea: Structure in the Arts

Understanding of the various structural components of the arts is critical to the development of other larger concepts in the arts. Structures that artists use include elements and principles of each art form, tools, media and subject matter that impact artistic products, and specific styles and genre that provide a context for creating works. It is the artist's choice of these structural components in the creative process that results in a distinctively expressive work. Students make choices about how to use structural organizers to create meaningful works of their own. The more students understand, the greater their ability to produce, interpret, or critique artworks from other artists, cultures, and historical periods.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.23 Students analyze their own and others' artistic products and performances using accepted standards.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the elements of music, dance and drama are intentionally applied in creating and performing.
- the elements and principles of design of visual art are intentionally applied in creating works of art.
- responding to or critiquing works of art involves an understanding of elements, principles, and structures appropriate to each area of the arts.
- existing and emerging technologies can inspire new applications of structural components.

Grade 4 Skills and Concepts – Music

Students will

- recognize and identify elements of music (rhythm, tempo, melody, harmony, form, timbre, dynamics) using musical terminology
- use the elements of music while performing, singing, playing instruments, moving, listening, reading music, writing music and creating music independently and with others
- listen to and explore how changing different elements results in different musical effects
- recognize, describe and compare various styles of music (spirituals, game songs, folk songs, work songs, lullabies, patriotic, bluegrass)

Grade 4 Skills and Concepts – Dance

Students will

- recognize and identify elements of dance (space, time, force) and basic dance forms using dance terminology
- use the elements of dance in creating, copying and performing patterns of movement independently and with others
- observe, describe and demonstrate locomotor (e.g. walk, run, skip, gallop) and nonlocomotor (e.g. bend, stretch, twist, swing) movements

Big Idea: Structure in the Arts – Continued

Grade 4 Skills and Concepts – Drama/Theatre
Students will

- recognize and identify elements of drama (literary, technical, performance) using drama/theatre terminology
- use the elements of drama in creating and performing dramatic works independently and with others
- observe, describe and apply creative dramatics (improvisation, mimicry, pantomime, role playing and story telling) in a variety of situations
- explore a variety of dramatic works (e.g., theater and dramatic media – film, television)

Grade 4 Skills and Concepts – Visual Arts
Students will

- recognize and describe elements of art (line, shape, form, texture, color) and principles of design (emphasis, pattern, balance, contrast) using visual art terminology
- use the elements of art and principles of design in creating artworks independently and with others
- explore, describe and compare elements of art (e.g., line, shape, form, texture, primary and secondary colors, color schemes) and principles of design (e.g., focal point, pattern, balance, contrast) in two and three dimensional artworks
- identify a variety of subject matter (e.g., landscape, portrait, still life)

Big Idea: Humanity in the Arts

The arts reflect the beliefs, feelings, and ideals of those who create them. Experiencing the arts allows one to experience time, place and/or personality. By experiencing the arts of various cultures, students can actually gain insight into the beliefs, feelings and ideas of those cultures. Students also have the opportunity to experience how the arts can influence society through analysis of arts in their own lives and the arts of other cultures and historical periods. Studying the historical and cultural stylistic periods in the arts offers students an opportunity to understand the world past and present, and to learn to appreciate their own cultural heritage. Looking at the interrelationships of multiple arts disciplines across cultures and historical periods is the focus of humanities in the arts.

Academic Expectations

2.24 Students have knowledge of major works of art, music, and literature and appreciate creativity and the contributions of the arts and humanities.

2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.

2.26 Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the arts are powerful tools for understanding human experiences both past and present.
- the arts help us understand others' (often very different) ways of thinking, working and expressing ourselves.
- the arts play a major role in the creation and defining of cultures and building civilizations.

Grade 4 Skills and Concepts – Music

Students will

- associate music they listen to or perform with specific cultures (Native American, Appalachian, West African); describe in simple terms how the music reflects the cultures
- associate music they listen to or perform with the Colonial American period in history; describe in simple terms how the music reflects the Colonial American time period
- describe the music of specific cultures using music terminology

Grade 4 Skills and Concepts – Dance

Students will

- associate dances they observe or perform with specific cultures (Native American, Appalachian, West African); describe in simple terms how dances reflect the cultures
- associate dances they observe or perform with the Colonial American period in history; describe in simple terms how dances reflect the Colonial American time period
- describe the dance of specific cultures using dance terminology

Grade 4 Skills and Concepts – Drama/Theatre

Students will

- associate story telling, myths, legends, or folktales they experience or perform with specific cultures (Native American, Appalachian, West African); describe how literature and oral tradition reflect the cultures
- associate folktales, legends, or myths they experience or perform with the Colonial American period in history; describe how literature and oral tradition reflect the Colonial American time period
- describe story telling, myths, legends, or folktales of specific cultures using drama/theatre terminology

Big Idea: Humanity in the Arts – Continued

Grade 4 Skills and Concepts – Visual Arts
Students will

- associate artworks they experience or create with specific cultures (Native American, Appalachian, West African); describe in simple terms how the art of these cultures reflects the cultures
- associate artworks they experience or create with the Colonial American period in history; describe how the art of the American Colonies reflects the Colonial American time period (e.g., European influences in American visual art)
- describe artworks of specific cultures using visual art terminology

Big Idea: Purposes for Creating the Arts

The arts have played a major role throughout the history of humans. As the result of the power of the arts to communicate on a basic human level, they continue to serve a variety of purposes in society. The arts are used for artistic expression to portray specific emotions or feelings, to tell stories in a narrative manner, to imitate nature and to persuade others. The arts bring meaning to ceremonies, rituals, celebrations and commemorations. Additionally, they are used for recreation and to support recreational activities. Students experience the arts in a variety of roles through their own creations and performances and through those of others. Through their activities and observations, students learn to create arts and use them for a variety of purposes in society.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.22 Students create works of art and make presentations to convey a point of view.
2.26 Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the arts fulfill a variety of purposes in society (e.g., to present issues and ideas, to entertain, to teach or persuade, to design, plan and beautify).
- the arts have value and significance for daily life. They provide personal fulfillment, whether in career settings, avocational pursuits, or leisure.
- the arts provide forms of nonverbal communication that can strengthen the presentation of ideas and emotions.

Grade 4 Skills and Concepts – Music

Students will

- identify purposes for which music is created (e.g., ceremonial, recreational, artistic expression)
- listen to and perform music created to fulfill a variety of specific purposes

Grade 4 Skills and Concepts – Dance

Students will

- identify purposes for which dance is created (e.g., ceremonial, recreational, artistic expression)
- observe and perform dance created to fulfill a variety of specific purposes

Grade 4 Skills and Concepts – Drama/Theatre

Students will

- identify purposes for which dramatic works are created (e.g., sharing the human experience, passing on tradition and culture, recreational, artistic expression)
- observe and perform dramatic works created to fulfill a variety of specific purposes

Grade 4 Skills and Concepts – Visual Arts

Students will

- identify purposes for which artworks are created (e.g., ceremonial, artistic expression, narrative, functional)
- create new and experience artworks designed to fulfill a variety of specific purposes

Big Idea: Processes in the Arts

There are three distinctive processes involved in the arts. These processes are creating new works, performing works for expressive purposes, and responding to artworks. Each process is critical and relies on others for completion. Artists create works to express ideas, feelings, or beliefs. The visual arts capture a moment in time while the performing arts (music, dance, drama/theatre) are performed for a live audience. The audience responds to the artistic expressions emotionally and intellectually based on the meaning of the work. Each process enhances understanding, abilities, and appreciation of others. Students involved in these processes over time will gain a great appreciation for the arts, for artists past and present, and for the value of artistic expression.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.22 Students create works of art and make presentations to convey a point of view.
2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- there are three distinct processes for involvement in the arts; creating new artworks, performing works previously created, and responding to artworks and performances.
- full understanding and appreciation of the arts requires some degree of involvement in all three processes.
- openness, respect for work, and an understanding of how artists apply elements and principles of design in creating and performing are personal attitudes and skills that enhance enjoyment of the observer.
- existing and emerging technologies can extend the reach of the art form to new audiences.

Grade 4 Skills and Concepts – Music

Students will

- be actively involved in creating and performing music alone and with others
- use knowledge of the elements of music and music terminology to describe and critique their own performances and the performances of others
- identify possible criteria for evaluating music (e.g., skill of performers, originality, emotional impact, variety, interest)
- demonstrate behavior appropriate for observing the particular context and style of music being performed; discuss opinions with peers in a supportive and constructive way

Grade 4 Skills and Concepts – Dance

Students will

- be actively involved in creating and performing dance alone and with others
- perform traditional folk dances, square dances, and ethnic dances. (Native American, West African/African-American, Early American and folk)
- use knowledge of the elements of dance and dance terminology to describe and critique their own performances and the performances of others
- identify possible criteria for evaluating dance (e.g., skill of performers, originality, emotional impact, variety, interest)
- demonstrate behavior appropriate for observing the particular context and style of dance being performed; discuss opinions with peers in a supportive and constructive way

Big Idea: Processes in the Arts – Continued

Grade 4 Skills and Concepts – Drama/Theatre
Students will

- be actively involved in creating and performing dramatic works
- use knowledge of the elements of drama and drama terminology to describe and critique their own performances and the performances of others
- identify possible criteria for evaluating dramatic works (e.g., skill of performers, originality, emotional impact, variety, interest)
- demonstrate behavior appropriate for observing the particular context and style of dramatic works being performed; discuss opinions with peers in a supportive and constructive way

Grade 4 Skills and Concepts – Visual Arts
Students will

- be actively involved in creating artworks
- use knowledge of the elements and principles of art and art terminology to describe and critique their own work and the work of others
- identify possible criteria for evaluating visual (e.g., skill of artist, originality, emotional impact, variety, interest)
- demonstrate behavior appropriate for observing the particular context and style of the artwork being viewed; discuss opinions with peers in a supportive and constructive way
- describe personal responses to artwork; explain why there might be different responses to specific works of art

Big Idea: Interrelationships Among the Arts

The arts share commonalities in structures, purposes, creative processes, and their ability to express ideals, feelings and emotions. Studying interrelationships among the arts enables students to get a broad view of the expressiveness of the art forms as a whole, and helps to develop a full appreciation of the arts as a mirror of human kind.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.22 Students create works of art and make presentations to convey a point of view.
2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.
2.26 Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the arts are basic forms of human communication.
- music, dance, drama and visual art created in common cultures and/or common historical periods tend to reflect common attitudes, ideas, beliefs and feelings.
- the arts provide forms of non-verbal communication that can strengthen the presentation of ideas and emotions.
- the modes of thinking and methods of the arts disciplines can be used to illuminate situations in other disciplines that require creative solutions.

Grade 4 Skills and Concepts – Arts

Students will

- recognize that common terms are used in various arts (e.g., tempo in dance and music)
- identify communication of common themes or ideas across different art forms
- identify and explain connections between and among different art forms from the same culture or from the same time period
- describe commonalities between the arts and other subjects taught in the school (e.g., observation skills in visual arts and science, historical and cultural perspectives in the arts and social studies, shape in visual art and mathematics, dance and a healthy lifestyle, fractions in music notation and mathematics, reading music and reading words, composing music and writing)
- communicate common meaning through creating and performing in the four art forms

Program of Studies – Arts and Humanities – Fifth Grade

The arts and humanities program in the fifth grade continues to center on an exploration of the art forms of dance, drama/theatre, music and visual arts. Emphasis should be placed on exposing students to a variety of arts through active experiences in all four art forms. This exploration includes a beginning of literacy development in the arts content areas, basic level analysis and critique of the arts, and active creating and performing in the arts.

Students should have the opportunity to learn about the arts in the context of creating and performing. As students create and perform, they learn that the arts are basic to human communication and that they can use the arts to communicate specific meaning through their choices in the use of various arts elements and principles of design.

The arts and humanities content standards at the fifth grade level are directly aligned with Kentucky's broad standards called the **Academic Expectations**. The **Academic Expectations** are directly related to the *National Standards for Arts Education (1994)*.

Arts and humanities grade level content standards are organized around five “Big Ideas” that are important to the arts disciplines. The five big ideas in arts and humanities are: Structures in the Arts, Humanity in the Arts, Purposes for Creating the Arts, Processes in the Arts and Interrelationships Among the Arts. The Big Ideas are conceptual organizers for arts and humanities and are similar at each grade level to ensure students have multiple opportunities throughout their school careers to develop skills and concepts linked to each Big Idea.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of the arts and humanities. The understandings represent the desired results - what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for arts and humanities are fundamental to arts literacy and proficiency, and build on prior learning.

The three arts processes of creating, performing and responding to the arts provide a basis for deep understanding and appreciation of the arts. In the processes of creating and performing, a variety of technologies are employed, ranging from primitive technologies to cutting edge electronic and digital technologies.

Creating involves planning and creating new music, dance, drama/theatre or visual arts, or it may involve improvising in music, dance or drama/theatre. Improvising is the composing of new music, reciting/acting new dramatic material, or creating new dance movements on the spur of the moment.

Performing is limited to the performing arts of music, dance and drama/theatre. Performing involves presenting previously created works for an audience. Although the process of performing involves following a creative plan conceived by a composer, playwright or choreographer, there is still opportunity for creative interpretations in the performance.

Responding to the arts involves responses on multiple levels. The arts are a tool for communication and are capable of delivering meaning through literal and emotional content.

Responding to the emotional content of artworks involves actually feeling the emotion(s) set forth by the creator. Responding can also involve intellectual analysis of works of art in regard to their design, effectiveness and quality.

Academic Expectations 2.25 and 2.26 bring forward the study of the humanities in the arts. The arts reflect time, place and society and offer a mirror to the human experience. The powerful communication qualities of the arts also enable them to be a factor that can drive the human experience. Study of historical and cultural contexts in the arts is an essential and integral part of instruction across all the art forms and across all grade levels.

Fifth grade students should have the opportunity to experience the arts of various cultures around the world, but specific study should focus on influences in the early history of America and the United States, specifically Native American arts, West African arts, Appalachian arts; how the arts are part of these cultures and purposes they have served in those cultures. Students will also study European arts that influenced arts in the American Colonial period.

**Social studies content has a definitive focus on the American Colonial Period in the fifth grade, so a heavier emphasis on the arts of this period can be incorporated in the fifth grade arts and humanities curriculum.*

Big Idea: Structure in the Arts

Understanding of the various structural components of the arts is critical to the development of other larger concepts in the arts. Structures that artists use include elements and principles of each art form, tools, media and subject matter that impact artistic products and specific styles and genre that provide a context for creating works. It is the artist's choice of these structural components in the creative process that results in a distinctively expressive work. Students make choices about how to use structural organizers to create meaningful works of their own. The more students understand, the greater their ability to produce, interpret, or critique artworks from other artists, cultures, and historical periods.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.23 Students analyze their own and others' artistic products and performances using accepted standards.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the elements of music, dance and drama are intentionally applied in creating and performing.
- the elements and principles of design of visual art are intentionally applied in creating works of art.
- responding to or critiquing works of art involves an understanding of elements, principles and structures appropriate to each area of the arts.
- existing and emerging technologies can inspire new applications of structural components.

Grade 5 Skills and Concepts – Music

Students will

- recognize and identify elements of music (rhythm, tempo, melody, harmony, form, timbre, dynamics) using musical terminology
- use the elements of music while performing, singing, playing instruments, moving, listening, reading music, writing music and creating music independently and with others
- listen to and explore how changing different elements results in different musical effects
- recognize, describe and compare various styles of music (spirituals, game songs, folk songs, work songs, lullabies, patriotic, bluegrass)

Grade 5 Skills and Concepts – Dance

Students will

- analyze and explain the use of elements of dance (space, time, force) and basic dance forms using dance terminology
- use the elements of dance in creating, copying and performing patterns of movement independently and with others
- observe, describe and demonstrate locomotor (e.g. walk, run, skip, gallop) and nonlocomotor (e.g. bend, stretch, twist, swing) movements
- apply principles of movement (e.g., balance, initiation of movement, weight shift) when observing, creating and performing movement skills

Big Idea: Structure in the Arts – Continued

Grade 5 Skills and Concepts – Drama/Theatre
Students will

- describe and compare elements of drama (literary, technical, performance) using drama/theatre terminology
- use the elements of drama in creating and performing dramatic works independently and with others
- observe, describe and apply creative dramatics (improvisation, mimicry, pantomime, role playing and story telling) in a variety of situations
- describe and explain characters, relationships among characters and settings as related to a script, a scenario, or classroom dramatization
- explore a variety of dramatic works (e.g., theater and dramatic media – film, television, electronic media)

Grade 5 Skills and Concepts – Visual Arts
Students will

- recognize and describe elements of art (line, shape, form, texture, color) and principles of design (emphasis, pattern, balance, contrast) using visual art terminology
- use the elements of art and principles of design in creating artworks independently and with others
- explore, describe and compare elements of art (e.g., line, shape, form, texture, primary and secondary colors, color schemes/groups) and principles of design (e.g., focal point, pattern, balance, contrast) in a variety of 2 and 3 dimensional artworks
- apply organizational structures and describe what makes them effective or not effective in communicating ideas

Big Idea: Humanity in the Arts

The arts reflect the beliefs, feelings and ideals of those who create them. Experiencing the arts allows one to experience time, place and/or personality. By experiencing the arts of various cultures, students can actually gain insight into the beliefs, feelings and ideas of those cultures. Students also have the opportunity to experience how the arts can influence society through analysis of arts in their own lives and the arts of other cultures and historical periods. Studying the historical and cultural stylistic periods in the arts offers students an opportunity to understand the world past and present, and to learn to appreciate their own cultural heritage. Looking at the interrelationships of multiple arts disciplines across cultures and historical periods is the focus of humanities in the arts.

Academic Expectations

2.24 Students have knowledge of major works of art, music, and literature and appreciate creativity and the contributions of the arts and humanities.

2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.

2.26 Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the arts are powerful tools for understanding human experiences both past and present.
- the arts help us understand others' (often very different) ways of thinking, working, and expressing ourselves.
- the arts play a major role in the creation and defining of cultures and building civilizations.

Grade 5 Skills and Concepts – Music

Students will

- associate music they listen to or perform with specific cultures (Native American, Appalachian, West African); describe how the music reflects the cultures
- associate music they listen to or perform with the Colonial American period in history; describe how the music reflects the Colonial American time period (e.g. work songs, patriotic songs, folk music; European influences)
- describe distinguishing characteristics of the music of specific cultures using music terminology (e.g., polyrhythms in African music not in Native American)

Grade 5 Skills and Concepts – Dance

Students will

- associate dances they observe or perform with specific cultures (Native American, Appalachian, West African); describe how dances reflect the cultures (e.g., hunting dances from Native American and West African cultures)
- associate dances they observe or perform with the Colonial American period in history; describe how dances reflect the Colonial American time period (e.g., social dances, square dancing)
- describe the dance of specific cultures using dance terminology

Big Idea: Humanity in the Arts – Continued

Grade 5 Skills and Concepts – Drama/Theatre
Students will

- associate folktales, legends or myths they experience or perform with specific cultures (Native American, Appalachian, West African); describe how the literature and oral traditions reflect the cultures
- associate folktales, legends, or myths they experience or perform with the Colonial American period in history; describe how the literature and oral traditions reflect the Colonial American time period
- describe folktales, legends, or myths of specific cultures using drama/theatre terminology
- use print and non-print sources to explore, describe and compare themes, characters, and situations in dramas from different cultures

Grade 5 Skills and Concepts – Visual Arts
Students will

- associate artworks they experience or create with specific cultures (Native American, Appalachian, West African); describe how the art of these cultures reflects the culture
- associate artworks they experience or create with the Colonial American period in history; describe how the art of the American Colonies reflects the Colonial American time period (e.g., European influences in American visual art)
- describe artworks of specific cultures using visual art terminology
- compare distinguishing characteristics of artworks from different cultures and time periods

Big Idea: Purposes for Creating the Arts

The arts have played a major role throughout the history of humans. As the result of the power of the arts to communicate on a basic human level, they continue to serve a variety of purposes in society. The arts are used for artistic expression to portray specific emotions or feelings, to tell stories in a narrative manner, to imitate nature and to persuade others. The arts bring meaning to ceremonies, rituals, celebrations and commemorations. Additionally, they are used for recreation and to support recreational activities. Students experience the arts in a variety of roles through their own creations and performances and through those of others. Through their activities and observations, students learn to create arts and use them for a variety of purposes in society.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.22 Students create works of art and make presentations to convey a point of view.
2.26 Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the arts fulfill a variety of purposes in society (e.g., to present issues and ideas, to entertain, to teach or persuade, to design, plan and beautify).
- the arts have value and significance for daily life. They provide personal fulfillment, whether in career settings, avocational pursuits or leisure.
- the arts provide forms of nonverbal communication that can strengthen the presentation of ideas and emotions.

Grade 5 Skills and Concepts – Music

Students will

- describe and compare multiple purposes for which music is created to fulfill (ceremonial, recreational, artistic expression)
- create new, listen to, choose and perform music to fulfill a variety of specific purposes

Grade 5 Skills and Concepts – Dance

Students will

- describe and compare multiple purposes for which dance is created (ceremonial, recreational, artistic expression)
- create new, observe, choose and perform dance to fulfill a variety of specific purposes

Grade 5 Skills and Concepts – Drama/Theatre

Students will

- describe and compare multiple purposes for which dramatic works are created (sharing the human experience, passing on tradition and culture, recreational, artistic expression)
- create or write new, observe, choose and perform dramatic works to fulfill a variety of specific purposes

Grade 5 Skills and Concepts – Visual Arts

Students will

- describe and compare multiple purposes for which artworks are created (ceremonial, artistic expression, narrative, functional)
- create new, choose and experience artworks created to fulfill a variety of specific purposes

Big Idea: Processes in the Arts

There are three distinctive processes involved in the arts. These processes are creating new works, performing works for expressive purposes, and responding to artworks. Each process is critical and relies on others for completion. Artists create works to express ideas, feelings or beliefs. The visual arts capture a moment in time while the performing arts (music, dance, drama/theatre) are performed for a live audience. The audience responds to the artistic expressions emotionally and intellectually based on the meaning of the work. Each process enhances understanding, abilities and appreciation of others. Students involved in these processes over time will gain a great appreciation for the arts, for artists past and present and for the value of artistic expression.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.22 Students create works of art and make presentations to convey a point of view.
2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- there are three distinct processes for involvement in the arts; creating new artworks, performing works previously created and responding to artworks and performances.
- full understanding and appreciation of the arts requires some degree of involvement in all three processes.
- openness, respect for work, and an understanding of how artists apply elements and principles of design in creating and performing are personal attitudes and skills that enhance enjoyment of the observer.
- existing and emerging technologies can extend the reach of the art form to new audiences.

Grade 5 Skills and Concepts – Music

Students will

- be actively involved in creating, notating, improvising and performing simple melodies (melodic shape/contour, meter), alone and with others
- sing and play simple rhythmic or tonal patterns by reading music notation, alone, and in small and large ensembles
- use knowledge of the elements of music and music terminology to describe and critique their own performances and the performances of others
- identify possible criteria for evaluating music (e.g., skill of performers, originality, emotional impact, variety, interest)
- demonstrate behavior appropriate for observing the particular context and style of music being performed; discuss opinions with peers in a supportive and constructive way

Big Idea: Processes in the Arts – Continued

Grade 5 Skills and Concepts – Dance
Students will

- be actively involved in creating and performing dance (incorporating the elements of dance: space, time and force) alone and with others
- perform traditional folk dances, square dances and ethnic dances (Native American, West African/African-American, Early American and folk)
- use knowledge of the elements of dance and dance terminology to describe and critique their own performances and the performances of others
- identify possible criteria for evaluating dance (e.g., skill of performers, originality, emotional impact, variety, interest)
- demonstrate behavior appropriate for observing the particular context and style of dance being performed; discuss opinions with peers in a supportive and constructive way

Grade 5 Skills and Concepts – Drama/Theatre
Students will

- be actively involved in creating, improvising and performing dramatic works using elements of drama (Literary, Technical, Performance)
- use a variety of resources (e.g., research, peers, technology) to write, refine, and record dialogue and action
- use knowledge of the elements of drama and drama terminology to describe and critique their own performances and the performances of others
- identify possible criteria for evaluating dramatic works (e.g., skill of performers, originality, emotional impact, variety, interest, technical requirements: lighting, sound, scenery, costumes)
- demonstrate behavior appropriate for observing the particular context and style of dramatic works being performed; discuss opinions with peers in a supportive and constructive way

Grade 5 Skills and Concepts – Visual Arts
Students will

- be actively involved in selecting media, techniques, and processes for creating artworks applying the elements of art and principles of design
- use knowledge of the elements and principles of art and art terminology to describe and critique their own work and the work of others
- identify possible criteria for evaluating visual (e.g., skill of artist, originality, emotional impact, variety, interest)
- demonstrate behavior appropriate for observing the particular context and style of the artwork being viewed; discuss opinions with peers in a supportive and constructive way
- describe personal responses to artwork; explain why there might be different responses to specific works of art (e.g., personal experience, interest, medium used, effectiveness of message)

Big Idea: Interrelationships Among the Arts

The arts share commonalities in structures, purposes, creative processes, and their ability to express ideals, feelings and emotions. Studying interrelationships among the arts enables students to get a broad view of the expressiveness of the art forms as a whole, and helps to develop a full appreciation of the arts as a mirror of human kind.

