

National Standards

National Standards for Arts Education

MUSIC

GRADES K - 4

NA-M.K-4.1 SINGING, ALONE AND WITH OTHERS, A VARIED REPERTOIRE OF MUSIC

Achievement Standard:

- Students sing independently, on pitch and in rhythm, with appropriate timbre, diction, and posture, and maintain a steady tempo
- Students sing expressively, with appropriate dynamics, phrasing, and interpretation
- Students sing from memory a varied repertoire of songs representing genres and styles from diverse cultures
- Students sing ostinatos, partner songs, and rounds
- Students sing in groups, blending vocal timbres, matching dynamic levels, and responding to the cues of a conductor

NA-M.K-4.2 PERFORMING ON INSTRUMENTS, ALONE AND WITH OTHERS, A VARIED REPERTOIRE OF MUSIC

Achievement Standard:

- Students perform on pitch, in rhythm, with appropriate dynamics and timbre, and maintain a steady tempo
- Students perform easy rhythmic, melodic, and chordal patterns accurately and independently on rhythmic, melodic, and harmonic classroom instruments
- Students perform expressively a varied repertoire of music representing diverse genres and styles
- Students echo short rhythms and melodic patterns
- Students perform in groups, blending instrumental timbres, matching dynamic levels, and responding to the cues of a conductor
- Students perform independent instrumental parts (e.g., simple rhythmic or melodic ostinatos, contrasting rhythmic lines, harmonic progressions, and chords) while other students sing or play contrasting parts

NA-M.K-4.3 IMPROVISING MELODIES, VARIATIONS, AND ACCOMPANIMENTS

Achievement Standard:

- Students improvise "answers" in the same style to given rhythmic and melodic phrases
- Students improvise simple rhythmic and melodic ostinato accompaniments
- Students improvise simple rhythmic variations and simple melodic embellishments on familiar melodies

- Students improvise short songs and instrumental pieces, using a variety of sound sources, including traditional sounds (e.g., voices, instruments), nontraditional sounds available in the classroom (e.g., paper tearing, pencil tapping), body sounds (e.g., hands clapping, fingers snapping), and sounds produced by electronic means (e.g., personal computers and basic MIDI devices, including keyboards, sequencers, synthesizers, and drum machines)

NA-M.K-4.4 COMPOSING AND ARRANGING MUSIC WITHIN SPECIFIED GUIDELINES

Achievement Standard:

- Students create and arrange music to accompany readings or dramatizations
- Students create and arrange short songs and instrumental pieces within specified guidelines (e.g., a particular style, form, instrumentation, compositional technique)
- Students use a variety of sound sources when composing

NA-M.K-4.5 READING AND NOTATING MUSIC

Achievement Standard:

- Students read whole, half, dotted half, quarter, and eighth notes and rests in 2/4, 3/4, and 4/4 meter signatures
- Students use a system (that is, syllables, numbers, or letters) to read simple pitch notation in the treble clef in major keys
- Students identify symbols and traditional terms referring to dynamics, tempo, and articulation and interpret them correctly when performing
- Students use standard symbols to notate meter, rhythm, pitch, and dynamics in simple patterns presented by the teacher

NA-M.K-4.6 LISTENING TO, ANALYZING, AND DESCRIBING MUSIC

Achievement Standard:

- Students identify simple music forms when presented aurally
- Students demonstrate perceptual skills by moving, by answering questions about, and by describing aural examples of music of various styles representing diverse cultures
- Students use appropriate terminology in explaining music, music notation, music instruments and voices, and music performances
- Students identify the sounds of a variety of instruments, including many orchestra and band instruments, and instruments from various cultures, as well as children's voices and male and female adult voices
- Students respond through purposeful movement (e.g., swaying, skipping, dramatic play) to selected prominent music characteristics or to specific music events (e.g., meter changes, dynamic changes, same/different sections) while listening to music

NA-M.K-4.7 EVALUATING MUSIC AND MUSIC PERFORMANCES

Achievement Standard:

- Students devise criteria for evaluating performances and compositions
- Students explain, using appropriate music terminology, their personal preferences for specific musical works and styles

NA-M.K-4.8 UNDERSTANDING RELATIONSHIPS BETWEEN MUSIC, THE OTHER ARTS, AND DISCIPLINES OUTSIDE THE ARTS

Achievement Standard:

- Students identify similarities and differences in the meanings of common terms (e.g., form, line, contrast) used in the various arts
- Students identify ways in which the principles and subject matter of other disciplines taught in the school are interrelated with those of music (e.g., foreign languages: singing songs in various languages; language arts: using the expressive elements of music in interpretive readings; mathematics: mathematical basis of values of notes, rests, and time signatures; science: vibration of strings, drum heads, or air columns generating sounds used in music; geography: songs associated with various countries or regions)

NA-M.K-4.9 UNDERSTANDING MUSIC IN RELATION TO HISTORY AND CULTURE

Achievement Standard:

- Students identify by genre or style aural examples of music from various historical periods and cultures
- Students describe in simple terms how elements of music are used in music examples from various cultures of the world
- Students identify various uses of music in their daily experiences and describe characteristics that make certain music suitable for each use
- Students identify and describe roles of musicians (e.g., orchestra conductor, folksinger, church organist) in various music settings and cultures
- Students demonstrate audience behavior appropriate for the context and style of music performed

GRADES 5 – 8

NA.5-8.1 SINGING, ALONE AND WITH OTHERS, A VARIED REPERTOIRE OF MUSIC

Achievement Standard:

- Students sing accurately and with good breath control throughout their singing ranges, alone and in small and large ensembles
- Students sing with expression and technical accuracy a repertoire of vocal literature with a level of difficulty of 2, on a scale of 1 to 6, including some songs performed from memory

- Students sing music representing diverse genres and cultures, with expression appropriate for the work being performed
- Students sing music written in two and three parts
- Students who participate in a choral ensemble sing with expression and technical accuracy a varied repertoire of vocal literature with a level of difficulty of 3, on a scale of 1 to 6, including some songs performed from memory

NA.5-8.2 PERFORMING ON INSTRUMENTS, ALONE AND WITH OTHERS, A VARIED REPERTOIRE OF MUSIC

Achievement Standard:

- Students perform on at least one instrument (e.g., band or orchestra instrument, keyboard instrument, fretted instrument, electronic instrument) accurately and independently, alone and in small and large ensembles, with good posture, good playing position, and good breath, bow, or stick control
- Students perform with expression and technical accuracy on at least one string, wind, percussion, or classroom instrument a repertoire of instrumental literature with a level of difficulty of 2, on a scale of 1 to 6
- Students perform music representing diverse genres and cultures, with expression appropriate for the work being performed
- Students play by ear simple melodies on a melodic instrument and simple accompaniments on a harmonic instrument
- Students who participate in an instrumental ensemble or class perform with expression and technical accuracy a varied repertoire of instrumental literature with a level of difficulty of 3, on a scale of 1 to 6, including some solos performed from memory

NA.5-8.3 IMPROVISING MELODIES, VARIATIONS, AND ACCOMPANIMENTS

Achievement Standard:

- Students improvise simple harmonic accompaniments
- Students improvise melodic embellishments and simple rhythmic and melodic variations on given pentatonic melodies and melodies in major keys
- Students improvise short melodies, unaccompanied and over given rhythmic accompaniments, each in a consistent style, meter, and tonality

NA.5-8.4 COMPOSING AND ARRANGING MUSIC WITHIN SPECIFIED GUIDELINES

Achievement Standard:

- Students compose short pieces within specified guidelines (e.g., a particular style, form, instrumentation, compositional technique), demonstrating how the elements of music are used to achieve unity and variety, tension and release, and balance
- Students arrange simple pieces for voices or instruments other than those for which the pieces were written

- Students use a variety of traditional and nontraditional sound sources and electronic media when composing and arranging

NA.5-8.5 READING AND NOTATING MUSIC

Achievement Standard:

- Students read whole, half, quarter, eighth, sixteenth, and dotted notes and rests in 2/4, 3/4, 4/4, 6/8, 3/8, and alla breve meter signatures
- Students read at sight simple melodies in both the treble and bass clefs
- Students identify and define standard notation symbols for pitch, rhythm, dynamics, tempo, articulation, and expression
- Students use standard notation to record their musical ideas and the musical ideas of others
- Students who participate in a choral or instrumental ensemble or class sight-read, accurately and expressively, music with a level of difficulty of 2, on a scale of 1 to 6