Academic Expectations

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.13 Students make sense of ideas and communicate ideas with the visual arts.
1.14 Students make sense of ideas and communicate ideas with music.
1.15 Students make sense of and communicate ideas with movement.
2.22 Students create works of art and make presentations to convey a point of view.
2.25 In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.
2.26 Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the arts are basic forms of human communication.
- music, dance, drama and visual art created in common cultures and/or common historical periods tend to reflect common attitudes, ideas, beliefs and feelings.
- the arts provide forms of non-verbal communication that can strengthen the presentation of ideas and emotions.
- the modes of thinking and methods of the arts disciplines can be used to illuminate situations in other disciplines that require creative solutions.

Grade 5 Skills and Concepts – Arts

Students will

- define common terms used in various arts (e.g., tempo in dance and music)
- explain communication of common themes or ideas across different art forms
- identify and explain connections between and among different art forms from the same culture or from the same time period
- describe commonalities between the arts and other subjects taught in the school (e.g., observation skills in visual arts and science, historical and cultural perspectives in the arts and social studies, shape in visual art and mathematics, dance and a healthy lifestyle, fractions in music notation and mathematics, composing music and writing)
- communicate common meaning through creating and performing in the four art forms

INTERMEDIATE ENGLISH LANGUAGE ARTS

Program of Studies – English/Language Arts – Fourth Grade

The English/Language Arts (ELA) content standards at the fourth grade level are directly aligned with Kentucky's **Academic Expectations**. ELA standards are organized around Big Ideas in reading, writing, speaking, listening and observing that are important to the discipline of English/Language Arts. The Big Ideas are conceptual organizers for ELA and are similar at each grade level to ensure that students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of ELA. The understandings represent the desired results--what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame the development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for ELA are fundamental to the reading, writing, speaking, listening and observing processes. Lessons should offer students a wide range of experiences with print and non-print materials that have literary and informational purposes that allow for integrated, interdisciplinary or multidisciplinary programs.

Reading: The five Big Ideas of Reading in fourth grade are Forming a Foundation for Reading, Developing an Initial Understanding, Interpreting Text, Reflecting and Responding to Text, and Demonstrating a Critical Stance. Fourth grade students must be exposed to a variety of texts designed to build a wide range of reading experiences with print and non-print materials to develop an understanding of texts, of themselves, and of different cultures. The complexity of literary and informational (expository, persuasive, and procedural texts and documents) texts selected for instruction should be appropriate for fourth grade students. Reading instruction should focus on before, during and after reading strategies to aid in comprehension of texts. Students should have the resources to develop the language skills they need to pursue life’s goals and to participate fully as informed, productive members of society.

Writing: ELA standards in writing are divided into the four Big Ideas of Writing Content, Structure, Conventions and Process. Students are required to write using the criteria for effective writing included in these Big Ideas. The central idea of the writing standards is *effective communication*. Students use writing-to-learn and writing-to-demonstrate-learning strategies to make sense of their reading and learning experiences. Additionally, students will write in authentic forms for authentic purposes and audiences.

Speaking, Listening and Observing: These standards emphasize that speaking, listening and observing are fundamental processes which people use to express, explore and learn about ideas. The contexts of these communication functions include one-to one conversations, small group discussions, large audiences and meetings, and interactions with media.

The **Academic Expectations** for ELA are:

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.

1.2 Students make sense of the variety of materials they read.

1.3 Students make sense of the various things they observe.

1.4 Students make sense of the various messages to which they listen.

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and ideas to different audiences for different purposes.

5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.

Big Idea: Forming a Foundation (Reading)

Forming a foundation requires readers to develop and apply basic reading skills and strategies across genres to read and understand texts at the appropriate grade level. This involves reading a variety of texts at the word, sentence, and connected text level across all content areas.

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- knowing how to apply phonetic principles, context clues, structural analysis, and spelling patterns can help determine unfamiliar words while reading.
- fluency involves reading orally and silently with speed, accuracy, and proper phrasing and expression, while attending to text features (e.g., punctuation, italics).
- developing breadth of vocabulary improves reading comprehension and involves applying knowledge of word meanings and word relationships. The larger the reader's vocabulary, the easier it is to make sense of text.
- many words have multiple meanings. Knowledge of syntax/language structure, semantics/meaning, context cues, and the use of resources can help in identifying the intended meaning of words and phrases as they are used in text.

Grade 4 Skills and Concepts

Students will

- read high-frequency/grade-appropriate words with automaticity in connected text; read multi-syllabic words using knowledge of sounds, word structure, syllable types, and word patterns; and identify the purpose of capitalization, punctuation, and text features (e.g., boldface type, italics, indentations) to make meaning of a variety of texts
- apply context and self-correction strategies while reading
- read grade-appropriate material--orally and silently--with accuracy and fluency
- use a variety of reading strategies to understand vocabulary and texts:
  - formulate questions to guide reading (before, during and after reading)
  - apply word recognition strategies (e.g., phonetic principles, context clues, structural analysis) to determine pronunciations or meanings of words in passages
  - apply knowledge of synonyms, antonyms, homonyms/homophones, compound words, or differences in meaning to assist comprehension
  - identify syllables and parts of words (e.g., prefixes, suffixes, base words); apply the meanings of common prefixes or suffixes to comprehend unfamiliar words
  - describe words in terms of categories (e.g., water is a liquid), functions (e.g., water is for drinking), or features (e.g., water flows)
  - scan to find specific key information (e.g., dates, places); skim to get the general meaning of a passage
- use resources (e.g., dictionaries, glossaries, thesauruses) to determine correct spellings of words, to identify multiple meanings of words, content-specific meanings of words, and precise use of vocabulary

Big Idea: Developing an Initial Understanding (Reading)

Developing an initial understanding of text requires readers to consider the text as a whole or in a broader perspective. Texts (including multicultural texts) encompass literary and informational texts (expository, persuasive, and procedural texts and documents). Strategies for gaining a broad or literal understanding of print texts can also be applied to non-print texts (e.g., digital, environmental).

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- reading a wide range of print and non-print texts builds an understanding of texts, of themselves, and of different cultures.
- different purposes to read include reading to acquire new information and reading for personal fulfillment.
- the use of comprehension strategies greatly enhances understanding of text. Among these texts include fiction, non-fiction, classic and contemporary works.
- different types of texts place different demands on the reader. Understanding text features and structures, and characteristics associated with different genres (including print and non-print) facilitates the reader's ability to make meaning of the text.

Big Idea: Developing an Initial Understanding (Reading) – Continued

Grade 4 Skills and Concepts
Students will

- use comprehension strategies (e.g., using prior knowledge, predicting, generating clarifying and literal questions, constructing sensory images, locating and using text features) while reading, listening to, or viewing literary and informational texts
- use text structure cues (e.g., sequence, chronology, compare/contrast, description) to aid in comprehension
- describe explicitly stated cause and effect relationships
- distinguish between fiction and non-fiction texts
- identify unfamiliar words and specialized vocabulary (words/terms needed to understand content)
- paraphrase and summarize (e.g., to show relationships, relative importance of information) and sequence major events or steps in a process if appropriate
- make text-based inferences; make and check predictions
    - demonstrate understanding of literary elements and literary passages/texts:
    - identify and describe characters ,major events/plot, setting or problem/solution
    - make and check predictions
    - identify characteristics of different types of literary texts (e.g., stories, poems, plays, fairy tales, folktales, historical fiction, realistic fiction)
- demonstrate understanding of informational passages/texts:
    - locate key ideas, information, facts, or details
    - use information to state and support central/main idea or to interpret the meaning of specialized vocabulary (words and terms specific to understanding the content)
    - identify text features (e.g., table of contents, bold and italicized print, headings, index, transitional words/phrases) of different types of informational texts (e.g., directions, invitations, children's magazines, dictionaries, encyclopedias, content trade books)
    - read and use functional messages encountered in daily life
    - use information from text to accomplish a specific task or answer questions
    - use visual information (e.g., maps, charts, graphs , timelines, visual organizers) to understand texts

Big Idea: Interpreting Text (Reading)

Interpreting text requires readers to extend their initial impressions to develop a more complete understanding of what is read. This involves linking information across parts of a text, as well as focusing on specific information. Texts (including multicultural texts) encompass literary and informational texts (expository, persuasive, and procedural texts and documents). Strategies for interpreting print texts can also be applied to non-print texts (e.g., digital, environmental).

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- interpretations of text involve linking information across parts of a text and determining importance of the information presented.
- references from texts provide evidence to support conclusions about the message, the information presented, or the author's perspective.
- authors make intentional choices that are designed to produce a desired effect on the reader.

Grade 4 Skills and Concepts

Students will

- use comprehension strategies while reading, listening to, or viewing literary and informational texts
- use text structure cues (e.g., chronology, cause/effect, compare/contrast, description, logical/sequential) to aid comprehension
- use text references to explain author's purpose, author's message, supporting evidence or logical predictions
- record and organize ideas to show understanding of central ideas and interrelationships (e.g., charting, mapping, webbing)
- demonstrate understanding of literary elements and literary passages/texts:
  - explain a character's actions and interpret possible motives based on a passage
  - identify problems and explain how conflicts are resolved
  - recognize author's craft as appropriate to genre (e.g., figurative language, exaggeration)
- demonstrate understanding of informational passages/texts:
  - distinguish between informative or persuasive passages
  - identify commonly used persuasive techniques (e.g., emotional appeal, testimonial, bandwagon, expert opinion)
  - use evidence/references from the text to state central/main idea and details that support them
  - distinguish between facts and opinions found in texts
  - identify information in a passage that is supported by facts
  - explain the purposes of text features in different types of informational texts

Big Idea: Reflecting and Responding to Text (Reading)

Reflecting and responding to text requires readers to connect knowledge from the text with their own background knowledge and experience. The focus is on how the text relates to personal knowledge. Texts encompass print and non-print literary and informational texts.

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- making connections involves thinking beyond the text and applying the text to a variety of situations. Connections may be expressed as comparisons, analogies, inferences, or the synthesis of ideas.
- references from texts provide evidence of applying ideas and making text-to-self, text-to-texts, and texts-to-real world connections.
- reading a wide range of literature by different authors, and from many time periods, cultures, and genres, builds an understanding of the extent of human experience.

Grade 4 Skills and Concepts

Students will

- use comprehension strategies while reading, listening to, or viewing literary and informational texts to make connections
- self-select texts based on personal interests
- generate a personal response to what is read, listened to or viewed:
  - relate stories or texts to prior knowledge, personal experiences, other texts, or ideas
  - provide text references/evidence to support connections made between text-to-self, text-to-texts, or texts-to-world
- read a range of texts by the same author, about the same subject, or from the same genre in order to respond and make connections (text-to-self, text-to-text, text-to-world)
- demonstrate participation in a literate community by sharing and responding to ideas and connections with others through writing and focused discussions about texts

Big Idea: Demonstrating a Critical Stance (Reading)

Demonstrating a critical stance requires readers to consider the text objectively in order to evaluate its quality and appropriateness. It involves a range of tasks, including critical evaluation, comparing and contrasting, and understanding the impact of features, such as irony, humor, and organization. Knowledge of text content and structure is important.

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.
5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- reading is a process that includes applying a variety of strategies to comprehend, interpret and evaluate texts, showing evidence of responsible interpretations of texts and examining texts critically.
- references from texts provide evidence to support judgments made about why and how the text was developed, considering the content, organization and form.
- determining the usefulness of text for a specific purpose, evaluating language and textual elements, and analyzing the author's style are all ways to critically examine texts.
- all citizens need to critically consider messages provided through a variety of media in order to make informed decisions.

Grade 4 Skills and Concepts

Students will

- explain how text features organize information for clarity or for usefulness
- identify the organizational pattern used (e.g., sentence lengths and structures, paragraphs in prose, verses in poems, sequence, description) and describe how understanding the structure helps to understand the text
- evaluate what is read, based on the author's word choice, sentence variety, content or use of literary elements
- form and support judgments/opinions about central ideas
- connect information within and across texts
- evaluate the accuracy of information presented in texts
- evaluate connections among evidences and inferences
- evaluate the quality of evidence used to support or oppose an argument
- analyze or evaluate the use of persuasive or propaganda techniques
- recognize faulty reasoning and false premises in an argument

Big Idea: Writing Content

To communicate effectively, students should be able to write for a variety of authentic purposes and audiences in a variety of forms connecting to prior knowledge and the students' understanding of the content. In their writing, students should be able to create a focused purpose and controlling idea and develop ideas adequately considering the purpose, audience and form.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- there are many reasons for students to write including writing-to-learn, writing-to-demonstrate learning and writing for authentic purposes and audiences.
- different forms of writing are appropriate for different purposes and audiences across the content areas and have different features (e.g., journals, narratives, articles, open response answers).
- to be effective, writing must be a sufficiently developed, coherent unit of thought to address the needs of the intended audience.
- writing can be used to make meaning of one's own experience, as well as of other information/ ideas.

Grade 4 Skills and Concepts

Students will

- write to learn by applying strategies effectively (e.g., learning logs, reflections)
- write to demonstrate learning and understanding of content knowledge (e.g., journals, summaries)
- write for a variety of authentic purposes and audiences:
  - communicate about personal experiences and relationships
  - communicate through authentic literary forms to make meaning about the human condition
  - communicate through authentic transactive purposes for writing (e.g. informing, describing, explaining, persuading)
  - analyze and communicate reflectively about literacy goals
  - analyze and address needs of intended audience
  - adjust the writing style (formal, informal) for intended audience
- communicate purpose, focus and controlling ideas authentic to the writer
- develop ideas that are logical, justified and suitable for a variety of purposes, audiences and forms of writing
- select and incorporate ideas or information (e.g., from research or reading), explaining reflections or related connections (e.g., identifying relationships or one's own experiences, offering support for conclusions, organizing prior knowledge about a topic)
- communicate understanding of ideas or events from different viewpoints
- provide sufficient details for clear understanding
- use and sustain suitable voice or tone

Big Idea: Writing Structure

To communicate effectively, students should be able to apply knowledge of language and genre structures to organize sentences, paragraphs and whole pieces logically and coherently.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- sentences must be complete and clear. Variety in sentence structure helps to engage the reader and make meaning more clear. Sometimes, unconventional sentence structure is appropriate for an intended effect upon the reader.
- different types of structures are appropriate for different purposes, audiences and different forms of writing. Paragraphs and whole texts must be unified and coherent.
- structural elements such as context, meaningful order of ideas, transitional elements and conclusion all help make meaning clear for the reader.

Grade 4 Skills and Concepts

Students will

- use complete and correct sentences of various structures and lengths (e.g., simple, compound, complex) to enhance meaning throughout a piece of writing; apply unconventional sentence structures to achieve intended effect on audience
- develop analytical structures appropriate to purpose (e.g., sequence, problem/solution, description, question/answer, cause/effect, compare/contrast, chronology)
- establish a context for the reader and a controlling idea in the introduction; develop the piece sufficiently, arranging ideas in meaningful order; and conclude effectively
- create unified and coherent paragraphs; apply paragraph structures (block and indented) consistently
- use a variety of transitional words/phrases (e.g., time, order of sequence) and/or transitional elements (e.g., white space)
- apply organizational devices (e.g., foreshadowing, flashback) to achieve intended effect on audience
- incorporate text features (e.g., numbering, bullets, white space, pictures, labels, diagrams, charts, shape in poetry) to enhance clarity and meaning

Big Idea: Writing Conventions

To communicate effectively, students should be able to apply knowledge of language conventions and have control over standard grammar and usage. Students should be able to choose precise language appropriate to the purpose.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- writers need to choose their language with care, depending on the content, purpose and audience.
- language should be concise and precise. Strong verbs and nouns, concrete details and sensory language help make meaning clear to the reader.
- standard grammar and usage are important in making meaning clear to the reader; non-standard grammar may be used for intended effect.
- writers need to use correct spelling, punctuation and capitalization.
- writers need to document sources/give credit for the ideas of others.

Grade 4 Skills and Concepts

Students will

- choose precise and descriptive language for clarity, richness and/or its effect on the reader (words with multiple meanings, words that imply different shades of meaning, strong nouns and verbs, concrete and sensory details, figurative language – simple metaphors)
- use specialized content vocabulary and words used for specific contexts, as needed
- apply correct grammar skills (e.g., complete sentences, various sentence structures, subject/ verb agreement); mechanics (e.g., capitalization, punctuation); and usage (e.g., among/between; accept/except)
- use resources (e.g., dictionary, glossary) and apply knowledge of spelling rules to correct spelling in final drafts
- use resources (e.g., word processing programs, handbooks) to adhere to standard guidelines for grammar, usage and mechanics
- document ideas used from outside sources (e.g., citing authors or titles within the text; listing sources) when paraphrasing or summarizing

Big Idea: Writing Process

To communicate effectively, students should engage in the various stages of the writing process including focusing, prewriting, drafting, revising, editing, publishing and reflecting. The writing process is recursive; different writers engage in the process differently and proceed through the stages at different rates.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the writing process is a helpful tool in constructing and demonstrating meaning of content (whether personal expressive, literary, academic or practical) through writing.
- the stages are sometimes recursive (e.g., In the process of revising, a writer sometimes returns to earlier stages of the process).
- writers work through the process at different rates. Often, the process is enhanced by conferencing with others.

Grade 4 Skills and Concepts

Students will

- focus: establish and maintain a controlling idea on a selected topic
- prewrite:
  - determine the most appropriate form to meet needs of purpose and audience
  - generate ideas to support and develop controlling idea (e.g., journaling, webbing, freewriting, researching print and non-print sources, note-taking, interviewing, observation, surveying, imagining and creating novel ideas)
  - organize and present ideas by taking notes, quoting, paraphrasing, summarizing
- draft:
  - determine how, when and whether to use visuals (e.g., illustrations, charts, diagrams) in addition to written text
  - logically introduce and incorporate quotes
- revise:
  - reflect on own writing
  - confer with peers and other writing conferencing partners to critically analyze one's own work and the work of others
  - confer to determine where to add, delete, rearrange, define/redefine or elaborate content so that writing is coherent and effective for intended audience, then make revisions
  - identify and develop topic sentences, making sure ideas are supported appropriately with relevant details and that sentences are in sequential order; insert new sentences and delete unnecessary ones; develop effective introductions and conclusions; eliminate redundant words; choose the most specific words available
- edit for appropriate language usage, sentence structure, spelling, capitalization, punctuation and proper documentation of sources
- publish to produce products for intended audience:
  - present written material using basic software programs and graphics when developmentally appropriate (e.g., charts, tables)
  - present final work in a neat, legible form
- reflect and evaluate personal progress and skills in writing

Big Idea: Speaking, Listening, and Observing

Speaking, listening and observing are fundamental processes which people use to express, explore and learn about ideas. The functions of speaking, listening and observing include gathering and sharing information, persuading others, expressing and understanding ideas, and selecting and critically analyzing messages. The contexts of these communication functions include one-to one conversations, small group discussions, large audiences and meetings, and interactions with media.

Academic Expectations

1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various messages they observe.
1.4 Students make sense of the various messages to which they listen.
1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- communication, both formal and informal, integrates listening, observing/viewing, reading, writing and speaking with confidence. Different levels of discourse are appropriate for different contexts, occasions, purposes and audiences.
- regardless of the topic, the context or the intended audience, students need to be able to communicate ideas effectively. Effective communication involves verbal and nonverbal techniques to enhance or emphasize content. These techniques aid the listener's ability to interpret the information.
- language usage is related to successful communication; language patterns and vocabulary transmit culture and affect meaning.
- observation involves interpreting and constructing meaning. By viewing context, students infer, construct meaning, draw conclusions and form opinions about the world around them.

Big Idea: Speaking, Listening, and Observing – Continued

Grade 4 Skills and Concepts

In formal speaking situations, students will

- create oral presentations that
  - are appropriate for the purpose (e.g., to inform, persuade, entertain), audience, context and occasion
  - support judgment with sound evidence and appropriate details
  - maintain a consistent focus
  - exhibit a logical structure appropriate to audience, context and purpose
  - organize ideas in a coherent, meaningful way including an introduction and a conclusion
  - choose language for its effect on the audience (e.g., strong nouns, active verbs, concrete and sensory details)
- apply delivery techniques
  - both verbal (e.g., tone, volume, rate, articulation, pacing) and nonverbal (e.g., gestures, facial expressions, eye contact)
  - avoid distracting delivery behaviors (e.g. excessive verbal pauses, fidgeting)
  - use language appropriate to audience; use specialized content vocabulary as needed
  - adhere to standard guidelines for grammar, usage, mechanics or use non-standard language for effect when appropriate (e.g., word plays, familiar idioms, similes)
- use visual aids, media and tools of technology to support oral communication
- document ideas from outside sources (e.g., citing authors, titles, websites)

In informal speaking situations, students will

- give spoken instructions to perform specific tasks
- ask and respond to questions as a way to enrich class discussions
- play a variety of roles in group discussions (e.g., discussion leader, facilitator, responder)
- use different voice level, phrasing, and intonation for different situations (e.g., small and large group settings, discussions)

When listening, students will

- follow spoken instructions to perform specific tasks
- identify specific information (e.g., main idea, supporting details)
- respond to information appropriately/respectfully in a variety of ways (e.g., summarizing orally, taking useful notes, organizing and recording that which is meaningful and useful)
- follow the organization of a presentation and recognize the speaker's use of transitions
- interpret and evaluate the effectiveness of verbal and nonverbal delivery techniques, including visual cues
- build on the ideas of others and contribute relevant information or ideas
- use self-evaluations and feedback from teachers and peers to improve presentations

When observing, students will

- use a variety of criteria (e.g., accuracy, effectiveness, relevance of facts) to evaluate media
- evaluate the role of media in focusing attention and in forming opinion
- interpret a variety of techniques used in advertising
- identify visual and auditory cues (e.g., slow motion, music to create mood, sound effects) to enhance the message or understand context

Program of Studies – English/Language Arts – Fifth Grade

The English/Language Arts (ELA) content standards at the fifth grade level are directly aligned with Kentucky's **Academic Expectations**. ELA standards are organized around Big Ideas in reading, writing, speaking, listening and observing that are important to the discipline of English/Language Arts. The Big Ideas are conceptual organizers for ELA and are similar at each grade level to ensure that students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of ELA. The understandings represent the desired results--what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame the development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for ELA are fundamental to the reading, writing, speaking, listening and observing processes. Lessons should offer students a wide range of experiences with print and non-print materials that have literary and informational purposes that allow for integrated, interdisciplinary or multidisciplinary programs.

Reading: The five Big Ideas of Reading in fifth grade are Forming a Foundation for Reading, Developing an Initial Understanding, Interpreting Text, Reflecting and Responding to Text, and Demonstrating a Critical Stance. Fifth grade students must be exposed to a variety of texts designed to build a wide range of reading experiences with print and non-print materials to develop an understanding of texts, of themselves, and of different cultures. The complexity of literary and informational (expository, persuasive, and procedural texts and documents) texts selected for instruction should be appropriate for fifth grade students. Reading instruction should focus on before, during and after reading strategies to aid in student comprehension of texts. Students should have the resources to develop the language skills they need to pursue life’s goals and to participate fully as informed, productive members of society.

Writing: ELA standards in writing are divided into the four Big Ideas of Writing Content, Structure, Conventions and Process. Students are required to write using the criteria for effective writing included in these Big Ideas. The central idea of the writing standards is *effective communication*. Students use writing-to-learn and writing-to-demonstrate-learning strategies to make sense of their reading and learning experiences. Additionally, students will write in authentic forms for authentic purposes and audiences.

Speaking, Listening and Observing: These standards emphasize that speaking, listening and observing are fundamental processes which people use to express, explore and learn about ideas. The contexts of these communication functions include one-to one conversations, small group discussions, large audiences and meetings, and interactions with media.

The **Academic Expectations** for ELA are:

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.

1.2 Students make sense of the variety of materials they read.

1.3 Students make sense of the various things they observe.

1.4 Students make sense of the various messages to which they listen.

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and ideas to different audiences for different purposes.

5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.

Big Idea: - Forming a Foundation (Reading)

Forming a foundation requires readers to develop and apply basic reading skills and strategies across genres to read and understand texts at the appropriate grade level. This involves reading a variety of texts at the word, sentence, and connected text level across all content areas.

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- knowing how to apply phonetic principles, context clues, structural analysis, and spelling patterns can help determine unfamiliar words while reading.
- fluency involves reading orally and silently with speed, accuracy, proper phrasing and expression, while attending to text features (e.g., punctuation, italics).
- developing breadth of vocabulary improves reading comprehension and involves applying knowledge of word meanings and word relationships. The larger the reader's vocabulary, the easier it is to make sense of text.
- many words have multiple meanings. Knowledge of syntax/language structure, semantics/meaning, context cues, and the use of resources can help in identifying the intended meaning of words and phrases as they are used in text.

Grade 5 Skills and Concepts

Students will

- read grade-appropriate texts with automaticity; read multi-syllabic words using knowledge of sounds, word structure, syllable types, and word patterns; and explain the purpose of capitalization, punctuation, and text features (e.g., boldface type, italics, indentations) to make meaning of a variety of texts
- apply context and self-correction strategies while reading
- read grade-appropriate material --orally and silently --with accuracy and fluency
- use a variety of reading strategies to understand vocabulary and texts:
  - formulate questions to guide reading (before, during and after reading)
  - apply word recognition strategies (e.g., phonetic principles, context clues, structural analysis) to determine pronunciations or meanings of words in passages
  - apply knowledge of synonyms, antonyms, homonyms/homophones, compound words, or differences in meaning to assist comprehension
  - identify syllables and parts of words (e.g., prefixes, suffixes, base words) and apply the meanings to comprehend unfamiliar words
  - describe words in terms of categories (e.g., water is a liquid), functions (e.g., water is for drinking), or features (e.g., water flows)
  - scan to find specific key information (e.g., dates, places); skim to get the general meaning of a passage
- use resources (e.g., dictionaries, glossaries, thesauruses) to identify multiple meanings of words, content-specific meanings of words, and precise use of vocabulary

Big Idea: Developing an Initial Understanding (Reading)

Developing an initial understanding of text requires readers to consider the text as a whole or in a broader perspective. Texts (including multicultural texts) encompass literary and informational texts including expository, persuasive, and procedural texts and documents. Strategies for gaining a broad or literal understanding of print texts can also be applied to non-print texts (e.g., digital, environmental).

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- reading a wide range of print and non-print texts builds an understanding of texts, of themselves, and of different cultures.
- different purposes to read include reading to acquire new information and reading for personal fulfillment. Among these texts are plays, fiction and non-fiction, classic and contemporary works.
- the use of comprehension strategies enhances understanding of text.
- different types of texts place different demands on the reader. Understanding text features and structures, and characteristics associated with different text genres (including print and non-print) facilitate the reader's ability to make meaning of the text.

Big Idea: Developing an Initial Understanding (Reading) – Continued

Grade 5 Skills and Concepts
Students will

- use comprehension strategies (e.g., using prior knowledge, predicting, generating clarifying, literal and inferential questions, constructing sensory images, locating and using text features) while reading, listening to, or viewing literary and informational texts
- use text structure cues (e.g., chronology, cause/effect, compare/contrast, description, classification, logical/sequential) to aid in comprehension
- describe explicitly stated cause and effect relationships
- distinguish between fiction and non-fiction texts
- identify meanings of unfamiliar words and specialized vocabulary (words/terms needed to understand content)
- paraphrase and summarize (e.g., to show relationships, relative importance of information), or sequence major events or steps in a process if appropriate
- make text-based inferences; make and check predictions
- demonstrate understanding of literary elements and literary passages/texts:
  - describe characters and character traits, major events/plot, setting or problem/solution
  - make and check predictions
  - identify characteristics of different types of literary texts (e.g., stories, poems, plays, folktales, historical fiction, realistic fiction, mysteries)
- demonstrate understanding of informational passages/texts:
  - locate key ideas, information, facts or details
  - use information to state and support central/main idea
  - identify text features (e.g., table of contents, bold and italicized print, headings, index, transitional words/phrases) of different types of informational texts (e.g., directions, invitations, children's magazines, dictionaries, encyclopedias, content trade books)
  - read and use functional messages encountered in daily life
  - use information from text to accomplish a specific task or answer questions
  - use text features and visual information to understand texts

Big Idea: Interpreting Text (Reading)

Interpreting text requires readers to extend their initial impressions to develop a more complete understanding of what is read. This involves linking information across parts of a text, as well as focusing on specific information. Texts (including multicultural texts) encompass literary texts and informational texts including expository, persuasive, and procedural texts and documents. Strategies for interpreting print texts can also be applied to non-print texts (e.g., digital, environmental).

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- interpretations of text involve linking information across parts of a text and determining importance of the information presented.
- references from texts provide evidence to support conclusions drawn about the message, the information presented, or the author's perspective.
- authors make intentional choices that are designed to produce a desired effect on the reader.

Grade 5 Skills and Concepts

Students will

- use comprehension strategies while reading, listening to, or viewing literary and informational texts
- use text structure cues (e.g., chronology, cause/effect, compare/contrast, description, logical/sequential) to aid comprehension
- use text references to identify and explain author's purpose, author's message (implied or stated), or arguments and supporting evidence
- record and organize ideas to show understanding of central ideas and interrelationships (e.g., charting, mapping, graphic organizers, outlining)
- demonstrate understanding of literary elements and literary passages/texts:
  - explain a character's actions and interpret possible motives based on a passage
  - identify problems and explain how conflicts are resolved
  - identify use of author's craft as appropriate to genre (e.g., rhyme, alliteration, sensory images, simile, description, dialogue)
- demonstrate understanding of informational passages/texts:
  - distinguish between informative or persuasive passages
  - identify use of persuasive techniques (e.g., emotional appeal, testimonial, bandwagon, expert opinion)
  - use evidence/references from the text to state central/main idea and details that support them
  - distinguish between facts and opinions found in texts
  - identify information in a passage that is supported by facts
  - explain the purposes of text features in different types of informational texts

Big Idea: Reflecting and Responding to Text (Reading)

Reflecting and responding to text requires readers to connect knowledge from the text with their own background knowledge and experience. The focus is on how the text relates to personal knowledge.

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- making connections involves thinking beyond the text and applying the text to a variety of situations. Connections may be expressed as comparisons, analogies, inferences, or the synthesis of ideas.
- references from texts provide evidence of applying ideas and making text-to-self, text-to-texts, and texts-to-real world connections.
- reading a wide range of literature by different authors, and from many time periods, cultures, and genres, builds an understanding of the extent of human experience.

Grade 5 Skills and Concepts

Students will

- use comprehension strategies while reading, listening to, or viewing literary and informational texts to make connections
- self-select texts based on with personal interests
- generate a personal response to what is read, listened to or viewed:
  - relate texts to prior knowledge, personal experiences, other texts, or ideas
  - provide text references/evidence to support connections made between text-to-self, text-to-texts, or text-to-world
- read a wide range of texts, including texts by the same author, about the same subject, or from the same genre in order to respond and make connections (text-to-self, text-to-text, text-to-world)
- demonstrate participation in a literate community by sharing and responding to ideas and connections with others through writing and focused discussions about texts

Big Idea: Demonstrating a Critical Stance (Reading)

Demonstrating a critical stance requires readers to consider the text objectively in order to evaluate its quality and appropriateness. It involves a range of tasks, including critical evaluation, comparing and contrasting, and understanding the impact of features, such as irony, humor, and organization. Knowledge of text content and structure is important.

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.
1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various things they observe.
1.4 Students make sense of the various messages to which they listen.
5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- reading is a process that includes: applying a variety of strategies to comprehend, interpret and evaluate texts; showing evidence of responsible interpretations of texts and examining texts critically.
- references from texts provide evidence to support judgments made about why and how the text was developed considering the content, organization and form.
- determining the usefulness of text for a specific purpose, evaluating language and textual elements, and analyzing the author's style are all ways to critically examine texts.
- all citizens need to critically consider messages provided through a variety of media in order to make informed decisions.

Grade 5 Skills and Concepts

Students will

- explain how text features organize information for clarity or for usefulness
- evaluate what is read based on the author's word choice, sentence variety, content or use of literary elements
- form and support judgments/opinions about central ideas
- identify the organizational pattern used (e.g., sentence lengths and structures, paragraphs in prose, verses in poems, transitional devices, transitional cues) and describe how understanding the structure helps to understand the text
- make connections and synthesize information within and across texts
- evaluate the accuracy of information presented in texts
- evaluate connections among evidences and inferences
- evaluate the quality of evidence used to support or oppose an argument
- analyze or evaluate the use of persuasive or propaganda techniques
- recognize faulty reasoning and false premises in an argument

Big Idea: Writing Content

To communicate effectively, students should be able to write for a variety of authentic purposes and audiences in a variety of forms connecting to prior knowledge and the students' understanding of the content. In their writing, students should be able to create a focused purpose and controlling idea and develop ideas adequately considering the purpose, audience and form.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- there are many reasons for students to write including writing-to-learn, writing-to-demonstrate learning and writing for authentic purposes and audiences.
- different forms of writing are appropriate for different purposes and audiences across content areas and have different features (e.g. journals, on-demand responses, narratives, articles).
- to be effective, writing must be a sufficiently developed, coherent unit of thought to address the needs of the intended audience.
- writing can be used to make meaning of one's own experience, as well as of other information/ ideas.

Grade 5 Skills and Concepts

Students will

- write to learn by applying strategies effectively (e.g., learning logs, grammar notebooks)
- write to demonstrate learning and understanding of content knowledge (e.g., on-demand responses, open-responses, expository reports)
- write for a variety of authentic purposes and audiences:
  - communicate about the significance of personal experiences and relationships
  - communicate through authentic literary forms to make meaning about the human condition
  - communicate through authentic transactive purposes for writing (e.g. informing, describing, explaining, persuading, analyzing)
  - analyze and communicate reflectively about literacy goals
  - analyze and address needs of intended audience
  - adjust the writing style (formal, informal) for intended audience
- communicate purpose, focus, and controlling idea authentic to the writer
- develop ideas that are logical, justified and suitable for a variety of purposes, audiences and forms of writing
- select and incorporate ideas or information (e.g., from research or reading), explaining reflections or related connections (e.g., identifying relationships and own experiences, offering support for conclusions, organizing prior knowledge about a topic)
- communicate understanding of ideas or events from different viewpoints
- provide sufficient details for clear understanding
- use and sustain suitable voice or tone

Big Idea: Writing Structure

To communicate effectively, students should be able to apply knowledge of language and genre structures to organize sentences, paragraphs and whole pieces logically and coherently.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- sentences must be complete and clear. Variety in sentence structure helps to engage the reader and make meaning more clear. Sometimes, unconventional sentence structure is appropriate for an intended effect upon the reader.
- different types of structures are appropriate for different purposes, audiences and different forms of writing. Paragraphs and whole texts must be unified and coherent.
- structural elements such as context, meaningful order of ideas, transitional elements and conclusion all help make meaning clear for the reader.

Grade 5 Skills and Concepts

Students will

- use complete and correct sentences of various structures and lengths (e.g., simple, compound, complex) to enhance meaning throughout a piece of writing; apply unconventional sentence structures to achieve intended effect on audience
- develop analytical structures appropriate to purpose (e.g., sequence, problem/solution, description, question/answer, cause/effect, compare/contrast, chronology)
- establish a context for the reader and a controlling idea in the introduction; develop the piece sufficiently, arranging ideas in meaningful order; and conclude effectively
- create unified and coherent paragraphs; apply paragraph structures (block and indented) consistently and appropriately
- use a variety of transitions (e.g., time, order of sequence) and/or transitional elements (e.g., white space, ellipses) effectively
- apply organizational devices (e.g., foreshadowing, flashback) to achieve intended effect on audience
- incorporate text features (e.g., numbering, bullets, subheadings, white space, pictures, labels, diagrams, charts, embedded visuals, shape in poetry) to enhance clarity and meaning

Big Idea: Writing Conventions

To communicate effectively, students should be able to apply knowledge of language conventions and have control over standard grammar and usage. Students should be able to choose precise language appropriate to the purpose.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- writers need to choose their language with care, depending on the content, purpose and audience.
- language should be concise and precise. Strong verbs and nouns, concrete details and sensory language help make meaning clear to the reader.
- standard grammar and usage are important in making meaning clear to the reader; non-standard grammar may be used for intended effect.
- writers need to use correct spelling, punctuation and capitalization.
- writers need to document sources/give credit for the ideas of others.

Grade 5 Skills and Concepts

Students will

- choose precise and descriptive language for clarity, richness and/or its effect on the reader (words with multiple meanings, words that imply different shades of meaning strong nouns and verbs, concrete and sensory details, figurative language – simple metaphors, personification)
- use specialized content vocabulary and words used for specific contexts, as needed
- apply correct grammar skills (e.g., complete sentences, various sentence structures, subject and verb agreement, pronoun antecedent agreement); mechanics (e.g., capitalization, punctuation); and usage (e.g., can/may, choose/chose)
- apply non-standard language for intended effect appropriate to purpose
- use resources (e.g., dictionary, glossary, word processing programs) and apply knowledge of spelling rules to correct spelling in final drafts
- use resources (e.g., word processing programs, handbooks) to adhere to standard guidelines for grammar, usage and mechanics
- document ideas used from outside sources (e.g., citing authors or titles within the text; listing sources) when paraphrasing, summarizing, quoting or using graphics

Big Idea: Writing Process

To communicate effectively, students should engage in the various stages of the writing process including focusing, prewriting, drafting, revising, editing, publishing and reflecting. The writing process is recursive; different writers engage in the process differently and proceed through the stages at different rates.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the writing process is a helpful tool in constructing and demonstrating meaning of content (whether personal expressive, literary, academic or practical) through writing.
- the stages are sometimes recursive (e.g., in the process of revising, a writer sometimes returns to earlier stages of the process).
- writers work through the process at different rates. Often, the process is enhanced by conferencing with others.

Grade 5 Skills and Concepts

Students will

- focus: establish and maintain a controlling idea on a selected topic
- prewrite:
  - determine the most appropriate form to meet needs of purpose and audience
  - generate ideas to support and develop controlling idea (e.g., journaling, webbing, free writes, researching print and non-print sources, note-taking, interviewing, observation, surveying, imagining and creating novel ideas)
  - organize and present ideas by taking notes, quoting, paraphrasing, summarizing
- draft:
  - determine how, when and whether to use visuals (e.g., illustrations, charts, diagrams, photographs) or technologies (e.g., digital images) in addition to written communication
  - logically introduce and incorporate quotes
- revise:
  - reflect on own writing
  - confer with peers and other writing conferencing partners to critically analyze one's own work and the work of others
  - confer to determine where to add, delete, rearrange, define/redefine or elaborate content so that writing is coherent and effective for intended audience, then make revisions
  - identify and develop topic sentences, making sure ideas are supported appropriately with relevant details and that sentences are in sequential order; insert new sentences and delete unnecessary ones; develop effective introductions and conclusions; eliminate redundant words; choose most specific words
- edit for appropriate language usage, sentence structure, spelling, capitalization, punctuation and proper documentation of sources
- publish to produce products for intended audience:
  - present written material using basic software programs and graphics when developmentally appropriate (e.g., charts, tables)
  - present final work in a neat, legible form
- reflect and evaluate personal progress and skills in writing

Big Idea: Speaking, Listening and Observing

Speaking, listening and observing are fundamental processes which people use to express, explore and learn about ideas. The functions of speaking, listening and observing include gathering and sharing information, persuading others, expressing and understanding ideas, and selecting and critically analyzing messages. The contexts of these communication functions include one-to one conversations, small group discussions, large audiences and meetings, and interactions with media.

Academic Expectations

1.2 Students make sense of the variety of materials they read.
1.3 Students make sense of the various messages they observe.
1.4 Students make sense of the various messages to which they listen.
1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.12 Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- communication, both formal and informal, is an interpretative process that integrates listening, observing, reading, writing and speaking with confidence. Different levels of discourse are appropriate for different contexts, occasions, purposes and audiences.
- regardless of the topic, the context or the intended audience, students need to be able to communicate ideas effectively. Effective communication involves verbal and nonverbal techniques to enhance or emphasize content. These techniques aid the listener's ability to interpret the information.
- language usage is related to successful communication; language patterns and vocabulary transmit culture and affect meaning.
- observation involves interpreting and constructing meaning. By viewing context, students infer, construct meaning, draw conclusions and form opinions about the world around them.

Big Idea: Speaking, Listening and Observing – Continued

Grade 5 Skills and Concepts

In formal speaking situations, students will

- create oral presentations that
  - are appropriate for the purpose (e.g., to inform, persuade, entertain), audience, context and occasion
  - support judgment with sound evidence and appropriate details
  - maintain a consistent focus
  - exhibit a logical structure appropriate to audience, context and purpose
  - organize ideas in a coherent, meaningful way including an introduction and a conclusion
  - choose language for its effect on the audience (e.g., strong nouns, active verbs, concrete and sensory details, figurative language)
- apply delivery techniques
  - both verbal (e.g., tone, volume, rate, articulation, pacing) and nonverbal (e.g., gestures, facial expressions, eye contact)
  - avoid distracting delivery behaviors (e.g. excessive verbal pauses, fidgeting)
  - use language appropriate to audience; use specialized content vocabulary as needed
  - adhere to standard guidelines for grammar, usage, mechanics or use non-standard language for effect when appropriate (e.g., word plays, familiar idioms, similes)
- use visual aids, media and tools of technology to support oral communication
- document ideas from outside sources (e.g., citing authors, titles, websites)

In informal speaking situations, students will

- give spoken instructions to perform specific tasks
- ask and respond to questions as a way to enrich class discussions
- play a variety of roles in group discussions (e.g., discussion leader, facilitator, responder)
- use different voice level, phrasing and intonation for different situations (e.g., small and large group settings, discussions)

When listening, students will

- follow spoken instructions to perform specific tasks
- identify specific information (e.g., main idea, supporting details)
- respond to information appropriately/respectfully in a variety of ways (e.g., summarizing orally, taking useful notes, organizing and recording that which is meaningful and useful)
- follow the organization of a presentation and recognize the speaker's use of transitions
- interpret and evaluate the effectiveness of verbal and nonverbal delivery techniques, including visual cues
- build on the ideas of others and contribute relevant information or ideas
- use self-evaluations and evaluations from teachers and peers to improve presentations

When observing, students will

- use a variety of criteria (e.g., accuracy, effectiveness, relevance of facts) to evaluate media
- evaluate the role of media in focusing attention and in forming opinion
- interpret a variety of techniques used in advertising
- identify visual and auditory cues (e.g., slow motion, music to create mood, sound effects) to enhance the message or understand context

INTERMEDIATE MATHEMATICS

Program of Studies – Mathematics – Fourth Grade

The mathematics program in grade four includes strong literacy connections, active and hands-on work with concrete materials and appropriate technologies. Grade four problem solving, mathematical communication, connections, mathematical reasoning and multiple representations should be a part of the mathematics curriculum. The use of these techniques enhances and extends students' mathematics skills. Accuracy is an integral part of the mathematics program.

Students should have opportunities to work individually and in groups of varying size and composition in order to conduct investigations, process information and discuss important mathematical concepts. Students must have regular opportunities to share their ideas with others and to solve problems generated as a result of their learning experiences.

The mathematics content standards at the fourth grade level are directly aligned with Kentucky's **Academic Expectations**. Mathematics standards are organized around five “Big Ideas” that are important to the discipline of mathematics. The five big ideas in mathematics are: Number Properties and Operations, Measurement, Geometry, Data Analysis and Probability and Algebraic Thinking. The Big Ideas are conceptual organizers for mathematics and are similar at each grade level to ensure students have multiple opportunities throughout the students’ school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of mathematics. The understandings represent the desired results – what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and Concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for mathematics are fundamental to mathematical literacy, mathematical power and build on prior learning.

Effectively implementing the Program of Studies requires a common understanding of the process standards below.

Problem solving includes developing and applying strategies to problems from everyday and mathematical situations and evaluating the solutions relative to the original problem situation.

Mathematical communication includes concrete materials, visual representations and diagrams that relate language to mathematical symbols in speaking, reading, writing and listening to mathematical ideas.

Mathematical connections include:

- relating concepts to other concepts and procedures (e.g., fraction, decimal)
- relating concepts of one mathematical topic to another (e.g., geometry, measurement)
- relating concepts of a mathematical topic to other disciplines (e.g., statistics, social studies).

Mathematical reasoning includes recognizing patterns and relationships and using models, known facts and mathematical properties to explain and justify thinking.

Multiple representations allow students to be able to recognize common mathematical structures across different contexts. In elementary school, students most often use representations to reason about objects and actions they can perceive directly.

Academic Expectation 1.5-1.9 (Students use mathematical ideas and procedures to communicate, reason and solve problems.) is infused throughout the mathematics instruction P-12 and is integral to the content and instruction across all grade levels.

Academic Expectation 1.16 (Students will use computers and other kinds of technology to collect, organize and communicate information and ideas.) is an essential and integral part of instruction across the content and the mathematics Program of Studies.

Big Idea: Number Properties and Operations

Whole number sense and addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Elementary number encompasses computational fluency with whole numbers, relationships between decimals and fractions and techniques for reasonable estimations.

Academic Expectations

2.7 Students understand number concepts and use numbers appropriately and accurately.

2.8 Students understand various mathematical procedures and use them appropriately and accurately.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- numbers, ways of representing numbers, relationships between numbers and number systems are means of representing real-world quantities.
- meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life.
- computing fluently and making reasonable estimates increases the ability to solve realistic problems encountered in everyday life.

Grade 4 Skills and Concepts – Number Sense

Students will

- apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 1,000,000)
- read, write and model whole numbers from 0 to 1,000,000, developing place value for hundred thousands and millions
- order and compare numbers to 1,000,000 and understand their relative magnitude
- investigate and apply multiple representations of commonly used and equivalent fractions through twelfths (e.g., 1/2=3/6) and decimals through thousandths with manipulatives (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols)
- explore the use of simple ratios to describe problem situations
- explore the relationship between fractions, decimals and percents
- apply whole numbers, commonly used fractions and decimals to represent real-world problems
- explain how the base 10 number system relates to place value
- develop equivalent relationships between commonly used fractions, decimals and whole numbers (e.g., 1/2=0.5, 4/2=2, 2=2.0)
- graph a whole number, commonly used fraction or decimal on a number line

Grade 4 Skills and Concepts – Estimation

Students will

- explore appropriate estimation procedures for different situations
- apply and explain appropriate strategies for estimating quantities of objects and computational results

Grade 4 Skills and Concepts – Number Operations

Students will

- develop and apply computational procedures to add, subtract, multiply and divide whole numbers
- use manipulatives and/or diagrams to add and subtract fractions with a common denominator
- add and subtract decimals through thousandths

Big Idea: Number Properties and Operations – Continued

Grade 4 Skills and Concepts – Properties of Numbers and Operations
Students will

- determine factors/multiples of a whole number
- skip-count forwards and backwards by 2s, 3s, 4s, 5s, 10s, 20s, 25s, 50s, 100s, 1,000s and 10,000s and use manipulatives, mental math and written and electronic means to communicate understanding
- identify and provide examples of odd and even numbers
- explore and use properties of numbers for written and mental computations (e.g., use commutative property of addition to rearrange addition such as change 12+4+8 to 12+8+4 to simplify the addition)

Big Idea: Measurement

Students translate from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.

Academic Expectations

2.10 Students understand measurement concepts and use measurements appropriately and accurately.
2.11 Students understand mathematical change concepts and use them appropriately and accurately.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- there are two major measurement systems (U.S. Customary and metric) and either may be used to solve problems.
- measurable attributes of objects and the units, systems and processes of measurement are powerful tools for making sense of the world around them.
- appropriate techniques, tools and formulas are used to determine measurements.
- there is an appropriate degree of accuracy in measurement for each situation.

Grade 4 Skills and Concepts – Measuring Physical Attributes

Students will

- explore and compare non-standard and standard units for measuring angles
- relate time to days, weeks, months and years
- add and subtract time to solve problems
- read and record temperatures to the nearest degree
- measure and determine area and perimeter of a rectangle
- measure and determine perimeter of regular/irregular shapes
- choose and use appropriate tools (e.g., thermometer, scale, balance, clock, meter stick) for specific measurement tasks
- use measurements to describe and compare attributes of objects, including length, width, height, money (cost), temperature and weight, and sort and compare objects using attributes
- estimate weight, length, perimeter, area, angle measure and time using appropriate units of measurement

Grade 4 Skills and Concepts – Systems of Measurement

Students will

- convert units (e.g., linear, weight, money, time) within a measurement system (e.g., 2 feet = 24 inches)
- describe, define, give examples of and use to solve real-world and/or mathematical problems both nonstandard and standard (U.S. Customary, metric) units of measurement to include length, weight, time, money and temperature (˚F and ˚C)

Big Idea: Geometry

Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.

Academic Expectation

2.8 Students understand various mathematical procedures and use them appropriately and accurately.

2.9 Students understand space and dimensionality concepts and use them appropriately and accurately.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- characteristics and properties of two-dimensional figures and three-dimensional objects describe the world and are used to develop mathematical arguments about geometric relationships and to evaluate the arguments of others.
- representational systems, including coordinate geometry, are means for specifying locations and describing spatial relationships and are organizers for making sense of the world around them.
- transformations and symmetry are used to analyze real-world situations (e.g., art, nature, construction and scientific exploration).
- shape and area are conserved during mathematical transformations (flips, slides and turns).
- visualization, spatial reasoning and geometric relationships model real-world situations.

Grade 4 Skills and Concepts – Shapes and Relationships

Students will

- analyze structures of geometric figures (e.g., points, rays, lines, segments, perpendicular lines, parallel lines, intersecting lines, angles)
- investigate geometric relationships (e.g., similarity, congruence) through manipulatives and drawings
- analyze attributes of two-dimensional figures (e.g., circle, triangles, squares, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons) and apply these attributes to solve real-world problems
- analyze attributes of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms) and will apply these attributes to solve real-world problems

Grade 4 Skills and Concepts – Transformations of Shapes

Students will

- describe and provide examples of line symmetry in real-world situations; apply one or two lines of symmetry to construct a simple geometric design
- identify basic two-dimensional figures in different orientations using 90º rotations (turns) around a point of rotation, reflections (flips) and translations (slides) within a plane

Grade 4 Skills and Concepts – Coordinate Geometry

Students will:

- identify and graph ordered pairs on a positive coordinate system
- locate points on a grid

Big Idea: Data Analysis and Probability

Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.

Academic Expectations

2.7 Students understand number concepts and use numbers appropriately and accurately.
2.8 Students understand various mathematical procedures and use them appropriately and accurately.
2.13 Students understand and appropriately use statistics and probability.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- quantitative literacy is a necessary tool to be an intelligent consumer and citizen.
- the collection, organization, interpretation and display of data can be used to answer questions.
- the choice of data display can affect the visual message communicated.
- inferences and predictions from data are used to make critical and informed decisions.
- probability can be used to make decisions or predictions or to draw conclusions.

Grade 4 Skills and Concepts – Data Representations

Students will

- explore line graphs to show change over time
- display, read and compare data on student-generated graphs
- pose questions and choose an appropriate method to collect, organize and display student-collected data to answer the questions
- analyze and make inferences from data displays (e.g., drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams)
- construct data displays (e.g., pictographs, bar graphs, line plots, Venn diagrams, tables)

Grade 4 Skills and Concepts – Characteristics of Data

Students will

- draw conclusions based on data
- develop the meaning and interpretation of the median, mode and range of a set of data
- determine the median, mode and range of a set of data
- compare two sets of data

Grade 4 Skills and Concepts – Experiments and Samples

Students will

- pose questions and collect, organize, interpret and display data to answer them

Grade 4 Skills and Concepts – Probability

Students will

- use a variety of appropriate manipulatives, graphics or symbols to determine the fairness of games and make predictions from the outcomes of simple probability experiments
- determine the likelihood of an event, expressed as a fraction
- describe and give examples of the probability of an unlikely event and a likely event
- use counting techniques and/or tables to explore probability experiments
- determine all possible outcomes of an activity with up to 12 possible outcomes

Big Idea: Algebraic Thinking

Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. Students use number sentences with missing values.

Academic Expectations

2.8 Students understand various mathematical procedures and use them appropriately and accurately.
2.11 Students understand mathematical change concepts and use them appropriately and accurately.
2.12 Students understand mathematical structure concepts including the properties and logic of various mathematical systems.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- patterns, relations and functions are tools that help explain or predict real-world phenomena.
- numerical patterns can be written as rules that generate the pattern.
- algebra represents mathematical situations and structures for analysis and problem solving.
- real-world situations can be represented using mathematical models to analyze quantitative relationships.
- functions are used to analyze change in various contexts and model real-world phenomena.
- functions can be written in words, as a symbolic sentence or in a table.

Grade 4 Skills and Concepts – Patterns, Relations and Functions

Students will

- represent, describe, analyze and/or formulate rules for number relationships or functions through a variety of methods (e.g., the use of variables, ordered pairs, lists in tables, plots on graphs and patterns)
- compare, contrast and/or extend patterns of numbers and shapes and sounds from real-world or mathematical situations

Grade 4 Skills and Concepts – Variables, Expressions and Operations

Students will

- explore unknowns and open sentences to express relationships
- write stories about mathematical sentences with missing values

Grade 4 Skills and Concepts – Equations and Inequalities

Students will

- solve simple equations (e.g., 4=7-[ ], 6+[ ]=10)
- solve simple inequalities (e.g., N+5> 14)
- apply number sentences to solve real-world problems
- read or create and solve story problems using mathematical sentences with missing values
- model real-world situations with simple number sentences using manipulatives, numbers and/or symbols

Program of Studies – Mathematics – Fifth Grade

The mathematics program in grade five includes strong literacy connections, active and hands-on work with concrete materials and appropriate technologies. Grade five problem solving, mathematical communication, connections, mathematical reasoning and multiple representations should be a part of the mathematics curriculum. The use of these techniques enhances and extends students' mathematics skills. Accuracy is an integral part of the mathematics program.

Students should have opportunities to work individually and in groups of varying size and composition in order to conduct investigations, process information and discuss important mathematical concepts. Students must have regular opportunities to share their ideas with others and to solve problems generated as a result of their learning experiences.

The mathematics content standards at the fifth grade level are directly aligned with Kentucky's **Academic Expectations**. Mathematics standards are organized around five “Big Ideas” that are important to the discipline of mathematics. The five big ideas in mathematics are: Number Properties and Operations, Measurement, Geometry, Data Analysis and Probability and Algebraic Thinking. The Big Ideas are conceptual organizers for mathematics and are similar at each grade level to ensure students have multiple opportunities throughout the students’ school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of mathematics. The understandings represent the desired results – what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for mathematics are fundamental to mathematical literacy, mathematical power and build on prior learning.

Effectively implementing the Program of Studies requires a common understanding of the process standards below.

Problem solving includes developing and applying strategies to problems from everyday and mathematical situations and evaluating the solutions relative to the original problem situation.

Mathematical communication includes concrete materials, visual representations and diagrams that relate language to mathematical symbols in speaking, reading, writing and listening to mathematical ideas.

Mathematical connections include:

- relating concepts to other concepts and procedures (e.g., fraction, decimal)
- relating concepts of one mathematical topic to another (e.g., geometry, measurement)
- relating concepts of a mathematical topic to other disciplines (e.g., statistics, social studies).

Mathematical reasoning includes recognizing patterns and relationships and using models, known facts and mathematical properties to explain and justify thinking.

Multiple representations allow students to be able to recognize common mathematical structures across different contexts. In elementary school, students most often use representations to reason about objects and actions they can perceive directly.

Academic Expectation 1.5-1.9 (Students use mathematical ideas and procedures to communicate, reason, and solve problems.) is infused throughout the mathematics instruction P-12 and is integral to the content and instruction across all grade levels.

Academic Expectation 1.16 (Students will use computers and other kinds of technology to collect, organize, and communicate information and ideas.) is an essential and integral part of instruction across the content and the mathematics Program of Studies.

Big Idea: Number Properties and Operations

Whole number sense and addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Elementary number encompasses computational fluency with whole numbers, relationships between decimals and fractions and techniques for reasonable estimations.

Academic Expectations

2.7 Students understand number concepts and use numbers appropriately and accurately.

2.8 Students understand various mathematical procedures and use them appropriately and accurately.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- numbers, ways of representing numbers, relationships between numbers and number systems are means of representing real-world quantities.
- meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life.
- computing fluently and making reasonable estimates increases the ability to solve realistic problems encountered in everyday life.

Grade 5 Skills and Concepts – Number Sense

Students will

- read, write, model, order, compare (using relative magnitude) and apply multiple representations of whole numbers
- compare and apply the relative sizes of common and mixed fractions
- investigate multiple representations of equivalent fractions (e.g., $\frac{1}{2}=\frac{3}{6}$, $1\frac{1}{2}=\frac{3}{2}$) with manipulatives, drawings and fractional notation
- explore the use of simple ratios to describe problem situations
- explore, investigate, compare, relate and apply relationships among whole numbers, fractions, decimals and percents
- read, write, identify and compare decimals through ten-thousandths

Grade 5 Skills and Concepts – Estimation

Students will

- explore appropriate estimation procedures for different situations
- apply and explain appropriate strategies for estimating quantities of objects and computational results

Big Idea: Number Properties and Operations – Continued

Grade 5 Skills and Concepts – Number Operations
Students will

- develop and apply computational procedures to add, subtract, multiply and divide whole numbers using basic facts and technology as appropriate
- add and subtract fractions with common denominators using manipulatives or symbolic notation
- add and subtract decimals through one-thousandths using manipulatives or symbolic notation
- extend multiplication to include one decimal place
- explore the effects of operations on numbers

Grade 5 Skills and Concepts – Properties of Numbers and Operations
Students will

- use factors to determine prime and composite numbers
- determine least common multiples
- skip-count forwards and backwards with fluency
- use properties of numbers for written and mental computation (e.g., combine commutative and associative properties to rearrange multiplication exercises such as 4x(7x5) which can be rearranged as (4x5)x7 to simplify the multiplication)

Big Idea: Measurement

Students translate from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.

Academic Expectations

2.10 Students understand measurement concepts and use measurements appropriately and accurately.

2.11 Students understand mathematical change concepts and use them appropriately and accurately.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- there are two major measurement systems (U.S. Customary and metric) and either may be used to solve problems.
- measurable attributes of objects and the units, systems and processes of measurement are powerful tools for making sense of the world around them.
- appropriate techniques, tools and formulas are used to determine measurements.
- for each situation, there is an appropriate degree of accuracy in measurement.

Grade 5 Skills and Concepts – Measuring Physical Attributes

Students will

- measure and construct angles to the nearest degree
- use charts and tables to determine time schedules, work with time zones and estimate time
- apply standard units of measure to length, weight, temperature and liquid capacity
- choose and use appropriate tools (e.g., protractor, angle ruler, meter stick, ruler) for measurement tasks
- use measures to identify, describe, sort and compare attributes of objects
- use standard units to determine area and perimeter of triangles and rectangles and volume of rectangular prisms and apply these skills to solve real-world and mathematical problems
- estimate weight, length, perimeter, area and angles using appropriate units of measurement
- solve problems involving money

Grade 5 Skills and Concepts – Systems of Measurement

Students will

- relate and convert units (e.g., linear, volume, weight) within a measurement system (e.g., 125 cm = 1m 25 cm)
- convert units within the U.S. monetary system
- convert units of time and determine elapsed time
- describe, define, give examples of and use to solve real-world and/or mathematical problems both nonstandard and standard (U.S. Customary, metric) units of measurement to include length, time, money, temperature (˚F and ˚C) and weight

Big Idea: Geometry

Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry. They move two-dimensional figures in a plane and explore congruent and similar figures.

Academic Expectation

2.8 Students understand various mathematical procedures and use them appropriately and accurately.

2.9 Students understand space and dimensionality concepts and use them appropriately and accurately.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- characteristics and properties of two-dimensional figures and three-dimensional objects describe the world and are used to develop mathematical arguments about geometric relationships and to evaluate the arguments of others.
- representational systems, including coordinate geometry, are means for specifying locations and describing spatial relationships and are organizers for making sense of the world around them.
- transformations and symmetry are used to analyze real-world situations (e.g., art, nature, construction and scientific exploration).
- shape and area are conserved during mathematical transformations (flips, slides and turns). Scale conserves shape, but changes size.
- visualization, spatial reasoning and geometric relationships model real-world situations.

Grade 5 Skills and Concepts – Shapes and Relationships

Students will

- identify and model basic two-dimensional figures and three-dimensional objects by appearance and in different orientations (e.g., representations of different views of figures and objects)
- classify angles as acute, right, or obtuse
- describe and provide examples of basic geometric elements and terms and apply these elements to solve real-world problems
- describe and provide examples of basic two-dimensional figures and three-dimensional objects and apply these to solve real-world problems
- identify and describe congruent and similar figures in real-world or mathematical situations

Grade 5 Skills and Concepts – Transformations of Shapes

Students will

- describe and provide examples of line symmetry in real-world situations and apply line symmetry to construct simple geometric designs
- identify and draw basic two-dimensional shapes in different orientations using 90º rotations (turns) around a point of rotation, reflections (flips) and translations (slides) within a plane

Grade 5 Skills and Concepts – Coordinate Geometry

Students will

- identify and graph ordered pairs on a positive coordinate system
- locate points on a grid
- apply graphing in the coordinate system to solve real-world problems

Big Idea: Data Analysis and Probability

Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.

Academic Expectations

2.7 Students understand number concepts and use numbers appropriately and accurately.
2.8 Students understand various mathematical procedures and use them appropriately and accurately.
2.13 Students understand and appropriately use statistics and probability.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- quantitative literacy is a necessary tool to be an intelligent consumer and citizen.
- the collection, organization, interpretation and display of data can be used to answer questions.
- the choice of data display can affect the visual message communicated.
- inferences and predictions from data are used to make critical and informed decisions.
- for a given set of data, the measures of central tendency (mean and median) can be different.
- probability can be used to make decisions or predictions, or to draw conclusions.

Grade 5 Skills and Concepts – Data Representations

Students will

- choose and use appropriate means to collect and represent data
- explore line graphs to show change over time
- pose questions and choose an appropriate method to collect, organize and display student-collected data to answer the questions
- analyze and make inferences from data displays (e.g., drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs)
- use a variety of tools (e.g., graph paper, manipulatives, models, computer) to construct data displays (e.g., pictographs, bar graphs, line plots, line graphs, Venn diagrams, tables)

Grade 5 Skills and Concepts – Characteristics of Data

Students will

- draw conclusions and make predictions based on data
- develop the meaning and interpretation of the arithmetic mean (average) for numerical data
- determine the mean, median, mode and range of a set of data and use the results to answer questions about the set of data

Grade 5 Skills and Concepts – Experiments and Samples

Students will

- pose questions and collect, organize, display and interpret data to answer the questions
- explore how sample size affects the reliability of the data

Grade 5 Skills and Concepts – Probability

Students will

- determine the possible outcomes of simple probability experiments that are conducted by using manipulatives
- determine the likelihood of an event and represent that likelihood in numerical terms
- examine events and describe their probability as likely or unlikely
- use counting techniques, tree diagrams and tables to explore probability experiments
- determine all possible outcomes of an activity/event with up to 20 possible outcomes

Big Idea: Algebraic Thinking

Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. Students use number sentences with missing values.

Academic Expectations

2.8 Students understand various mathematical procedures and use them appropriately and accurately.
2.11 Students understand mathematical change concepts and use them appropriately and accurately.
2.12 Students understand mathematical structure concepts including the properties and logic of various mathematical systems.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- patterns, relations and functions are tools that help explain or predict real-world phenomena.
- numerical patterns can be written as rules that generate the pattern.
- algebra represents mathematical situations and structures for analysis and problem solving.
- real-world situations can be represented using mathematical models to analyze quantitative relationships.
- functions are used to analyze change in various contexts and model real-world phenomena.
- functions can be written in words, as a symbolic sentence, or in a table.

Grade 5 Skills and Concepts – Patterns, Relations and Functions

Students will

- create, recognize, extend, find and write rules for patterns
- generalize a rule for sets of ordered pairs
- describe input-output functions through pictures, tables and/or words
- construct tables to analyze functions based on real-world or mathematical situations

Grade 5 Skills and Concepts – Variables, Expressions and Operations

Students will

- explore unknowns and open sentences to express relationships
- represent real-world situations with mathematical sentences containing missing values
- use variables or missing values to model verbal descriptions of real-world situations

Grade 5 Skills and Concepts – Equations and Inequalities

Students will

- apply simple equations and simple inequalities to solve mathematical and/or real-world problems
- model real-world situations with simple number sentences using manipulatives, numbers, variables and/or symbols

INTERMEDIATE PRACTICAL LIVING
(HEALTH AND PHYSICAL EDUCATION)

Program of Studies – Practical Living – Fourth Grade

The health program in the 4th grade should provide opportunities for students to build upon the knowledge, skills and practices learned in the primary health education program. Continued acquisition of health knowledge enables students to make a smooth transition to the middle grades and prepares them to assume more responsibility for their own health.

Health literacy in the 4th grade program further develops an understanding of the body functions as well as behaviors and decisions that foster life-long health. Students in 4th grade health education focus on responsibility for personal health throughout the life cycle as related to good nutritional health and safety practices, decision-making skills, disease prevention and benefits of exercise. Other topics included are community resources, prevention of violence and substance abuse.

Physical Education addresses both health-related and skill-related components that promote enhanced health behaviors and increase responsible decision-making. Physical Education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being.

The 4th grade physical education program continues the development and refinement of motor skills and their application to various games, sports and other physical activities. Defining fitness skills and building positive attitudes toward lifetime physical fitness are some benefits derived from participation in the 4th grade physical education program. Students in intermediate level physical education develop and refine movement patterns, socially acceptable behavior and sportsmanship through participation in activities and games. They also learn the relationship between exercise, rest and nutrition to growth and development

The Health and Physical Education content standards at the 4th grade level are directly aligned with Kentucky's **Academic Expectations.** The Health and Physical Education standards are organized around five "Big Ideas" that are important to the discipline of health and physical education. These big ideas are: Personal Wellness, Nutrition, Safety, Psychomotor Skills and Lifetime Physical Wellness. The Big Ideas are conceptual organizers for health and physical education and are the same at each grade level. This ensures students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to health and physical education. The understandings represent the desired results- what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lessons plans.

Skills and concepts describe the ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for health and physical education are fundamental to health literacy and build on prior learning.

The health and physical education program provides a connection to Kentucky's Learning Goals 3 (self-sufficient individuals) and Learning Goal 4 (responsible group member), which are included in Kentucky statue, but they are not included in the state's academic assessment program. These connections provide a comprehensive link between essential content, skills and abilities important to learning. In addition Learning Goal 5 (Think and Solve Problems) and Learning Goal 6 (Connect and Integrate Knowledge) are addressed in health and physical education.

All physical education courses taught in the state of Kentucky must be in compliance with the Federal Special Education Law and Title IX and shall not include practice for or participation in interscholastic athletics.

Big Idea: Personal Wellness (Health Education)

Wellness is maximum well-being, or total health. Personal wellness is a combination of physical, mental, emotional, spiritual and social well-being. It involves making behavioral choices and decisions each day that promote an individual's physical well-being, the prevention of illnesses and diseases and the ability to remain, physically, mentally, spiritually, socially and emotionally healthy.

Academic Expectations

2.29 Students demonstrate skills that promote individual well-being and healthy family relationships.
2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
2.32 Students demonstrate strategies for becoming and remaining mentally and emotionally healthy.
3.2 Students demonstrate the ability to maintain a healthy lifestyle.
4.1 Students effectively use interpersonal skills.
4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others.
5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating and comparing to solve a variety of problems in real-life situations.
5.4 Students use a decision-making process to make informed decisions among options.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- responsibility to oneself promotes health enhancing behaviors.
- physical, emotional and social changes are normal and each individual is unique in the growth and development process.
- interpersonal skills and strategies can influence social, mental and emotional well-being and affect an individual's relationships.
- culture, media and use of technology (e.g., television, computers, MP3 Players, electronic/arcade games) can influence personal health.
- behavioral choices affect physical, mental, emotional and social well-being and can have positive or negative consequences on one's health.
- positive health habits prevent the spreading of diseases and injuries to self and others.
- self-management and coping strategies can enhance mental and emotional health.

Grade 4 Skills and Concepts – Personal and Physical Health

Students will

- describe the relationship between personal health behaviors and individual well-being
- explain the characteristics of mental/emotional, social and physical health
- explain and exhibit responsibility to oneself and others
- describe how individual behaviors and choices of diet, exercise and rest affect the body

Grade 4 Skills and Concepts – Growth and Development

Students will

- explain why growth and development are unique to each individual
- develop an awareness of the interrelatedness of body functions and the impact lifestyle choices has on body systems
- describe physical, social and emotional changes that occur during preadolescence

Big Idea: Personal Wellness (Health Education) – Continued

Grade 4 Skills and Concepts – Social, Mental and Emotional Health
Students will

- demonstrate social interaction skills by:
  - using etiquette, politeness, sharing and other social interaction skills
  - working and playing collaboratively in large and small groups
  - using appropriate means to express needs, wants and feelings
  - distinguishing between verbal and nonverbal communication
  - describing characteristics needed to be a responsible friend and family member
  - identifying social interaction skills that enhance individual health
- describe how goal setting can lead to personal achievement
- identify and describe common social and emotional problems (aggression, anxiety, depression)
- demonstrate the ability to apply a decision-making process to solve health issues and health problems
- identify self-management and coping strategies (goal setting, refusal skills, decision making and time management) that enhance health

Grade 4 Skills and Concepts – Family Health
Students will

- describe how culture influences personal health behaviors
- describe ways technology and media influences thoughts, feelings and personal health
- explain how family traditions/values impact personal health practices
- explain how information from school and family influences health

Grade 4 Skills and Concepts – Communicable, Non-Communicable and Chronic Diseases Prevention
Students will

- describe symptoms and treatments of:
  - communicable diseases (cold, strep throat and chicken pox)
  - non-communicable diseases (asthma, heart disease, diabetes, skin cancer)
- demonstrate an understanding of how to maintain a healthy body by:
  - explaining how body systems work together (e.g., digestive, circulatory and respiratory systems)
  - listing body defenses that fight pathogens
  - describing ways pathogens from the environment enter the body
  - identifying and explaining behaviors that promote personal hygiene (e.g., the use of grooming products) or can affect self and others in the prevention and spread of disease (e.g., hand washing, care of teeth and eyes, covering coughs and sneezes, sun protection)
  - describing reasons for regular visits to health care providers

Grade 4 Skills and Concepts – Alcohol, Tobacco and Other Drugs
Students will

- demonstrate an understanding of the use and misuse of alcohol, tobacco and other drugs:
  - distinguish between the use and misuse of drugs, alcohol and tobacco and identify the effects each use might have on the body
  - describe their effects on physical, mental, emotional and social health (e.g., effects on family life)

Big Idea: Nutrition (Health Education)

Proper nutrition is critical to good health. To maintain a healthy weight, good dietary habits and physical activity are essential. Nutritious foods are necessary for growth, development and maintenance of healthy bodies.

Academic Expectations

2.30 Students evaluate consumer products and services and make effective consumer decisions.
2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
3.2 Students will demonstrate the ability to maintain a healthy lifestyle.
3.5 Students will demonstrate self-control and self-discipline.
5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating and comparing to solve a variety of problems in real-life situations.
5.4 Students use decision-making process to make informed decisions among options.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- proper nutrition is essential to growth and development.
- nutrients provide energy for daily living.
- resources are available to assist in making nutritional choices.

Grade 4 Skills and Concepts

Students will

- explain the role of the digestive system in nutrition
- describe the relationship between food choices in staying healthy
- explain how to use resources (e.g., Food Guide Pyramid (FGP), Dietary Guidelines for Americans) in making healthful food choices
- identify nutrients which are important to growth and development of healthy bodies
- identify and explain the nutritional information provided on food labels

Big Idea: Safety (Health Education)

Accidents are a major cause of injury and death to children and adolescents. Unintentional injuries involving a motor vehicle, falls, drowning, fires, firearms and poisons can occur at home, school and work. Safe behavior protects a person from danger and lessens the effects of harmful situations.

Academic Expectations

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
2.33 Students demonstrate the skills to evaluate and use services and resources available in their community.
3.2 Students will demonstrate the ability to maintain a healthy lifestyle.
4.3 Students individually demonstrate consistent, responsive and caring behavior.
4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others.
5.1 Students use skills such as analyzing, prioritizing, categorizing, evaluating and comparing to solve a variety of problems in real-life situations.
5.4 Students use a decision-making process to make informed decisions among-options.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- safety practices and procedures help to prevent injuries and provide a safe environment.
- community resources are available to assist in hazardous situations.

Grade 4 Skills and Concepts

Students will

- practice safety rules/procedures for crossing streets/highway, riding in cars and on buses and using playground equipment
- identify and explain ways to prevent injuries at home and at school (e.g., seat belts, helmets, knee pads, falls, poisonings) in a variety of situations
- explain and demonstrate school and home safety procedures (e.g., tornado, fire, earthquake drills)
- identify the effects injuries have on the body (e.g., skeletal system, skin, eyes)
- identify proper procedures (e.g., calling 911, Heimlich maneuver, stop, drop & roll, apply pressure) for dealing with a variety of emergency situations (e.g., choking, bleeding, burns)
- demonstrate awareness of how to avoid danger (e.g., fires, strangers) (e.g., through role plays, discussions, drawing)
- identify the available health and safety agencies in a community and the services they provide (e.g., health department, fire department, police, ambulance services)

Big Idea: Psychomotor Skills (Physical Education)

Cognitive information can be used to understand and enhance the development of motor skills such as movement sequences and patterns. Individuals who understand their bodies and how to perform various movements will be safer and more productive in recreation and work activities. Development of psychomotor skills contributes to the development of social and cognitive skills.

Academic Expectations

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
2.34 Students perform physical movements skills effectively in a variety of settings.
2.35 Students demonstrate knowledge and skills that promote physical activity and involvement in physical activity throughout lives.
4.1 Students effectively use interpersonal skills.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- spatial awareness, motor skills and movement patterns are needed to perform a variety of physical activities.
- movement concepts, principles and strategies apply to the learning and performance of physical activities.

Grade 4 Skills and Concepts

Students will

- demonstrate a variety of locomotor and combination skills in a movement pattern
- use non-locomotor, locomotor and combination skills to demonstrate movements in creative sequences and in simple patterned dances, games and other activities
- demonstrate a variety of non-locomotor, locomotor and combination skills while participating in different games and sports
- develop manipulative skills of throwing, catching, kicking and striking while developing motor skills (e.g., sliding, running, jumping) for use in games and other activities that lead to more complex games and sports (e.g., basketball, volleyball, soccer, softball)
- demonstrate and explain how movement patterns are influenced by space, force and time
- willingly try new movement and skills

Big Idea: Lifetime Physical Wellness (Physical Education)

Lifetime wellness is health-focused. The health-related activities and content utilized are presented to help students become more responsible for their overall health status and to prepare each student to demonstrate knowledge and skills that promote physical activity throughout their lives. Physical education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being. Physical, mental, emotional and social health is strengthened by regular involvement in physical activities.

Academic Expectations

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
2.34 Students perform physical movements skills effectively in a variety of settings.
2.35 Students demonstrate knowledge and skills that promote physical activity and involvement in physical activity throughout lives.
3.1 Students demonstrate positive growth in self-concept through appropriate tasks or projects.
3.2 Students demonstrate the ability to maintain a healthy lifestyle.
3.7 Students demonstrate the ability to learn on one's own.
4.2 Students use productive team membership skills.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- physical activity provides opportunities for social interaction, challenges and fun.
- participation in regular physical activity has physical, mental and social benefits.
- practice is a basic component for improving sport skills.
- rules impact the effective participation in physical activities.
- personal and social behavior that shows respect to self and others impacts enjoyment and safety in physical activity settings.
- regular participation in health-related, physical activity supports the goals of fitness and a healthier lifestyle throughout life.
- principles and techniques are used to improve physical fitness.

Big Idea: Lifetime Physical Wellness (Physical Education) – Continued

Grade 4 Skills and Concepts
Students will

- identify likes and dislikes connected with participating in sports and physical activities; explain how physical activity provides opportunities for enjoyment, challenge, self-expression and social interaction
- identify and engage in physical activities that promote physical fitness and health
- describe the potential positive and negative (e.g., injury) effects of regular participation in moderate to vigorous physical activities
- participate in daily physical activity during and after school
- relate the concept of practice to the importance of learning new skills; explain why repeated appropriate practice contributes to increased skill development
- when participating in a variety of physical activities and games:
  - explain basic rules needed to make games fair
  - identify the need for rules in social settings and choose appropriate behaviors
  - demonstrate cooperation with partners and small groups
- demonstrate and apply the concept of sportsmanship (e.g., complying with rules, responding appropriately) in games, sports and physical activities
- explain how rules of play and sportsmanship for spectators and participants during games or activities can make them safe and enjoyable
- identify and participate in activities to enhance the health related fitness components (e.g., aerobic capacity/cardio-respiratory endurance, muscular endurance, muscular strength and flexibility)
- identify the components of fitness (muscular strength, muscular endurance, flexibility, body composition, cardio-respiratory endurance); describe the meaning of F.I.T.T. Principle (Frequency, Intensity, Type, Time)

Program of Studies – Practical Living – Fifth Grade

The health program in the 5th grade should provide opportunities for students to build upon the knowledge, skills and practices learned in the fourth grade health education program. Continued acquisition of health knowledge enables students to make a smooth transition to the middle grades and prepares them to assume more responsibility for their own health.

Health literacy in the 5th grade program further develops an understanding of the body functions as well as behaviors and decisions that foster life-long health. Students in 5th grade health education focus on responsibility for personal health throughout the life cycle as related to good nutritional health and safety practices, decision-making skills, disease prevention and benefits of exercise. Other topics included are community resources, prevention of violence and substance abuse.

Students in 5th grade apply movement principles and concepts to enhance their movement performance, personal fitness and game strategy and tactics. They develop proficiency in games and dance. Students demonstrate specialized skills alone, with a partner or in a small group. They access and use resources to improve personal fitness as they exhibit a physically active lifestyle. Students continue to develop responsible personal and social behaviors as they work with others in safe and respectful ways.

Students in the 5th grade program are actively engaged in physical activity with developmentally appropriate instruction for effective learning to take place. The major goal for physical education at this level is to inspire children to be active for life.

The Health and Physical Education content standards at the 5th grade level are directly aligned with Kentucky's **Academic Expectations**. The Health and Physical Education standards are organized around five "Big Ideas" that are important to the discipline of health and physical education. These big ideas are: Personal Wellness, Nutrition, Safety, Psychomotor Skills and Lifetime Physical Wellness. The Big Ideas are conceptual organizers for health and physical education and are the same at each grade level. This ensures students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to health and physical education. The understandings represent the desired results - what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lessons plans.

Skills and concepts describe the ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for health and physical education are fundamental to health literacy and build on prior learning.

The health and physical education program provides a connection to Kentucky's Learning Goals 3 (self-sufficient individuals) and Learning Goal 4 (responsible group member), which are included in Kentucky statue, but they are not included in the state's academic assessment program. These connections provide a comprehensive link between essential content, skills and abilities important to learning. In addition Learning Goal 5 (think and solve problems) and Learning Goal 6 (connect and integrate knowledge) are addressed in health and physical education.

All physical education courses taught in the state of Kentucky must be in compliance with the Federal Special Education Law and Title IX and shall not include practice for or participation in interscholastic athletics.

Big Idea: Personal Wellness (Health Education)

Wellness is maximum well-being or total health. Personal wellness is a combination of physical, mental, emotional, spiritual and social well-being. It involves making behavioral choices and decisions each day that promote an individual's physical well-being, the prevention of illnesses and diseases and the ability to remain, physically, mentally, spiritually, socially and emotionally healthy.

Academic Expectations

2.29 Students demonstrate skills that promote individual well-being and healthy family relationships.
2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
2.32 Students demonstrate strategies for becoming and remaining mentally and emotionally healthy.
3.2 Students demonstrate the ability to maintain a healthy lifestyle.
4.1 Students effectively use interpersonal skills.
4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others.
5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating and comparing to solve a variety of problems in real-life situations.
5.4 Students use a decision-making process to make informed decisions among options.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- maintaining a healthy lifestyle is an individual's responsibility.
- physical, emotional and social changes are normal in the growth and development process.
- social interaction skills can influence an individual's physical, mental and emotional health and affect relationships.
- physical, social, mental and emotional health are impacted by the environment, lifestyle, family history, peers and other factors.
- culture, media and use of technology (e.g., television, computers, MP3 Players, electronic/arcade games) can influence personal health.
- behavioral choices affect physical, mental, emotional and social well-being and can have positive or negative consequences on one's health.
- positive health habits prevent the spreading of diseases and injuries to self and others.
- self-management and coping strategies can enhance mental and emotional health.
- a variety of resources are available to inform, treat and counsel individuals with physical, mental, social and emotional health needs.

Grade 5 Skills and Concepts – Personal and Physical Health

Students will

- explain the importance of assuming responsibility for personal health behaviors
- determine health goals by identifying personal strengths and weakness
- describe how individual behaviors and choices of diet, exercise and rest affect the body

Grade 5 Skills and Concepts – Growth and Development

Students will

- explain the concept of maturity as it relates to physical, social and emotional development
- describe physical, social and emotional changes that occur during preadolescence

Big Idea: Personal Wellness (Health Education) – Continued

Grade 5 Skills and Concepts – Social, Mental and Emotional Health
Students will

- demonstrate social interaction skills by:
  - using appropriate means to express needs, wants and feelings
  - using effective social interaction skills (e.g., listening, cooperation, making friends, empathy)
  - recommending ways to avoid or reduce stressful situations/harmful behaviors in relationships (e.g. bullying, peer pressure, conflict)
- demonstrate the ability to apply a decision-making process to solve health issues and health problems
- identify common social and emotional problems (aggression, anxiety, depression)
- identify self-management and coping strategies (goal setting, refusal skills, decision making and time management) that enhance health

Grade 5 Skills and Concepts – Family and Community Health
Students will

- analyze how personal health, health behaviors and use of health services can be influenced by:
  - family traditions/values
  - technology and media messages
  - cultural beliefs
  - physical and social environments
  - information from peers

Grade 5 Skills and Concepts – Communicable, Non-Communicable and Chronic Disease Prevention
Students will

- demonstrate an understanding of diseases by:
  - describing symptoms and treatments of communicable diseases (cold, strep throat, chicken pox)
  - describing symptoms and treatments of non-communicable diseases (asthma, heart disease, diabetes, skin cancer)
- investigate family history, environment, lifestyle and other risk factors related to the cause or prevention of disease and other health problems
- demonstrate an understanding of how to maintain a healthy body by:
  - explaining how body systems work together (e.g., digestive, circulatory and respiratory systems)
  - describing ways pathogens from the environment enter the body and body defenses that fight pathogens
  - identifying and explaining behaviors that promote personal hygiene (e.g., the use of grooming products) or can affect self and others in the prevention and spread of disease (e.g., hand washing, care of teeth and eyes, covering coughs and sneezes, sun protection)
  - describing reasons for regular visits to health care providers

Grade 5 Skills and Concepts – Alcohol, Tobacco and Other Drugs
Students will

- demonstrate an understanding of the use and misuse of alcohol, tobacco and other drugs by:
  - distinguishing between the use and misuse of drugs, alcohol and tobacco and identify the effects each use might have on the body
  - describing their effects on physical, mental, emotional and social health (e.g., effects on family life)
  - identifying illegal drugs (inhalants, marijuana, stimulants, depressants) and describing how their usage affects the body systems
  - identifying resources available to individuals seeking treatment or counseling for negative behaviors or addictions

Big Idea: Nutrition (Health Education)

Proper nutrition is critical to good health. To maintain a healthy weight, good dietary habits and physical activity are essential. Nutritious foods are necessary for growth, development and maintenance of healthy bodies.

Academic Expectations

2.30 Students evaluate consumer products and services and make effective consumer decisions.
2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
3.2 Students will demonstrate the ability to maintain a healthy lifestyle.
3.5 Students will demonstrate self-control and self-discipline.
5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating and comparing to solve a variety of problems in real-life situations.
5.4 Students use decision-making process to make informed decisions among options.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- proper nutrition is essential to growth and development.
- nutrients provide energy for daily living.
- resources are available to assist in making nutritional choices.

Grade 5 Skills and Concepts

Students will

- provide examples of foods that are sources of the six nutrients (protein, carbohydrates, fats, minerals, vitamins, water)
- identify the role of nutrients and food sources which are important in the growth and development of healthy bodies
- interpret and explain the recommendations of national resources (e.g., Food Guide Pyramid (FGP), Dietary Guidelines for Americans) in making healthful food choices
- explain the role of the digestive system in nutrition
- explain how the nutritional information provided on food labels impacts dietary choices

Big Idea: Safety (Health Education)

Accidents are a major cause of injury and death to children and adolescents. Unintentional injuries involving a motor vehicle, falls, drowning, fires, firearms and poisons can occur at home, school and work. Safe behavior protects a person from danger and lessens the effects of harmful situations.

Academic Expectations

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being
2.33 Students demonstrate the skills to evaluate and use services and resources available in their community
3.2 Students will demonstrate the ability to maintain a healthy lifestyle
4.3 Students individually demonstrate consistent, responsive and caring behavior
4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others
5.1 Students use skills such as analyzing, prioritizing, categorizing, evaluating and comparing to solve a variety of problems in real-life situations
5.4 Students use a decision-making process to make informed decisions among-options

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- safety practices and procedures help to prevent injuries and provide a safe environment.
- community and state resources are available to assist in hazardous situations.
- proper procedures must be used in emergency situations.

Grade 5 Skills and Concepts

Students will

- explain and practice safety rules/procedures for crossing streets/highway, riding in cars and on buses and using playground equipment
- identify and explain ways to prevent injuries at home and at school (e.g., seat belts, helmets, knee pads, falls, poisonings) for a variety of situations
- demonstrate school and home safety procedures (e.g., tornado, fire, earthquake drills)
- explain and demonstrate the effects injuries have on the body (e.g., skeletal system, skin, eyes)
- describe proper procedures (e.g., calling 911, Heimlich maneuver, stop, drop & roll, apply pressure) for dealing with a variety of emergency situations (e.g., choking, bleeding, burns and broken bones)
- explain safety practices (e.g., use of seatbelts/helmets/life vests) for dealing with a variety of health hazards (e.g., crossing the street, talking to strangers, dealing with threatening situations) while at home, school and play
- describe how to avoid dangerous situations involving strangers, fires and internet safety
- identify the available community and state health and safety agencies and the services they provide (e.g., health department, fire department, state police, hospital transport services)
- access and use reliable resources on safety guidelines for avoiding injuries and dangerous situations

Big Idea: Psychomotor Skills (Physical Education)

Cognitive information can be used to understand and enhance the development of motor skills such as movement sequences and patterns. Individuals who understand their bodies and how to perform various movements will be safer and more productive in recreation and work activities. Development of psychomotor skills contributes to the development of social and cognitive skills.

Academic Expectations

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
2.34 Students perform physical movements skills effectively in a variety of settings.
2.35 Students demonstrate knowledge and skills that promote physical activity and involvement in physical activity throughout lives.
4.1 Students effectively use interpersonal skills.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- spatial awareness, motor skills and movement patterns are needed to perform a variety of physical activities.
- movement concepts, principles and strategies apply to the learning and performance of physical activities.

Grade 5 Skills and Concepts

Students will

- demonstrate a variety of locomotor and combination skills in a movement pattern
- use non-locomotor, locomotor and combination skills to demonstrate movements in creative sequences and in simple patterned dances, games and other activities
- demonstrate a variety of non-locomotor, locomotor and combination skills while participating in different games and sports
- develop manipulative skills of throwing, catching, kicking and striking while developing motor skills (e.g., sliding, running, jumping) for use in games and other activities that lead to more complex games and sports (e.g., football, volleyball, soccer, softball)
- demonstrate and explain how movement patterns are influenced by space, force and time

Big Idea: Lifetime Physical Wellness (Physical Education)

Lifetime wellness is health-focused. The health-related activities and content utilized are presented to help students become more responsible for their overall health status and to prepare each student to demonstrate knowledge and skills that promote physical activity throughout their lives. Physical education uses physical activity as a means to help students acquire skills, fitness, knowledge and attitudes that contribute to their optimal development and well-being. Physical, mental, emotional and social health is strengthened by regular involvement in physical activities.

Academic Expectations

2.31 Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.
2.34 Students perform physical movements skills effectively in a variety of settings.
2.35 Students demonstrate knowledge and skills that promote physical activity and involvement in physical activity throughout lives.
3.1 Students demonstrate positive growth in self-concept through appropriate tasks or projects.
3.2 Students demonstrate the ability to maintain a healthy lifestyle.
3.7 Students demonstrate the ability to learn on one's own.
4.2 Students use productive team membership skills.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- physical activity provides opportunities for social interaction, challenges, and fun.
- participation in regular physical activity has physical, mental and social benefits.
- practice is a basic component for improving sport skills.
- rules impact the effective participation in physical activities.
- personal and social behavior that shows respect to self and others impacts enjoyment and safety in physical activity settings.
- regular participation in health-related, physical activity supports the goals of fitness and a healthier lifestyle throughout life.
- fitness principles and techniques are used to improve/maintain physical health.

Big Idea: Lifetime Physical Wellness (Physical Education) – Continued

Grade 5 Skills and Concepts

Students will

- explain how physical activity provides opportunities for enjoyment, challenge, self-expression and social interaction
- explore a variety of physical activities in order to determine like and dislikes of games, sports and other activities
- identify and explain health benefits that result from regular participation in physical activity
- describe how physical activity is related to emotion/mental health
- participate in daily physical activity during and after school
- investigate the role of practice for successful participation in physical activity; explain why repeated appropriate practice contributes to increased skill development
- investigate personal skill proficiency through a variety of tasks and explain why some skills are more developed than others
- when participating in a variety of physical activities and games:
  - explain the need for rules in social settings
  - recognize and use appropriate safety principles, rules, procedures and etiquette
- demonstrate appropriate behaviors of sportsmanship, cooperation, teamwork and conflict resolution in physical activity settings
- explain how rules of play and sportsmanship for spectators and participants during games and/or activities make them safe and enjoyable
- describe and demonstrate the health related fitness components (muscular strength, muscular endurance, flexibility, body composition, cardio respiratory endurance)
- explain the meaning of F.I.T.T. Principle (Frequency, Intensity, Type, Time) as it relates to fitness
- identify lifetime physical activities (e.g., biking, swimming) that meet requirements for improving fitness

INTERMEDIATE SCIENCE

Program of Studies – Science – Fourth Grade

The science program in the fourth grade should provide opportunities for students to think and work like scientists. Students must be provided multiple opportunities to observe and experience the world around them in order to develop scientific conception and abilities necessary to do scientific inquiry. These abilities include: (1) asking a question about objects, organisms and events in the environment, (2) planning and conducting a simple investigation/fair test, (3) using simple equipment and tools to gather data and extend the senses, (4) using data to construct a reasonable explanation and (5) communicating investigations and explanations.

Students should have opportunities to work individually and in groups of varying size and composition in order to conduct investigations, process information and discuss/debate important scientific concepts. Students must have regular opportunities to share their ideas with others and to test questions they generate as a result of their learning experiences.

In our technologically advanced society, information gathering must extend beyond the classroom walls and must involve a variety of credible sources. Scientists also place a high value on accurate record keeping and open communication of findings. The science classroom should mirror this by emphasizing multiple, varied and consistent methods of documenting and communicating learning.

The scientific content standards at the fourth grade level are directly aligned with Kentucky's **Academic Expectations**. Science standards are organized around seven “Big Ideas” that are important to the discipline of science. These big ideas are: Structure and Transformation of Matter, Motion and Forces, The Earth and the Universe, Unity and Diversity, Biological Change, Energy Transformations and Interdependence. The Big Ideas are conceptual organizers for science and are the same at each grade level. This ensures students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of science. The understandings represent the desired results - what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for science are fundamental to scientific literacy, scientific inquiry and build on prior learning.

Effectively implementing the Program of Studies requires a common understanding of some of the terms referenced throughout this document. These terms include:

> **Investigate/Explore**- compile a variety of information through hands-on experiences (utilizing process skills such as measuring, observing, questioning, classifying, predicting and inferring) and/or consult a variety of print and non-print media in order to formulate conclusions and/or gather evidence/data.
>
> **Experiment/Test**- conduct a scientifically valid and controlled investigation, collecting and analyzing data. Use findings and conclusions to form logical explanations and openly share.

Research- consult a variety of credible sources of information to gain knowledge, answer questions and support conclusions and explanations.

Model- represent a phenomenon or concept. Models are often conceptual in nature, and the term ‘model’ does not always imply a physical product.

Big Idea: Structure and Transformation of Matter (Physical Science)

A basic understanding of matter is essential to the conceptual development of other big ideas in science. In the elementary years of conceptual development, students will be studying properties of matter and physical changes of matter at the macro level through direct observations, forming the foundation for subsequent learning. The use of models (and an understanding of their scales and limitations) is an effective means of learning about the structure of matter. Looking for patterns in properties is also critical to comparing and explaining differences in matter.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- things can be done to materials to change some of their properties, but not all materials respond the same way to what is done to them.
- when a new material is made by combining two or more materials the new material often has properties that are different from the original materials.
- properties of materials may change if the materials become hotter or colder.
- if water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing. When liquid water “disappears” it is not really gone, it has turned into a gas (vapor).
- scientists pay more attention to claims about how something works when the claims are backed up with evidence that can be confirmed.

Grade 4 Skills and Concepts

Students will

- identify matter as solids, liquids and gases
- gather information including temperature, magnetism, hardness and mass using appropriate tools to identify physical properties of matter
- investigate and describe how the physical properties of water change as heat energy is added or removed
- conduct tests, compare data and draw conclusions about physical properties of matter including states of matter, conduction and buoyancy
- predict and describe patterns of properties in matter, such as how materials will interact with each other and how they can be changed
- investigate student-generated questions about the properties of matter and uses of matter with particular properties
- design and build objects that require different properties of materials
- write clear descriptions of their designs and experiments, present their findings (when appropriate) in tables and graphs (designed by the students)
- analyze the designs and investigations of themselves and others to see if following the same procedures would produce similar results and conclusions (scientific validity)

Big Idea: Motion and Forces (Physical Science)

Whether observing airplanes, baseballs, planets, or people, the motion of all bodies is governed by the same basic rules. In the elementary years of conceptual development, students need multiple opportunities to experience, observe, and describe (in words and pictures) motion, including factors (pushing and pulling) that affect motion.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- an object's motion can be described as its change in position over time and can be represented in a variety of ways.
- forces (pushes and pulls) cause changes in the direction or speed of something moving; the greater the force on an object, the greater its change in motion.
- sound is produced by the vibration of matter, and the rate of vibration affects the pitch of the sound.
- things vary greatly in their motion. Some things move so fast they cannot be seen, while others are so slow that we cannot see that they are moving at all. Technology enables people to observe these fast or slow movements.
- recording and representing information about the motion of objects in a variety of ways makes that data useful in supporting explanations, even long after it was originally collected.

Grade 4 Skills and Concepts

Students will

- measure and record changes (using appropriate charts, graphs) in the position and motion of an object to which a force has been applied
- make inferences about the size of forces or the change in motion produced by various forces
- investigate how the rate of vibration of an object changes the pitch (high-low) of the sound it produces
- use tools and resources, such as stopwatches, sonic rangers, microscopes, computer simulations/animations and video clips, to observe motions that are hard to see or quantify and compare the usefulness/limitations of such tools
- answer student-generated questions through investigative and non-investigative processes about what affects motion and sound using information from a variety of print and non-print sources

Big Idea: The Earth and the Universe (Earth/Space Science)

The Earth system is in a constant state of change. These changes affect life on earth in many ways. Development of conceptual understandings about processes that shape the Earth begin at the elementary level with understanding what Earth materials are and that change occurs. At the heart of elementary students' initial understanding of the Earth's place in the universe is direct observation of the Earth-sun-moon system. Students can derive important conceptual understandings about the system as they describe interactions resulting in shadows, moon phases, and day and night. The use of models and observance of patterns to explain common phenomena is essential to building a conceptual foundation and supporting ideas with evidence at all levels.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- classifying Earth materials according to their properties allows decisions to be made about their usefulness for various purposes.
- weather data can be organized and represented in ways that reveal patterns needed for making predictions about the future, but the weather is so complex that it cannot always be predicted beyond being more or less likely to occur.
- the surface of the Earth is always changing through both fast and slow processes. These changes may be steady, repetitive or irregular. Careful analysis of data from past events allows the prediction of expected consequences when similar events happen again.
- a variety of models of the sun, earth, moon system are needed to explain the observed patterns of their relative motions, since people are not able to see from the outside how this system is constructed.
- a model of something can never be exactly like the real thing, but can be used to learn something about the real thing.

Grade 4 Skills and Concepts

Students will

- Use the properties of earth materials to make and support decisions about using them for different purposes (e.g., growing plants, building materials, fuel)
- analyze weather data to make predictions about future weather
- assess the accuracy of weather predictions and the evidence used to support the predictions made by each other and meteorologists
- describe and compare the processes, factors involved and consequences of slow changes to earth's surface (e.g., erosion and weathering)
- describe and compare contributing factors and consequences of fast changes to earth's surface (e.g., landslides, earthquakes, floods)
- explore, design and evaluate a number of models (e.g., physical, analogous, conceptual) of Earth-Sun and Earth-Sun-Moon systems for benefits, limitations and accuracy (e.g., scale, proportional relationships)
- analyze and interpret information from a variety of sources (e.g., print based, models, video) to construct reasonable explanations from direct and indirect evidence

Big Idea: Unity and Diversity (Biological Science)

All matter is comprised of the same basic elements, goes through the same kinds of energy transformations, and uses the same kinds of forces to move. Living organisms are no exception. Elementary students begin to observe the macroscopic features of organisms in order to make comparisons and classifications based upon likenesses and differences. Looking for patterns in the appearance and behavior of an organism leads to the notion that offspring are much like the parents, but not exactly alike. Emphasis at every level should be placed upon the understanding that while every living thing is composed of similar small constituents that combine in predictable ways, it is the subtle variations within these small building blocks that account for both the likenesses and differences in form and function that create the diversity of life.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- things in the environment are classified as living, nonliving and once living.
- characteristics of living things can be used to sort them into various groups: the characteristics chosen to establish the grouping depend on the reason for the grouping.
- organisms have different structures that are used for different functions. Observations of the structures of a certain organism can be used to predict how that organism functions or where it might live.
- offspring resemble their parents because the parents have a reliable way to transfer information to the next generation.
- some likenesses between parents and offspring are inherited (e.g. eye color) and some likenesses are learned (e.g. speech patterns in people).
- all living things are produced from other living things. They grow and then eventually die. Before they die most living things create offspring, allowing their kind to continue.

Grade 4 Skills and Concepts

Students will

- compare the concepts of living, once living and nonliving
- analyze the structures and related functions of a variety of plants and animals in order to establish classification schemes
- investigate and compare life cycles, especially reproductive characteristics (e.g., gestational periods, germination rates, number of offspring) and life expectancies of plants and animals to make inferences and/or draw conclusions about their populations
- identify, observe and compare some characteristics of organisms that are passed from the parents (e.g., color of flower petals) and others that are learned from interactions with the environment (e.g., learning to ride a bike)
- answer student-generated questions about the diversity of living things using information from a variety of print and non-print sources

Big Idea: Biological Change (Biological Science)

The only thing certain is that everything changes. Elementary students build a foundational knowledge of change by observing slow and fast changes caused by nature in their own environment, noting changes that humans and other organisms cause in their environment, and observing fossils found in or near their environment.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.6 Students understand how living and nonliving things change over time and the factors that influence the changes.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the structures and characteristics of fossils provide information about the nature of an organism, the environmental conditions where/when it lived and how it is related to organisms still alive today.
- scientists ask many questions about the world around them, but not all of their questions can be investigated in a scientific way. Part of the job of a scientist is to focus only on questions that can be scientifically tested.
- scientists pay more attention to claims when they are supported with evidence that can be confirmed through scientific investigation.

Grade 4 Skills and Concepts

Students will

- examine fossils and representations of fossils to make comparisons among organisms that lived long ago and organisms of today and draw conclusions about the nature of the organisms and basic environments represented by fossils
- describe reasons why some differences in organisms give individuals an advantage in surviving and reproducing
- answer student-generated questions about how/why organisms and the environment have changed over time using information from a variety of print and non-print sources to support claims/provide evidence for conclusions
- analyze claims and information based on the credibility of the source and ability to confirm with multiple sources

Big Idea: Energy Transformations (Unifying Concepts)

Energy transformations are inherent in almost every system in the universe—from tangible examples at the elementary level, such as heat production in simple earth and physical systems to more abstract ideas beginning at middle school, such as those transformations involved in the growth, dying and decay of living systems. The use of models to illustrate the often invisible and abstract notions of energy transfer will aid in conceptualization, especially as students move from the macroscopic level of observation and evidence (primarily elementary school) to the microscopic interactions at the atomic level (middle and high school levels).

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- ecosystems are defined by the relationships that occur within them. These relationships can be determined through observation of the organisms and their environment.
- light and heat from the sun are essential to sustaining most life on earth. Plants change energy from the sun's light into energy that is used as food by the plant.
- electrical energy can be used for a variety of purposes. Many electrical systems share some common features, including a source of energy, a closed conducting path and a device that performs a function by utilizing that energy.
- light interacts with different kinds of matter in different ways and those interactions can be predicted based on the type of matter involved.
- heat is a form of energy that results when another form of energy is transformed. Heat flows through different materials at different rates, and it naturally flows from warmer areas to cooler ones.
- seeing how a model works after changes are made to it may suggest how the real thing would work if the same thing were done to it.

Big Idea: Energy Transformations (Unifying Concepts) – Continued

Grade 4 Skills and Concepts
Students will

- observe/construct, analyze patterns and explain basic relationships of plants and animals in an ecosystem (e.g., food webs)
- analyze food webs in order to draw conclusions about the relationship between the sun's heat and light and sustaining most life on Earth
- demonstrate open and closed circuits, and series and parallel circuits using batteries, bulbs and wires; analyze models of a variety of electrical circuits in order to predict changes to the systems
- identify events/situations that result in some energy being transformed into heat (e.g., rubbing hands together, lighting a bulb, running a car engine)
- identify and compare how heat is transferred through different materials in order to make predictions and draw conclusions about the heat conductivity of materials (e.g., compare the 'hotness' of wooden spoons, metal spoons, plastic spoons when exposed to higher temperatures)
- design and conduct investigations/experiments to compare properties of conducting and non-conducting materials (both heat and electrical), documenting and communicating (speak, draw, write, demonstrate) observations, designs, procedures and results of scientific investigations
- represent the path of light as it interacts with a variety of surfaces (reflecting, refracting, absorbing)
- make predictions/inferences about the behavior of light as it interacts with materials of differing properties
- answer student-generated questions about forms of energy (e.g., heat, light, sound, magnetic effects) using information from a variety of print and non-print sources

Big Idea: Interdependence (Unifying Concepts)

It is not difficult for students to grasp the general notion that species depend on one another and on the environment for survival. But their awareness must be supported by knowledge of the kinds of relationships that exist among organisms, the kinds of physical conditions that organisms must cope with, the kinds of environments created by the interaction of organisms with one another and their physical surroundings, and the complexity of such systems. Elementary learners need to become acquainted with ecosystems that are easily observable to them by beginning to study the habitats of many types of local organisms. Students begin to investigate the survival needs of different organisms and how the environment affects optimum conditions for survival.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- all living things depend on their environment and other organisms within it for their survival. Certain patterns of behavior or physical features may help an organism survive in some environments yet perish in others.
- environmental relationships extend beyond food (e.g. shelter, seed transport).
- people impact their environment in both beneficial and harmful ways. Some of these impacts can be predicted, while others cannot.
- beneficial and harmful are relative terms: any single action can be both beneficial and harmful to different organisms in an ecosystem.

Grade 4 Skills and Concepts

Students will

- observe, document and explain the cause and effect relationships existing between organisms and their environments
- use evidence and observations to make predictions/draw conclusions about how changes in the environment affect the plants' and animals' ability to survive
- observe, document and describe human interactions that impact the local environment
- describe and provide examples of how beneficial and harmful are relative terms
- evaluate the consequences of changes caused by humans or other organisms, and propose solutions to real life situations/dilemmas
- use evidence (obtained through investigative and/or non investigative research) to support or defend positions on real world environmental problems

Program of Studies – Science – Fifth Grade

The science program in grade five incorporates opportunities for students to work and think like scientists as they apply abilities needed for scientific inquiry. These abilities include: (1) identifying questions that can be answered through scientific investigations, (2) designing and conducting scientific investigations, (3) using appropriate tools and techniques to gather, analyze and interpret data, (4) developing descriptions, explanations, predictions and models using evidence, (5) thinking critically and logically to uncover the relationships between evidence and explanations, (6) recognizing and analyzing alternative explanations and predictions, (7) communicating scientific procedures and explanations.

Students should have opportunities to work individually and in groups of varying size and composition in order to conduct investigations, process information and discuss/debate important scientific concepts. Students must have regular opportunities to share their ideas with others and to test questions they generate as a result of their learning experiences.

In our technologically advanced society, information gathering must extend beyond the classroom walls and must involve a variety of credible sources. Scientists also place a high value on accurate record keeping and open communication of findings. The science classroom should mirror this by emphasizing multiple, varied and consistent methods of documenting and communicating learning.

The scientific content standards at the fifth grade level are directly aligned with Kentucky's **Academic Expectations**. Science standards are organized around seven “Big Ideas” that are important to the discipline of science. These big ideas are: Structure and Transformation of Matter, Motion and Forces, The Earth and the Universe, Unity and Diversity, Biological Change, Energy Transformations and Interdependence. The Big Ideas are conceptual organizers for science and are the same at each grade level. This ensures students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of science. The understandings represent the desired results - what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for science are fundamental to scientific literacy, scientific inquiry and build on prior learning.

Effectively implementing the Program of Studies requires a common understanding of some of the terms referenced throughout this document. These terms include:

> **Investigate/Explore-** compile a variety of information through hands-on experiences (utilizing process skills such as measuring, observing, questioning, classifying, predicting and inferring) and/or consult a variety of print and non-print media in order to formulate conclusions and/or gather evidence/data.

Experiment/Test- conduct a scientifically valid and controlled investigation, collecting and analyzing data. Use findings and conclusions to form logical explanations and openly share.

Research- consult a variety of credible sources of information to gain knowledge, answer questions and support conclusions and explanations.

Model- represent a phenomenon or concept. Models are often conceptual in nature, and the term ‘model’ does not always imply a physical product.

Big Idea: Structure and Transformation of Matter (Physical Science)

A basic understanding of matter is essential to the conceptual development of other big ideas in science. In the elementary years of conceptual development, students will be studying properties of matter and physical changes of matter at the macro level through direct observations, forming the foundation for subsequent learning. The use of models (and an understanding of their scales and limitations) is an effective means of learning about the structure of matter. Looking for patterns in properties is also critical to comparing and explaining differences in matter.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- a substance has its own set of properties which allows it to be distinguished from other substances.
- the physical properties of a substance do not change regardless of how much or how little of the substance there is.
- many kinds of changes in the properties of substances occur faster when the temperature is higher.
- when individual substances are combined, the total weight is equal to the sum of the individual weights.
- results of investigations are seldom exactly the same, but if the results vary widely, then it is necessary to figure out why they differ.

Grade 5 Skills and Concepts

Students will

- use appropriate tools (e.g., balance, thermometer, graduated cylinder) and observations to describe physical properties of substances (e.g., boiling point, solubility, density) and to classify materials
- work individually and with others to design and conduct fair tests to safely investigate properties of matter, such as boiling point, density and solubility
- keep accurate records of investigations (procedures, data) in order to support or dispute conclusions
- use student-generated questions about the properties of matter to drive inquiry-based learning experiences

Big Idea: Motion and Forces (Physical Science)

Whether observing airplanes, baseballs, planets, or people, the motion of all bodies is governed by the same basic rules. In the elementary years of conceptual development, students need multiple opportunities to experience, observe, and describe (in words and pictures) motion, including factors (pushing and pulling) that affect motion.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- predictions and/or inferences about the direction or speed of an object can be made by interpreting graphs, charts or descriptions of the object's motion.
- the more mass an object has, the less effect a given force will have.
- forces are pushes and pulls that may be invisible (e.g., gravity, magnetism) or visible (e.g., friction, collisions).
- some comparisons may not be 'fair' because some conditions (e.g. mass, force, speed, friction) might not be the same.

Grade 5 Skills and Concepts

Students will

- use observations and appropriate tools (e.g., timer, meter stick, balance, spring scale) to explore the relationship between force and mass
- create and interpret graphical representations in order to make inferences and draw conclusions about the motion of an object
- design and conduct experiments to examine the effects of variables on the straight line motion of objects. Analyze, review and critique each other's experiments
- predict and support with evidence/justification, changes in the motion of an object related to its mass or the amount of force acting on it

Big Idea: The Earth and the Universe (Earth/Space Science)

The Earth system is in a constant state of change. These changes affect life on earth in many ways. Development of conceptual understandings about processes that shape the Earth begin at the elementary level with understanding what Earth materials are and that change occurs. At the heart of elementary students' initial understanding of the Earth's place in the universe is direct observation of the Earth-sun-moon system. Students can derive important conceptual understandings about the system as they describe interactions resulting in shadows, moon phases, and day and night. The use of models and observance of patterns to explain common phenomena is essential to building a conceptual foundation and supporting ideas with evidence at all levels.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the Earth's water supply has existed since the formation of the planet and is constantly cycled from the ocean to the atmosphere, allowing the same water to be endlessly reused without the creation of new water.
- water is a powerful solvent that dissolves earth materials, allowing them to impact the ocean system as water is cycled into it.
- earth is surrounded by a blanket of air called the atmosphere that is essential to life because of some of the gasses it contains.
- air is free to move from place to place all across the planet and this movement causes global weather patterns. Observing air movements help scientists explain both global and local weather patterns.
- observations, models and diagrams of the solar system illustrate the position and relationship of the Earth, sun and moon within the larger system of planets and other celestial bodies. Even though they are all parts of the same system, a comparison of their properties reveals great differences among celestial bodies.
- technology extends the ability of people to understand the universe. Most tools of today are different than those of the past, but may also be modifications of much older tools.

Big Idea: The Earth and the Universe (Earth/Space Science) – Continued

Grade 5 Skills and Concepts
Students will

- investigate how water can change forms yet still be conserved in the water cycle
- create/analyze/explain representations that illustrate the circulation of water (evaporation and condensation) from the surface of the Earth, through the crust, oceans and atmosphere (water cycle)
- compare weather and climate and describe the factors that influence each
- explore the concept of watersheds and identify factors that impact them, including results of interactions of water with earth materials (e.g., dissolving minerals, moving minerals and gases)
- describe the makeup of the Earth's atmosphere and analyze atmospheric data to explain real life phenomena (e.g., pressurized cabins in airplanes, mountain-climber's need for oxygen)
- use a variety of models and graphic representations to obtain and organize data in order to compare the major components of our solar system
- explore the development of and types of technology useful for learning about the atmosphere and our solar system
- explain why scale models are important tools for understanding a number of phenomena (e.g., solar system, watersheds, earth's atmosphere) but are not always easy to construct or require trade-offs in other aspects of the model (e.g. distance vs. size)

Big Idea: Unity and Diversity (Biological Science)

All matter is comprised of the same basic elements, goes through the same kinds of energy transformations, and uses the same kinds of forces to move. Living organisms are no exception. Elementary students begin to observe the macroscopic features of organisms in order to make comparisons and classifications based upon likenesses and differences. Looking for patterns in the appearance and behavior of an organism leads to the notion that offspring are much like the parents, but not exactly alike. Emphasis at every level should be placed upon the understanding that while every living thing is composed of similar small constituents that combine in predictable ways, it is the subtle variations within these small building blocks that account for both the likenesses and differences in form and function that create the diversity of life.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- animals and plants have a great variety of body plans and internal structures that contribute to their being able to meet their needs.
- organisms are composed of a variety of sub-systems that have essential functions. Organisms function with a minimum of superfluous parts because their structures are precisely suited to their essential functions.
- microscopes make it possible to see that living things are made mostly of cells. Some organisms cells vary greatly in appearance and perform very different roles in the organism.

Grade 5 Skills and Concepts

Students will

- use observations and models to describe and compare internal and external structures of plants and animals and their corresponding functions
- identify and describe systems and subsystems essential to an organism's survival
- use observations and models (conceptual, analogical, physical) to identify major structures of cells and their corresponding functions
- use scientific tools (e.g., microscopes) to observe and make comparisons of unicellular and multi-cellular organisms

Big Idea: Biological Change (Biological Science)

The only thing certain is that everything changes. Elementary students build a foundational knowledge of change by observing slow and fast changes caused by nature in their own environment, noting changes that humans and other organisms cause in their environment, and observing fossils found in or near their environment.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.5 Students understand that under certain conditions nature tends to remain the same or move toward a balance.

2.6 Students understand how living and nonliving things change over time and the factors that influence the changes.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the gradual changes in organisms that have occurred over time are only accurately represented using a geologic time scale dating back to the formation of the Earth.
- sometimes differences in organisms give individuals an advantage in surviving and reproducing. Over many generations these adaptations have led to a wide variety of types of organisms.
- successful organisms must be able to maintain the basic functions of life in response to normal environmental fluctuations (e.g. day/night, seasonal temperature changes, precipitation). However, an organism that has an advantage in a specific environment may not be able to survive if the environment changes too drastically.
- scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis and doing experiments. The question being investigated determines the form of the investigation used.

Grade 5 Skills and Concepts

Students will

- analyze various geologic time scale representations
- investigate and describe adaptations of various organisms to their environments through observations as well as print and non-print based resources
- Investigate ways that organisms cope with fluctuations (e.g. temperature, precipitation, change in food sources) in their environments
- propose explanations regarding adaptations of populations to environments citing evidence/data to support conclusions
- compare procedures used (e.g., experiments, investigative and non-investigative research, observations) to find information/collect data about the diversity of organisms that exist or have existed on Earth

Big Idea: Energy Transformations (Unifying Concepts)

Energy transformations are inherent in almost every system in the universe—from tangible examples at the elementary level, such as heat production in simple earth and physical systems to more abstract ideas beginning at middle school, such as those transformations involved in the growth, dying and decay of living systems. The use of models to illustrate the often invisible and abstract notions of energy transfer will aid in conceptualization, especially as students move from the macroscopic level of observation and evidence (primarily elementary school) to the microscopic interactions at the atomic level (middle and high school levels).

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- energy can have many different forms and be contained in many different substances. Evidence of energy transfer may be observed in a wide variety of systems.
- energy from the sun flows through space to reach the Earth. Solar energy provides the driving force for many of the changes that happen on the Earth's surface.
- electrical circuits transfer energy and can produce heat, light, sound and magnetic effects. They can be used for different purposes by rearranging their components.
- light interacts with matter in predictable ways that can be discovered through investigations.
- in a closed system, warm objects will cool and cool objects will warm until they are all the same temperature.
- if the results of an investigation are unexpected, it is good to make new observations. If those observations continue to be unexpected, different ideas should be considered to explain the results.

Grade 5 Skills and Concepts

Students will

- classify energy phenomena (e.g., heat/thermal energy, electrical energy, energy of position) as kinetic or potential and use observations and evidence to describe the transfer of energy occurring in simple systems
- describe solar energy and how it impacts physical and biological systems on Earth
- design and conduct investigations/experiments to determine the effects of altering variables within electrical circuits and to draw conclusions about the transfer of energy (e.g., heat, light, sound and magnetic effects) within a system
- design and conduct investigations/experiments to identify predictable patterns of interaction between light and matter (e.g. some materials are more reflective, different liquids refract differently, effects of multiple or differing light sources)

Big Idea: Interdependence (Unifying Concepts)

It is not difficult for students to grasp the general notion that species depend on one another and on the environment for survival. But their awareness must be supported by knowledge of the kinds of relationships that exist among organisms, the kinds of physical conditions that organisms must cope with, the kinds of environments created by the interaction of organisms with one another and their physical surroundings, and the complexity of such systems. Elementary learners need to become acquainted with ecosystems that are easily observable to them by beginning to study the habitats of many types of local organisms. Students begin to investigate the survival needs of different organisms and how the environment affects optimum conditions for survival.

Academic Expectations

2.1 Students understand scientific ways of thinking and working and use those methods to solve real-life problems.

2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

2.3 Students identify and analyze systems and the ways their components work together or affect each other.

2.4 Students use the concept of scale and scientific models to explain the organization and functioning of living and nonliving things and predict other characteristics that might be observed.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- within every ecosystem are populations of organisms that serve specific functions. Changes to any population may affect the other populations in that ecosystem.
- all of the populations that interact with each other in an ecosystem form a specific community, but there may be multiple communities within the same ecosystem.
- matter and energy flow along multiple paths within a community. Complex models depicting this interdependence make these relationships easier to visualize and comprehend.

Grade 5 Skills and Concepts

Students will

- define the concepts of population and community and identify examples of populations and communities within various ecosystems
- identify the role/function a population of organisms has in a particular community/ecosystem (e.g., producers, consumers, decomposers)
- explore the cause/effect relationship of altering a particular population of organisms within an ecosystem using data/evidence collected through research and/or simulations (e.g., role-play games, computer-based simulations)
- analyze, create and describe visual representations of ecosystems and the interactions occurring within them. Compare and critique pre-existing and student-constructed representations for accuracy, identifying strengths and limitations, insisting on the use of evidence to support decisions

INTERMEDIATE SOCIAL STUDIES

Program of Studies – Social Studies – Fourth Grade

Social studies in the intermediate grades has a different level/grade context each year. For example, grade four focuses on Kentucky studies and regions of the United States. Grade five includes an integrated focus on United States history. Regardless of the level/grade context, students incorporate each of the five areas of social studies in an integrated fashion to explore the content.

The primary purpose of social studies is to help students develop the ability to make informed decisions as citizens of a culturally diverse, democratic society in an interdependent world. The skills and concepts found throughout this document reflect this purpose by promoting the belief that students must develop more than an understanding of social studies content. They must also be able to apply the content perspectives of several academic fields of the social studies to personal and public experiences. By stressing the importance of both content knowledge and its application, the social studies curriculum in Kentucky provides a framework that prepares students to become productive citizens.

The social studies content standards at the intermediate level are directly aligned with Kentucky's **Academic Expectations**. Social Studies standards are organized around five "Big Ideas" that are important to the discipline of social studies. The five Big Ideas in social studies are: Government and Civics, Cultures and Societies, Economics, Geography and Historical Perspective. The Big Ideas, which are more thoroughly explained in the pages that follow, are conceptual organizers that are the same at each grade level. This consistency ensures students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of social studies. The understandings represent the desired results - what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for social studies are fundamental to social studies literacy and build on prior learning.

The social studies program includes strong literacy connections, active hands-on work with concrete materials, and appropriate technologies. The social studies curriculum includes and depends on a number of different types of materials such as textbooks, non-fiction texts, biographies, autobiographies, journals, maps, newspapers, photographs and primary documents. Higher order thinking skills, such as compare, explain, analyze, predict, construct and interpret, are all heavily dependent on a variety of literacy skills and processes. For example, in social studies students must be able to understand specialized vocabulary, identify and comprehend key pieces of information within texts, determine what is fact and what is opinion, relate information across texts, connect new information to prior knowledge and synthesize the information to make meaning.

Big Idea: Government and Civics

The study of government and civics allows students to understand the nature of government and the unique characteristics of American representative democracy, including its fundamental principles, structure, and the role of citizens. Understanding the historical development of structures of power, authority and governance and their evolving functions in contemporary U.S. society and other parts of the world is essential for developing civic competence. An understanding of civic ideals and practices of citizenship is critical to full participation in society and is a central purpose of the social studies.

Academic Expectations

2.14 Students understand the democratic principles of justice, equality, responsibility, and freedom and apply them to real-life situations.

2.15 Students can accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens in a democracy.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the government of Kentucky was formed to establish order, provide security and accomplish common goals.
- the Constitution of Kentucky establishes a government of limited powers that are shared among different levels and branches.
- all citizens of Kentucky have rights and responsibilities as members of a democratic society, including civic participation.
- fundamental values and principles of American representative democracy are expressed in Kentucky's Constitution.

Grade 4 Skills and Concepts

Students will

- demonstrate an understanding of the nature of government:
  - explore basic functions of state government (e.g., to establish order, to provide security and to accomplish common goals)
  - explain and give examples of services state governments provide (e.g., state police and fire protection, state parks, highway maintenance, snow removal)
  - describe how the state government provides services to its citizens (e.g., collecting taxes)
  - describe the structure of state government (e.g., the executive, legislative and judicial branches) and explain why power is shared among different branches
  - investigate and give examples of state laws and explain their purpose
- explore rights and responsibilities:
  - describe, give examples, and compare rights and responsibilities
  - describe the benefits of citizenship and find examples of citizenship in current events/news media
- use information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental) to explain basic democratic principles (e.g. life, liberty, pursuit of safety and happiness, acquiring and protecting property) found in Kentucky's Constitution

Big Idea: Cultures and Societies

Culture is the way of life shared by a group of people, including their ideas and traditions. Cultures reflect the values and beliefs of groups in different ways (e.g., art, music, literature, religion); however, there are universals connecting all cultures. Culture influences viewpoints, rules and institutions in a global society. Students should understand that people form cultural groups throughout the United States and the World and that issues and challenges unite and divide them.

Academic Expectations

2.16 Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people and the relationships among individuals and among groups.

2.17 Students interact effectively and work cooperatively with the many ethnic and cultural groups of our nation and world.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- culture is a system of beliefs, knowledge, institutions, customs/traditions, languages and skills shared by a group of people. Through a society's culture, individuals learn the relationships, structures, patterns and processes to be members of the society.
- cultures develop social institutions (e.g., government, economy, education, religion, family) to structure society, influence behavior and respond to human needs.
- interactions among individuals and groups assume various forms (e.g., compromise, cooperation, conflict, competition) and are influenced by culture.
- a variety of factors promote cultural diversity in the state of Kentucky.
- an appreciation of the diverse complexity of cultures is essential to interact effectively and work cooperatively with the many diverse ethnic and cultural groups of today.

Grade 4 Skills and Concepts

Students will

- develop an understanding of the nature of culture:
  - explore and compare cultural elements (e.g., beliefs, traditions, languages, skills, literature, the arts) of diverse groups (e.g., Native Americans and early settlers) in the early settlement of Kentucky
  - examine the influences/contributions of diverse groups in Kentucky
- investigate social institutions (e.g., family, government, economy, education, religion) in Kentucky and explain their functions
- describe conflicts that occurred between diverse groups (e.g., Native Americans and the early settlers) in the settlement of Kentucky
- investigate and compare culture/cultural events of diverse groups in Kentucky today with the past using information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental)

Big Idea: Economics

Economics includes the study of production, distribution and consumption of goods and services. Students need to understand how their economic decisions affect them, others and the nation as a whole. The purpose of economic education is to enable individuals to function effectively both in their own personal lives and as citizens and participants in an increasingly connected world economy. Students need to understand the benefits and costs of economic interaction and interdependence among people, societies, and governments.

Academic Expectations

2.18 Students understand economic principles and are able to make economic decisions that have consequences in daily living.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the basic economic problem confronting individuals and groups in Kentucky today is scarcity; as a result of scarcity, economic choices and decisions must be made.
- a variety of fundamental economic concepts impact individuals and groups.
- economic institutions are created to help individuals, groups and businesses accomplish common goals.
- markets enable buyers and sellers to exchange goods and services.
- production and distribution of goods and services have changed over time in Kentucky.
- individuals, groups and businesses demonstrate interdependence as they make economic decisions about the use of resources (e.g., natural, human, capital) in the production, distribution, and consumption of goods and services.

Grade 4 Skills and Concepts

Students will

- develop an understanding of the nature of limited resources and scarcity:
  - use a variety of sources to research and give examples of productive resources (e.g., natural, human, capital) found in regions of Kentucky
  - explain why individuals, groups, and businesses must make economic decisions due to the scarcity of resources
  - investigate banks in Kentucky; explain and give examples of the roles banks play (e.g., loan money, save money) in helping people deal with scarcity
  - investigate and give examples of markets (past and present); and explain how goods and services were/are exchanged
- use a variety of sources to investigate and trace change over time (e.g., draw, chart, map, timeline) in the production, distribution, and consumption of goods and services (e.g., products made in Kentucky)
- investigate and give examples of specialization and explain how it promotes trade between places and regions of the United States (e.g., Kentucky imports and exports, Midwest exports corn, South exports citrus)

Big Idea: Geography

Geography includes the study of the five fundamental themes of location, place, regions, movement and human/environmental interaction. Students need geographic knowledge to analyze issues and problems to better understand how humans have interacted with their environment over time, how geography has impacted settlement and population and how geographic factors influence climate, culture, the economy and world events. A geographic perspective also enables students to better understand the past and present and to prepare for the future.

Academic Expectations

2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- the use of geographic tools (e.g., maps, globes, charts, graphs) and mental maps help interpret information, understand and analyze patterns, spatial data and geographic issues.
- patterns emerge as humans move, settle and interact on Earth's surface and can be identified by examining the location of physical and human characteristics, how they are arranged and why they are in particular locations. Economic, political, cultural and social processes interact to shape patterns of human populations, interdependence, cooperation and conflict.
- regions help us to see Earth as an integrated system of places and features organized by such principles as landform types, political units, economic patterns and cultural groups.
- people depend on, adapt to, or modify the environment to meet basic needs. Human actions modified the physical environment and in turn, the physical environment limited and/or promoted human activities in the settlement of Kentucky.

Grade 4 Skills and Concepts

Students will

- demonstrate an understanding of patterns on the Earth's surface, using a variety of geographic tools (e.g., maps, globes, charts, graphs):
  - locate and describe major landforms, bodies of water and natural resources located in regions of Kentucky and the United States
  - locate, in absolute and relative terms, major landforms and bodies of water in regions of Kentucky and the United States
  - analyze and compare patterns of movement and settlement in Kentucky
  - explain and give examples of how physical factors (e.g., rivers, mountains) impacted human activities during the early settlement of Kentucky
- use information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental) to investigate regions of Kentucky:
  - compare regions in Kentucky by their human characteristics (e.g., settlement patterns, languages, and religious beliefs) and physical characteristics (e.g., climate, landforms, bodies of water)
  - describe patterns of human settlement in regions of Kentucky and explain relationships between these patterns and the physical characteristics (e.g., climate, landforms, bodies of water) of the region
  - explain the influence of the physical characteristics of regions (e.g., climates, landforms, bodies of water) on decisions that were made about where to locate things (e.g., factories stores, bridges)
  - analyze how advances in technology (e.g., dams, roads, irrigation) have allowed people to settle in places previously inaccessible (Kentucky)
- investigate interactions among human activities and the physical environment in regions of Kentucky:
  - explain how people modified the physical environment (e.g., dams, roads, bridges) to meet their needs
  - describe how the physical environment (e.g., mountains as barriers or protection, rivers as barriers or transportation) promoted and/or restricted human activities (e.g., exploration, migration, trade, settlement, development) and land use in Kentucky

Big Idea: Historical Perspective

History is an account of events, people, ideas, and their interaction over time that can be interpreted through multiple perspectives. In order for students to understand the present and plan for the future, they must understand the past. Studying history engages students in the lives, aspirations, struggles, accomplishments and failures of real people. Students need to think in an historical context in order to understand significant ideas, beliefs, themes, patterns, and events, and how individuals and societies have changed over time in Kentucky, the United States, and the World.

Academic Expectations

2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspective.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- history is an account of human activities that is interpretive in nature and a variety of tools (e.g., primary and secondary sources) are needed to analyze and understand historical events.
- the history of Kentucky can be analyzed by examining the connected events shaped by multiple cause-effect relationships, tying past to present.
- the history of Kentucky has been impacted by significant individuals, groups and advances in technology.

Grade 4 Skills and Concepts

Students will

- demonstrate an understanding of the nature of history using a variety of tools (e.g., primary and secondary sources):
  - investigate and chronologically describe (e.g., timelines, charts) significant events in Kentucky history, from early development as a territory to development as a state
  - interpret and describe events in Kentucky's history in terms of their importance
  - examine cause and effect relationships that influenced Kentucky's history
  - explain reasons that different groups of people explored and settled in Kentucky
  - investigate the influences/contributions of diverse groups to the culture of Kentucky today
- use information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental):
  - examine and compare factual and fictional accounts of historical events in Kentucky's history
  - investigate change over time (e.g., transportation, communication, education, technology, lifestyles and conditions) in Kentucky's history
  - describe the significance of historical documents, symbols, and songs related to Kentucky's history (e.g., Kentucky's Constitution, state flag, state song)

Program of Studies – Social Studies – Fifth Grade

Social studies in the intermediate grades has a different level/grade context each year. For example, grade four focuses on Kentucky studies and regions of the United States. Grade five includes an integrated focus on United States history. Regardless of the level/grade context, students incorporate each of the five areas of social studies in an integrated fashion to explore the content.

The primary purpose of social studies is to help students develop the ability to make informed decisions as citizens of a culturally diverse, democratic society in an interdependent world. The skills and concepts found throughout this document reflect this purpose by promoting the belief that students must develop more than an understanding of social studies content. They must also be able to apply the content perspectives of several academic fields of the social studies to personal and public experiences. By stressing the importance of both content knowledge and its application, the social studies curriculum in Kentucky provides a framework that prepares students to become productive citizens.

The social studies content standards at the intermediate level are directly aligned with Kentucky's Academic Expectations. Social Studies standards are organized around five “Big Ideas” that are important to the discipline of social studies. The five Big Ideas in social studies are: Government and Civics, Cultures and Societies, Economics, Geography and Historical Perspective. The Big Ideas, which are more thoroughly explained in the pages that follow, are conceptual organizers that are the same at each grade level. This consistency ensures students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of social studies. The understandings represent the desired results - what learning will focus upon and what knowledge students will be able to explain or apply. Understandings can be used to frame development of units of study and lesson plans.

Skills and concepts describe ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for social studies are fundamental to social studies literacy and build on prior learning.

The social studies program includes strong literacy connections, active hands-on work with concrete materials, and appropriate technologies. The social studies curriculum includes and depends on a number of different types of materials such as textbooks, non-fiction texts, biographies, autobiographies, journals, maps, newspapers, photographs and primary documents. Higher order thinking skills, such as compare, explain, analyze, predict, construct and interpret, are all heavily dependent on a variety of literacy skills and processes. For example, in social studies students must be able to understand specialized vocabulary, identify and comprehend key pieces of information within texts, determine what is fact and what is opinion, relate information across texts, connect new information to prior knowledge and synthesize the information to make meaning.

Big Idea: Government and Civics

The study of government and civics equips students to understand the nature of government and the unique characteristics of American representative democracy, including its fundamental principles, structure and the role of citizens. Understanding the historical development of structures of power, authority and governance and their evolving functions in contemporary U.S. society and other parts of the world is essential for developing civic competence. An understanding of civic ideals and practices of citizenship is critical to full participation in society and is a central purpose of the social studies.

Academic Expectations

2.14 Students understand the democratic principles of justice, equality, responsibility, and freedom and apply them to real-life situations.

2.15 Students can accurately describe various forms of government and analyze issues that relate to the rights and responsibilities of citizens in a democracy.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the government of the United States was developed from a colonial base of representative democracy by people who envisioned an independent country and new purposes for the government.
- the United States Government was formed to establish order, provide security and accomplish common goals.
- the fundamental values and principles (e.g., liberty, justice, individual human dignity) of American representative democracy are expressed in historical documents (e.g., the Declaration of Independence, the Constitution of the United States, including the Preamble and the Bill of Rights).
- the Constitution of the United States establishes a government of limited powers that are shared among different levels and branches.
- as members of a democratic society, all citizens of the United States have certain rights and responsibilities, including civic participation.

Grade 5 Skills and Concepts

Students will

- demonstrate an understanding of government, using information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental):
  - investigate the basic functions of the United States Government, as defined in the Preamble to the U.S. Constitution, (e.g., establish justice, ensure domestic tranquility, provide for the common defense, promote the general welfare, secure the blessings of liberty) and explain their significance today
  - explain how democratic governments work to promote the “common good” (e.g., making, enacting, enforcing laws that protect rights and property of all citizens)
- describe the basic duties of the three branches of government (executive, legislative, judicial); explain why the framers of the U.S. Constitution felt it was important to establish a government with limited powers that are shared among different branches and different levels (e.g., local, state, federal)
- analyze information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental) to describe fundamental values and principles of American representative democracy (e.g., liberty, justice) found in the Declaration of Independence and the U.S. Constitution; explain their significance today
- investigate the rights and responsibilities of U.S. citizens:
  - describe and give examples of specific rights guaranteed to all U.S. citizens in the Bill of Rights (e.g., freedom of religion, freedom of speech, freedom of press) and explain why they are important today
  - describe some of the responsibilities U.S. citizens have in order for democratic governments to function effectively (e.g. voting, community service, paying taxes) and find examples of civic participation in current events/news (e.g., television, radio, articles, Internet)

Big Idea: Cultures and Societies

Culture is the way of life shared by a group of people, including their ideas and traditions. Cultures reflect the values and beliefs of groups in different ways (e.g., art, music, literature, religion); however, there are universals connecting all cultures. Culture influences viewpoints, rules, and institutions in a global society. Students should understand that people form cultural groups throughout the United States and the World, and that issues and challenges unite and divide them.

Academic Expectations

2.16 Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people and the relationships among individuals and among groups.

2.17 Students interact effectively and work cooperatively with the many ethnic and cultural groups of our nation and world.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- culture is a system of beliefs, knowledge, institutions, customs/traditions, languages and skills shared by a group of people. Through a society's culture, individuals learn the relationships, structures, patterns and processes to be members of the society.
- cultures develop social institutions (e.g., government, economy, education, religion, family) to structure society, influence behavior and respond to human needs.
- interactions among individuals and groups assume various forms (e.g., compromise, cooperation, conflict, competition) and are influenced by culture.
- a variety of factors promote cultural diversity in a society, nation and world.
- an understanding and appreciation of the diverse complexity of cultures is essential to interact effectively and work cooperatively with the many diverse ethnic and cultural groups of today.

Grade 5 Skills and Concepts

Students will

- demonstrate an understanding of culture and cultural elements (e.g., beliefs, traditions, languages, skills, literature, the arts) of diverse groups:
  - investigate cultural similarities and differences of diverse groups (e.g., English, French, Spanish and Dutch Colonists, West Africans, Immigrants of the 1800's) during the early development of the United States
  - research the contributions of diverse groups to the culture (e.g., beliefs, traditions, literature, the arts) of the United States today
  - investigate factors that promoted cultural diversity in the history of the United States
- examine social institutions (e.g., family, religion, education, government, economy) in the United States and explain their functions
- describe conflicts that occurred among and between diverse groups (e.g., Native Americans and the early Explorers, Native Americans and the Colonists, the British Government and the English Colonists, Native Americans and the U.S. Government) during the settlement of the United States; explain the causes of these conflicts and the outcomes
- describe causes of conflicts between individuals and/or groups today and give examples of how to resolve them peacefully

Big Idea: Economics

Economics includes the study of production, distribution, and consumption of goods and services. Students need to understand how their economic decisions affect them, others, and the nation as a whole. The purpose of economic education is to enable individuals to function effectively both in their own personal lives and as citizens and participants in an increasingly connected world economy. Students need to understand the benefits and costs of economic interaction and interdependence among people, societies, and governments.

Academic Expectations

2.18 Students understand economic principles and are able to make economic decisions that have consequences in daily living.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the basic economic problem confronting individuals, groups and businesses in the United States today is scarcity: as a result of scarcity, economic choices and decisions must be made.
- a variety of fundamental economic concepts (e.g., supply and demand, opportunity cost) impact individuals, groups and businesses in the United States today.
- economic institutions are created to help individuals, groups and businesses accomplish common goals.
- markets enable buyers and sellers to exchange goods and services.
- production, distribution and consumption of goods and services have changed over time in the United States.
- individuals, groups and businesses in the United States demonstrate interdependence as they make economic decisions about the use of resources (e.g., natural, human, capital) in the production, distribution, and consumption of goods and services.

Grade 5 Skills and Concepts

Students will

- demonstrate an understanding using information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental) of the connection between resources, limited productive resources and scarcity:
  - investigate different kinds of resources (e.g., natural, human, capital)
  - explain how individuals and groups in the United States make economic decisions based upon limited productive resources (natural, human, capital) and give examples of how these decisions create interdependence between individuals, groups and businesses
- demonstrate an understanding of how people deal with scarcity; explain the roles banks play in helping people deal with scarcity (e.g., loan money, save money, lines of credit, interest-bearing accounts)
- demonstrate an understanding of markets:
  - explain how goods and services are/were exchanged
  - investigate and give examples of markets; explain how markets have changed over time during the history of the United States
- use a variety of sources:
  - investigate and trace (e.g., write, draw, chart, timeline) change over time in the production, distribution and consumption of goods and services in the United States
  - research specialization in the United States; explain how specialization promotes trade between individuals, groups and businesses in the United States and world; describe the impact of specialization on the production of goods in the United States

Big Idea: Geography

Geography includes the study of the five fundamental themes of location, place, regions, movement and human/environmental interaction. Students need geographic knowledge to analyze issues and problems to better understand how humans have interacted with their environment over time, how geography has impacted settlement and population, and how geographic factors influence climate, culture, the economy and world events. A geographic perspective also enables students to better understand the past and present and to prepare for the future.

Academic Expectations

2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- the use of geographic tools (e.g., maps, globes, charts, graphs) and mental maps help interpret information, understand and analyze patterns, spatial data and geographic issues.
- patterns emerge as humans move, settle and interact on Earth's surface and can be identified by examining the location of physical and human characteristics, how they are arranged and why they are in particular locations. Economic, political, cultural and social processes interact to shape patterns of human populations, interdependence, cooperation and conflict.
- regions help us to see Earth as an integrated system of places and features organized by such principles as landform types, political units, economic patterns and cultural groups.
- people depend on, adapt to, and/or modify the environment to meet basic needs. Human actions modified the physical environment and in turn, the physical environment limited and/or promoted human activities in the settlement of the United States.

Grade 5 Skills and Concepts

Students will

- demonstrate an understanding of patterns on the Earth's surface, using a variety of geographic tools (e.g., maps, globes, charts, graphs):
  - locate, in absolute or relative terms, major landforms and bodies of water in the United States
  - locate and explain patterns on Earth's surface (e.g., how different factors such as rivers, mountains and plains impact where human activities are located)
- investigate regions on the Earth's surface and analyze information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental):
  - explain how places and regions in the U.S. are defined by their human characteristics (e.g., language, settlement patterns, religious beliefs) and physical characteristics (e.g., climate, landforms, bodies of water)
  - locate and describe patterns of human settlement and explain how these patterns were influenced by the physical characteristics (e.g., climate, landforms, bodies of water) of places and regions in the United States
  - investigate how advances in technology (e.g., dams, roads, air conditioning, irrigation) over time have allowed people to settle in places previously inaccessible in the United States
- investigate how humans modify the physical environment:
  - describe how people modified the physical environment (e.g., dams, roads, bridges) to meet their needs during the early settlement of the United States
  - analyze how the physical environment (e.g., mountains as barriers or protection, rivers as barriers or transportation) promoted and restricted human activities during the early settlement of the United States
  - explain how different perspectives of individuals and groups impact decisions about the use of land (e.g., farming, industrial, residential, recreational) in the United States

Big Idea: Historical Perspective

History is an account of events, people, ideas, and their interaction over time that can be interpreted through multiple perspectives. In order for students to understand the present and plan for the future, they must understand the past. Studying history engages students in the lives, aspirations, struggles, accomplishments, and failures of real people. Students need to think in an historical context in order to understand significant ideas, beliefs, themes, patterns and events, and how individuals and societies have changed over time in Kentucky, the United States, and the World.

Academic Expectations

2.20 Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspective.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- history is an account of human activities that is interpretive in nature. A variety of tools (e.g., primary and secondary sources) are needed to understand and analyze historical events.
- the history of the United States can be analyzed by examining significant eras (*Colonization and Settlement, Revolution and a New Nation, Expansion and Conflict, Industrialization and Immigration and the Twentieth Century*) to develop a chronological understanding and recognize cause and effect relationships and multiple causation, tying past to present.
- the history of the United States has been impacted by significant individuals, groups and advances in technology.
- geography, culture, and economics have a significant impact on historical perspectives and events.

Grade 5 Skills and Concepts

Students will

- demonstrate an understanding of the interpretative nature of history using a variety of tools (e.g., primary and secondary sources):
  - investigate and chronologically describe major events in United States history (e.g., using timelines, charts, fictional and report writing, role playing)
  - explain and draw inferences about the importance of major events in United States history
  - examine cause and effect relationships in the history of the United States; identify examples of multiple causes of major historical events
  - explain reasons that individuals and groups explored and settled in the United States
  - research influences/contributions of diverse groups to the culture (e.g., beliefs, traditions, literature, the arts) of the United States today
- use information from print and non-print sources (e.g., documents, informational passages/texts, interviews, digital and environmental):
  - examine factual and fictional accounts of significant historical events and people in United States history
  - explore change over time (e.g., transportation, communication, education, technology, lifestyles and conditions) in the United States
  - compare reasons (e.g., freedoms, opportunities, fleeing negative situations) immigrants came/come to America
  - investigate the events surrounding patriotic symbols, songs, landmarks (e.g., American flag, Statue of Liberty, the Star-Spangled Banner), and selected readings (e.g., Dr. Martin Luther King's speech: I Have a Dream), and explain their historical significance
- investigate patterns across in U.S. history (e.g., major events/conflicts/culture; compare with major events/conflicts/culture to the present)

INTERMEDIATE TECHNOLOGY

Program of Studies – Technology – Intermediate

Technology use in the 21st century has become a vital component of all aspects of life. For students in Kentucky to be contributing citizens, they must receive an education that incorporates technology literacy at all levels. Technology literacy is the ability of students to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century. The Technology Program of Studies provides a framework for integrating technology into all content areas. It reflects the basic skills required for each student to be competitive in the global economy.

For students to gain the technology competencies, it is essential that they have access to technology during the school day in all grade levels. Instruction should provide opportunities for students to gain and demonstrate technology skills that build primary through grade 12.

The technology content standards should be integrated into each curricular discipline. The purpose of integrating technology is to help students make useful connections between what they learn in each content area and the real world. Technology knowledge, concepts and skills should be interwoven into lessons or units and taught in partnership with other content areas. Technology lends itself to curriculum integration and team teaching. Technology can enhance learning for all students, and for some it is essential for access to learning.

The technology content standards are organized by grade spans: primary, intermediate, middle, and high. The technology program of studies at the intermediate level builds upon primary experiences. It continues to build competencies related to technology literacy. Students interpret critique and evaluate digital texts, synthesize information and solve problems. Students create and use technology for developing ideas and opinions, for communicating and collaborating with others and for personal fulfillment. These experiences enhance and extend students' technology skills.

The technology content standards at the intermediate grade span are directly aligned with Kentucky's **Academic Expectations**. Technology standards are organized around three Big Ideas that are important to the discipline of technology. The three Big Ideas in technology are: **1) Information, Communication and Productivity; 2) Safety and Ethical/Social Issues;** and **3) Research, Inquiry/Problem-Solving and Innovation**. The Big Ideas are conceptual organizers for technology. Each grade level span ensures students have multiple opportunities throughout their school careers to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of *Enduring Knowledge/Understandings* that represent overarching generalizations linked to the Big Ideas of Technology. The understandings represent the desired results--what learning will focus upon and what knowledge students will be able to explain or apply. *Understandings* can be used to frame development of units of study and lesson plans.

Skills and Concepts describe ways that students demonstrate their learning and are specific to each grade level span. The skills and concepts for technology are fundamental to technology literacy, safe use and inquiry. The skills and concepts build on prior learning.

Big Idea: Information, Communication and Productivity

Students demonstrate a sound understanding of the nature and operations of technology systems. Students use technology to learn, to communicate, increase productivity and become competent users of technology. Students manage and create effective oral, written and multimedia communication in a variety of forms and contexts.

Academic Expectations

1.11 Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.
1.16 Students use computers and other kinds of technology to collect, organize, and communicate information and ideas.
3.3 Students demonstrate the ability to be adaptable and flexible through appropriate tasks or projects.
6.1 Students connect knowledge and experiences from different subject areas.
6.3 Students expand their understanding of existing knowledge by making connections with new knowledge, skills, and experiences.

Intermediate Enduring Knowledge – Understandings

Students will understand that

- appropriate terminology, computer operations and applications assist in gaining confidence in the use of technology.
- technology requires proper care and maintenance to be used effectively.
- a variety of media is used to support directed and independent learning.
- technology is used to communicate in a variety of ways including global communications.
- technology (e.g. keyboarding, word processing, spreadsheets, presentation) is used effectively and efficiently to accomplish a task.

Intermediate Skills and Concepts – Information

Students will

- investigate different technology devices (e.g., CPU, monitor, keyboard, disk drive, printer, mouse)
- describe the uses of technology (e.g., computers, telephones, cell phones, digital and video cameras, Internet) at home, school and workplace
- use appropriate technology terms (e.g., hardware, software, CD, hard drive)
- explain the use of networks and the need for login procedures (e.g., stand alone, network, file server, LANs network resources)
- demonstrate proper keyboarding techniques, optimal posture and correct hand placement (e.g., home row finger placement) at the computer workstation

Intermediate Skills and Concepts – Communication

Students will

- use technology to communicate in a variety of modes (e.g., audio, speech to text, print, media)
- participate in online group projects and learning activities using technology communications
- create a variety of tasks using technology devices and systems to support authentic learning
- use technology to collect data for content area assignments/projects
- use a variety of tools and formats (oral presentations, journals and multimedia presentations) to summarize and communicate the results of observations and investigations
- use online collaborative tools (e.g., email, videoconferencing)

Intermediate Skills and Concepts – Productivity

Students will

- develop, publish and present information in print and digital formats
- use productivity tools to produce content area assignments/projects

Big Idea: Safety and Ethical/Social Issues

Students understand safe, ethical and social issues related to technology. Students practice and engage in safe, responsible and ethical use of technology. Students develop positive attitudes toward technology use that supports lifelong learning, collaboration, personal pursuits and productivity.

Academic Expectations

2.17 Students interact effectively and work cooperatively with the many ethnic and cultural groups of our nation and world.
3.6 Students demonstrate the ability to make decisions based on ethical values.
4.3 Students individually demonstrate consistent, responsive, and caring behavior.
4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others.
4.5 Students demonstrate an understanding of, appreciation for, and sensitivity to a multi- cultural and world view.

Intermediate Enduring Knowledge – Understandings

Students will understand that

- responsible and ethical use of technology is necessary to ensure safety.
- technology is used in collaborative and interactive projects to enhance learning.
- acceptable technology etiquette is essential to respectful social interactions and good citizenship.
- technology is used in jobs and careers to support the needs of the local and global community.
- assistive technology supports learning to ensure equitable access to a productive life.

Intermediate Skills and Concepts – Safety

Students will

- explain the importance of safe Internet use (e.g., iSafe skills)
- apply safe behavior when using technology

Intermediate Skills and Concepts – Ethical Issues

Students will

- investigate basic issues related to responsible use of technology and describe personal consequences of inappropriate use (e.g., plagiarism, intellectual property, copyright and the conditions of Acceptable Usage Policy)
- explore, investigate and practice the use of technology in an appropriate, safe and responsible manner
- use ethical behavior while using technology in personal and community contexts

Intermediate Skills and Concepts – Social Issues

Students will

- use technology to collaborate and engage in interactive projects with others (e.g., local, national and global) and credit all participants for their contribution to the work
- use proper social etiquette with any technology (e.g., email, blogs, IM, telephone, help desk)
- investigate how assistive technologies supports learning
- explain how technology has had an influence on our world
- explain how technology supports career options and lifelong learning

Big Idea: Research, Inquiry/Problem-Solving and Innovation

Students understand the role of technology in research and experimentation. Students engage technology in developing solutions for solving problems in the real world. Students will use technology for original creation and innovation.

Academic Expectations

1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems.
2.3 Students identify and analyze systems and the ways their components work together or affect each other.
5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.
5.2 Students use creative thinking skills to develop or invent novel, constructive ideas or products.
5.4 Students use a decision-making process to make informed decisions among options.
5.5 Students use problem-solving processes to develop solutions to relatively complex problems.
6.1 Students connect knowledge and experiences from different subject areas.

Intermediate Enduring Knowledge – Understandings

Students will understand that

- technology assists in gathering, organizing and evaluating information from a variety of sources to answer essential questions.
- technology supports critical thinking skills used in inquiry/problem solving to make informed decisions.
- technology is used to produce an innovative product or system.

Intermediate Skills and Concepts – Research

Students will

- gather and use accurate information from a variety of electronic sources (e.g. teacher-selected web sites, CDROM, encyclopedias and automated card catalog, online virtual library; word processing, database, spreadsheet) in all content areas
- correctly cite sources
- evaluate the accuracy, relevance, appropriateness, comprehensiveness and bias of electronic information sources
- use technology tools to process data and report results
- use content-specific tools to enhance understanding of content (e.g., environmental probes, sensors, robotics, simulation software and measuring devices)

Intermediate Skills and Concepts – Inquiry/Problem-solving

Students will

- determine which technology is useful and select the appropriate tool(s) (e.g., calculators, data collection probes, videos, educational software) to inquire/problem- solve in self-directed and extended learning
- use technology to solve problems using critical thinking and problem-solving strategies
- solve content-specific problems using a combinations of technologies

Intermediate Skills and Concepts – Innovation

Students will

- use technology to organize and develop creative solutions, ideas or products
- use technology to express creativity both individually and collaboratively

INTERMEDIATE VOCATIONAL STUDIES

Program of Studies – Vocational Studies – Fourth Grade

The vocational studies program at the fourth grade develops an awareness of careers. This awareness includes the purpose of having a job, concepts of consumer decision-making, saving money, and connections between work and learning. The challenge is to empower students to make a connection between school and the world of work and to be productive citizens.

The fourth grade level provides appropriate opportunities for students to be involved in activities designed to develop an appreciation of work and an awareness of self and jobs/careers. They should examine the relationship between school studies and work; this will enable them to make vital connections that will give meaning to their learning. Elementary students should begin to develop work habits, study skills, team skills and set short-term goals.

The vocational studies program at the fourth grade includes active, hands-on work with concrete materials and appropriate technologies. Although the vocational studies program for fourth grade is divided into five areas, each area is designed to interact with the others in an integrated fashion. Because of this integration, students are able to develop broad conceptual understandings in vocational studies. All content teachers are responsible for providing instruction in the vocational studies area.

The vocational studies content standards at the fourth grade are directly aligned with Kentucky's **Academic Expectations.** The vocational studies standards are organized around five "Big Ideas" that are important to the discipline of Vocational Studies. These big ideas are: Consumer Decisions, Financial Literacy, Career Awareness/Exploration/Planning, Employability Skills, and Communication/Technology. The Big Ideas are conceptual organizers for vocational studies and are the same at each grade level. This ensures students have multiple opportunities throughout their school career to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of vocational studies. The understandings represent the desired results- that focus on learning, and the knowledge students will have to explain or apply. Understandings can be used to frame development of units of study and lessons plans.

Skills and concepts describe the ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for vocational studies are fundamental to career awareness and builds on prior learning.

Academic Expectations 2.36 and 2.37 bring forward the career awareness in Vocational Studies. Vocational Studies provide a connection to Kentucky Learning Goal 3 (become self-sufficient individual) and Learning Goal 4 (become a responsible group members). These connections provide a comprehensive link between essential content, skills and abilities important to learning.

Big Idea: Consumer Decisions

Individual and families need to make consumer decisions due to the numerous products/services on the market, multiple advertising techniques, and the need to make responsible financial management decisions. Accessing and assessing consumer information, comparing and evaluating products and services, provides basis for making effective consumer decisions. Consumer decisions influence the use of resources and the impact they have on the community and environment.

Academic Expectations

2.30 Students evaluate consumer products and services and make effective consumer decisions. Students demonstrate the skills to evaluate and use services and resources available in their community.
4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others.
5.4 Students use a decision-making process to make informed decisions among options.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- fundamental economic concepts are important for consumer decision-making.
- consumer decisions are influenced by economic and social factors.
- values have a role in making consumer decisions.
- consumer actions (e.g., reusing, reducing, recycling) influence the use of resources and impact the environment.
- an individual has multiple life roles that impact responsibility to be a valuable family and community member.

Grade 4 Skills and Concepts

Students will

- investigate economic concepts and why they are important for consumer decisions by:
  - examining how individuals and families make choices to satisfy needs and wants as they relate to consumer decisions
  - explain bartering, and how money makes it easier for people to get things they want
  - determining ways in which goods and services used by families impact the environment
- describe how culture, media and technology can influence consumer decisions by:
  - comparing and evaluating products and services based on major factors (e.g., price, quality, features) when making consumer decisions
  - describing how different types of media, technology and advertising impact the family and consumer decision-making
  - identify ways in which consumer decisions (e.g., buying and selling) affect families and friends
- identify ways that individuals have rights and responsibilities as a consumer
- evaluate consumer actions (e.g., reusing, reducing, recycling) and how they influence the use of resources and impact the environment by:
  - describing how consumption, conservation, and waste management practices are related
  - identifying ways the physical environment is related to individual and community health
- examine individual, family, and community roles and responsibilities by:
  - investigating a variety of resources (e.g., current events, surveys, children's magazines) and explain ways in which consumers are addressing the effects of renewable resources on the environment
  - describing jobs carried out by people at school and in the community that support success in school

Big Idea: Financial Literacy

Financial literacy provides knowledge so that students are responsible for their personal economic well-being. As consumers, individuals need economic knowledge as a base for making financial decisions impacting short and long term goals throughout one's lifetime. Financial literacy will empower students by providing them with the skills and awareness needed to establish a foundation for a future of financial responsibility and economic independence.

Academic Expectations

2.30 Students evaluate consumer products and services and make effective consumer decisions.
2.33 Students demonstrate the skills to evaluate and use services and resources available in their community.
5.4 Students use a decision-making process to make informed decisions among options.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- management of financial resources is needed to meet goals of individuals and families.
- budgets are a basic component in making financial decisions.
- various services are provided by financial institutions (e.g., banks, credit unions).

Grade 4 Skills and Concepts

Students will

- explain how financial management is needed to meet goals of individuals and families by:
  - identifying goals pertaining to money that might affect individuals and families
  - describing different ways to save and invest money (e.g., piggy bank, local bank, savings bonds)
- define credit and how it can be used to make purchases
- explain the purpose of a budget and define the basic components (income, expenses, savings)
- investigate basic services (e.g., deposits, check cashing) provided by financial institutions (e.g., banks, credit unions)

Big Idea: Career Awareness, Exploration, Planning

Career awareness, exploration and planning gives students the opportunity to discover the various career areas that exist and introduce them to the realities involved with the workplace. Many factors need to be considered when selecting a career path and preparing for employment. Career awareness, exploration and planning will enable students to recognize the value of education and learn how to plan for careers. The relationship between academics and jobs/careers will enable students to make vital connections that will give meaning to their learning.

Academic Expectations

2.36 Students use strategies for choosing and preparing for a career.
2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.
5.4 Students use a decision-making process to make informed decision among options.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- people need to work to meet basic needs.
- a variety of career choices are available in planning for job/careers.
- the connection between work and academics can influence one's future job/career.
- individual and societal needs can impact future jobs/careers.
- self-knowledge is an important part of the career planning process.

Grade 4 Skills and Concepts

Students will

- explain why people need to work (e.g., chores, jobs, employment) to meet basic needs (e.g., food, clothing, shelter)
- recognize that the roles of individuals at home, in the workplace, and in the community are constantly changing
- investigate the connection between work and learning and how it can influence one's future job/career by:
  - explaining different jobs/careers that use what they learn in school (mathematics, reading/writing, science, social studies) impacts future jobs/careers
  - describing work done by school personnel and other individuals in the community
- evaluate how individual and societal needs can impact future jobs/careers by:
  - recognizing how career choices may change as a person matures
  - examining and grouping careers in clusters
- recognize self-knowledge (e.g., interests, abilities) is helpful when selecting and preparing for a career path and that unique interests may lead to career choices

Big Idea: Employability Skills

Employability skills will focus on student's competencies with their work habits and academic/technical skills that will impact an individual's success in school and workplace. School-to-work transition skills will help students develop interpersonal skills and positive work habits.

Academic Expectations

2.36 Students use strategies for choosing and preparing for a career.
Students demonstrate skills and work habits that lead to success in future schooling and work.
3.7 Students demonstrate the ability to make decisions based on ethical values.
4.1 Students effectively use interpersonal skills.
4.2 Students use productive team membership skills.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- interpersonal skills are needed to be a responsible friend, family and team member.
- attitudes and work habits contribute to success at home, school and work.
- academics contribute to obtaining and succeeding in employment.

Grade 4 Skills and Concepts

Students will

- explain how interpersonal skills are needed to be a responsible friend, family and team member by:
  - identifying ways to cooperate at both home and school
  - learning the importance of developing good team skills (e.g., cooperation, communication) and explain how these skills are used to complete tasks
  - demonstrating how to work cooperatively by contributing ideas, suggestions and efforts
- describe how attitudes and work habits contribute to success at home, school and work by:
  - describing study skills needed in school
  - developing personal responsibilities for their own learning and behaviors
  - explaining how effective communication skills (e.g., reading, writing, speaking, and listening) impacts work-related situations and give examples for success at home, school and work
  - learning how to follow routines (e.g., rules, schedules, directions) with minimal supervision
  - identifying consequences for actions when disobeying rules and routines
  - identifying the importance of developing good work habits
- examine potential job/careers in the community
- identify how employability skills prepare them for obtaining and maintaining employment
- identify ways academics can impact success in employment

Big Idea: Communication/Technology

Special communication and technology skills are needed for success in schooling and in the workplace. Students will be able to express information and ideas using a variety of technologies in various ways.

Academic Expectations

1.16 Students use computers and other kinds of technology to collect, organize, and communicate information and ideas.

2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.

Grade 4 Enduring Knowledge – Understandings

Students will understand that

- technology skills can enhance learning and impact productivity at home, school and the workplace.
- communication skills is essential for jobs/careers.

Grade 4 Skills and Concepts

Students will

- explore how technology is used in different jobs/careers

investigate how technology in school and at work enhances learning and provide access to information and resources by:

  - explain how technology tools (e.g., computer programs, Internet, email, cell phones) are used in homes, schools and jobs

- identify ways written communication skills are used at school and in the workplace

Program of Studies – Vocational Studies – Fifth Grade

The vocational studies program at the fifth grade develops an awareness of careers. This awareness includes the purpose of having a job, concepts of consumer decision-making, saving money, and connections between work and learning. The challenge is to empower students to make a connection between school and the world of work and to be productive citizens.

The fifth grade provides appropriate opportunities for students to be involved in activities designed to develop an appreciation of work and an awareness of self and jobs/careers. They should examine the relationship between school studies and work; this will enable them to make vital connections that will give meaning to their learning. Elementary students should begin to develop work habits, study skills, team skills and set short-term goals.

The vocational studies program at the fifth grade includes active, hands-on work with concrete materials and appropriate technologies. Although the vocational studies program for fifth grade is divided into five areas, each area is designed to interact with the others in an integrated fashion. Because of this integration, students are able to develop broad conceptual understandings in vocational studies. All content teachers are responsible for providing instruction in the vocational studies area.

The vocational studies content standards at the fifth grade are directly aligned with Kentucky's **Academic Expectations.** The Vocational Studies standards are organized around five "Big Ideas" that are important to the discipline of Vocational Studies. These big ideas are: Consumer Decisions, Financial Literacy, Career Awareness/Exploration/Planning, Employability Skills, and Communication/Technology. The Big Ideas are conceptual organizers for vocational studies and are the same at each grade level. This ensures students have multiple opportunities throughout their school career to develop skills and concepts linked to the Big Ideas.

Under each Big Idea are statements of Enduring Knowledge/Understandings that represent overarching generalizations linked to the Big Ideas of vocational studies. The understandings represent the desired results- that focus on learning, and the knowledge students will have to explain or apply. Understandings can be used to frame development of units of study and lessons plans.

Skills and concepts describe the ways that students demonstrate their learning and are specific to each grade level. The skills and concepts for vocational studies are fundamental to career awareness and builds on prior learning.

Academic Expectations 2.36 and 2.37 bring forward the career awareness in Vocational Studies. Vocational Studies provide a connection to Kentucky Learning Goal 3 (become self-sufficient individual) and Learning Goal 4 (become a responsible group members). These connections provide a comprehensive link between essential content, skills and abilities important to learning.

Big Idea: Consumer Decisions

Individual and families need to make consumer decisions due to the numerous products/services on the market, multiple advertising techniques, and the need to make responsible financial management decisions. Accessing and assessing consumer information, comparing and evaluating products and services, provides basis for making effective consumer decisions. Consumer decisions influence the use of resources and the impact they have on the community and environment.

Academic Expectations

2.30 Students evaluate consumer products and services and make effective consumer decisions.
2.33 Students demonstrate the skills to evaluate and use services and resources available in their community.
4.4 Students demonstrate the ability to accept the rights and responsibilities for self and others.
5.4 Students use a decision-making process to make informed decisions among options.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- fundamental economic concepts are important for consumer decision-making.
- culture, media and technology can influence consumer decisions.
- values have a role in making consumer decision.
- consumer actions (e.g., reusing, reducing, recycling) influence the use of resources and impact the environment.
- an individual has multiple life roles that impact responsibility to be a valuable family and community member.

Grade 5 Skills and Concepts

Students will

- investigate economic concepts and why they are important for consumer decisions by:
  - analyzing the differences between needs and wants and how individuals and families make choices
  - determining ways in which goods and services used by families impact the environment
  - recognizing the relationship between supply and demand and its role in meeting consumer needs
- describe how culture, media and technology can influence consumer decisions by:
  - identifying the ways family and consumer resources are impacted by the environment
  - comparing and evaluating products and services based on major factors (e.g., price, quality, features) when making consumer decisions
  - identifying advertising techniques (bandwagon, facts and figures, emotional appeal, endorsement/testimonial) and explain how they impact the consumer
- analyze ways that an individual has rights and responsibilities as a consumer
- describe how consumer actions (e.g., reusing, reducing, recycling) influence the use of resources and impact the environment by:
  - describing some community activities that promote healthy environments
- examine individual, family, and community roles and responsibilities by:
  - investigating a variety of resources and explain ways in which consumers are addressing the effects of renewable resources on the environment
  - describing jobs carried out by people at school and in the community that support success in school

Big Idea: Financial Literacy

Financial literacy provides knowledge so that students are responsible for their personal economic well-being. As consumers, individuals need economic knowledge as a base for making financial decisions impacting short and long term goals throughout one's lifetime. Financial literacy will empower students by providing them with the skills and awareness needed to establish a foundation for a future of financial responsibility and economic independence.

Academic Expectations

2.30 Students evaluate consumer products and services and make effective consumer decisions.
2.33 Students demonstrate the skills to evaluate and use services and resources available in their community.
5.4 Students use a decision-making process to make informed decisions among options.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- management of financial resources is needed to meet goals of individuals and families.
- saving plans and budgets are a basic component in making financial decisions.
- various services are provided by financial institutions (e.g., banks, credit unions).

Grade 5 Skills and Concepts

Students will

- explain how financial management is needed to meet goals of individuals and families by:
  - investigating goals pertaining to money that might affect individuals and families
  - describing various types of expenses (e.g., food, clothing, entertainment) and savings (e.g., piggy bank, bank account, savings bonds)
- investigate savings plans and budgets in making financial decisions by:
  - developing a simple savings plan that would achieve a specific goal
  - explaining the purpose of a budget and define the basic components (income, expenses, savings)
- explain credit and the affect of having fees with credit
- describe how basic services (e.g., deposits, check cashing) are provided by financial institutions (e.g., banks, credit unions)

Big Idea: Career Awareness, Exploration, Planning

Career awareness, exploration and planning gives students the opportunity to discover the various career areas that exist and introduce them to the realities involved with the workplace. Many factors need to be considered when selecting a career path and preparing for employment. Career awareness, exploration and planning will enable students to recognize the value of education and learn how to plan for careers. The relationship between academics and jobs/careers will enable students to make vital connections that will give meaning to their learning.

Academic Expectations

2.36 Students use strategies for choosing and preparing for a career.
2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.
5.4 Students use a decision-making process to make informed decision among options.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- people need to work to meet basic needs.
- a variety of career choices are available in planning for job/careers.
- the connection between work and academics can influence one's future job/career.
- individual and societal needs can impact future jobs/careers.
- awareness of career opportunities and the skills needed for different careers is an important part of the career planning process.
- an Individual Learning Plan (ILP) is an academic and career planning tool.
- self-knowledge is an important part of the career planning process.

Grade 5 Skills and Concepts

Students will

- explain that people need to work (e.g., chores, jobs, employment) to meet basic needs (e.g., food, clothing, shelter), provide self-satisfaction and enjoyment
- investigate a variety of career choices available in planning for jobs/careers by:
  - identifying different job opportunities in the home, school, and community (e.g., home business, flexible schedule)
  - recognizing that the roles of individuals at home, in the workplace, and in the community are constantly changing
- analyze the connection between work and academics which can influence one's future job/careers by:
  - explaining different jobs/careers that use what they learn in school (e.g., mathematics, reading/writing, science, social studies) impacts future jobs/careers
  - explaining how educational planning can impact future career opportunities
  - researching career choice through the use of technology
- evaluate how individual and societal needs can impact future jobs/careers by:
  - describing the impact of individual interests and abilities on career choices
  - identifying and describe jobs in career clusters (e.g., Arts and Humanities, Construction, Manufacturing, Science and Mathematics)
- recognize sources of career information (e.g., Career Day, guest speaker, field trips, informal personal surveys)
- identify the components of an Individual Learning Plan (ILP)
- recognize how self-knowledge (e.g., interests, abilities) is helpful when selecting and preparing for a career path and that unique interests may lead to career choices

Big Idea: Employability Skills

Employability skills will focus on student's competencies with their work habits and academic/technical skills that will impact an individual's success in school and workplace. School-to-work transition skills will help students develop interpersonal skills and positive work habits.

Academic Expectations

2.36 Students use strategies for choosing and preparing for a career.
2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.
2.38 Students demonstrate skills such as interviewing, writing résumé and completing applications that are needed to be accepted into college or other postsecondary training or to get a job.
3.8 Students demonstrate the ability to make decisions based on ethical values.
4.1 Students effectively use interpersonal skills.
4.2 Students use productive team membership skills.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- interpersonal skills are needed to be a responsible friend, family and team member.
- attitudes and work habits contribute to success at home, school and work.
- academics contribute to obtaining and succeeding in employment.

Grade 5 Skills and Concepts

Students will

- explain how interpersonal skills are needed to be a responsible friend, family and team member by:
  - examining ways to cooperate at home, school and work
  - demonstrating effective group interaction strategies (e.g., communicating effectively, conflict resolution, compromise) to develop team skills
  - explaining the importance of working cooperatively with others by contributing ideas, suggestions and efforts to complete a task
- describe how attitudes and work habits contribute to success at home, school and work by:
  - describing study skills needed in school
  - explaining how attitudes and work habits transfer from the home and school to the workplace
  - explaining how effective communication skills (e.g., reading, writing, speaking, and listening) impact work-related situations and give examples for success at home, school and work
  - identifying consequences for actions when disobeying rules and routines when employed
  - identifying the importance of developing good work habits (e.g., attendance, work done on time, follow directions)
- examine potential job/careers in the community
- describe employability skills needed to prepare individuals for obtaining and maintaining employment
- explain how success in an academic course of study could contribute to the ability to achieve and succeed in employment (e.g., Science/Medicine, Language Arts/Librarian)

Big Idea: Communication/Technology

Special communication and technology skills are needed for success in schooling and in the workplace. Students will be able to express information and ideas using a variety of technologies in various ways.

Academic Expectations

1.16 Students use computers and other kinds of technology to collect, organize, and communicate information and ideas.

2.37 Students demonstrate skills and work habits that lead to success in future schooling and work.

Grade 5 Enduring Knowledge – Understandings

Students will understand that

- technology skills can enhance learning and impact productivity at home, school and the workplace.
- communication skills are used in a variety of ways at home, school and in the workplace.

Grade 5 Skills and Concepts

Students will

- evaluate how technology tools (e.g., computer programs, Internet, email, cell phones) are used in homes, schools and jobs by:
  - explaining how technology provides access to information and resources at home, school and the workplace
- demonstrate how to work cooperatively and collaboratively with peers when using technology in the classroom by:
  - explaining how written communication skills are used at school and in the workplace