NA.5-8.6 LISTENING TO, ANALYZING, AND DESCRIBING MUSIC

Achievement Standard:

- Students describe specific music events (e.g., entry of oboe, change of meter, return of refrain) in a given aural example, using appropriate terminology
- Students analyze the uses of elements of music in aural examples representing diverse genres and cultures
- Students demonstrate knowledge of the basic principles of meter, rhythm, tonality, intervals, chords, and harmonic progressions in their analyses of music

NA.5-8.7 EVALUATING MUSIC AND MUSIC PERFORMANCES

Achievement Standard:

- Students develop criteria for evaluating the quality and effectiveness of music performances and compositions and apply the criteria in their personal listening and performing
- Students evaluate the quality and effectiveness of their own and others' performances, compositions, arrangements, and improvisations by applying specific criteria appropriate for the style of the music and offer constructive suggestions for improvement

NA.5-8.8 UNDERSTANDING RELATIONSHIPS BETWEEN MUSIC, THE OTHER ARTS, AND DISCIPLINES OUTSIDE THE ARTS

Achievement Standard:

- Students compare in two or more arts how the characteristic materials of each art (that is, sound in music, visual stimuli in visual arts, movement in dance, human interrelationships in theatre) can be used to transform similar events, scenes, emotions, or ideas into works of art
- Students describe ways in which the principles and subject matter of other disciplines taught in the school are interrelated with those of music (e.g., language arts: issues to be considered in setting texts to music; mathematics: frequency ratios of intervals; sciences: the human hearing

process and hazards to hearing; social studies: historical and social events and movements chronicled in or influenced by musical works)

NA.5-8.9 UNDERSTANDING MUSIC IN RELATION TO HISTORY AND CULTURE

Achievement Standard:

- Students describe distinguishing characteristics of representative music genres and styles from a variety of cultures
- Students classify by genre and style (and, if applicable, by historical period, composer, and title) a varied body of exemplary (that is, high-quality and characteristic) musical works and explain the characteristics that cause each work to be considered exemplary
- Students compare, in several cultures of the world, functions music serves, roles of musicians (e.g., lead guitarist in a rock band, composer of jingles for commercials, singer in Peking opera), and conditions under which music is typically performed

GRADES 9 - 12

NA.9-12.1 SINGING, ALONE AND WITH OTHERS, A VARIED REPERTOIRE OF MUSIC

Achievement Standard, Proficient:

- Students sing with expression and technical accuracy a large and varied repertoire of vocal literature with a level of difficulty of 4, on a scale of 1 to 6, including some songs performed from memory
- Students sing music written in four parts, with and without accompaniment
- Students demonstrate well-developed ensemble skills

Achievement Standard, Advanced:

- Students sing with expression and technical accuracy a large and varied repertoire of vocal literature with a level of difficulty of 5, on a scale of 1 to 6
- Students sing music written in more than four parts
- Students sing in small ensembles with one student on a part

NA.9-12.2 PERFORMING ON INSTRUMENTS, ALONE AND WITH OTHERS, A VARIED REPERTOIRE OF MUSIC

Achievement Standard, Proficient:

- Students perform with expression and technical accuracy a large and varied repertoire of instrumental literature with a level of difficulty of 4, on a scale of 1 to 6
- Students perform an appropriate part in an ensemble, demonstrating well-developed ensemble skills
- Students perform in small ensembles with one student on a part

Achievement Standard, Advanced:

- Students perform with expression and technical accuracy a large and varied repertoire of instrumental literature with a level of difficulty of 5, on a scale of 1 to 6

NA.9-12.3 IMPROVISING MELODIES, VARIATIONS, AND ACCOMPANIMENTS**Achievement Standard, Proficient:**

- Students improvise stylistically appropriate harmonizing parts
- Students improvise rhythmic and melodic variations on given pentatonic melodies and melodies in major and minor keys
- Students improvise original melodies over given chord progressions, each in a consistent style, meter, and tonality

Achievement Standard, Advanced:

- Students improvise stylistically appropriate harmonizing parts in a variety of styles
- Students improvise original melodies in a variety of styles, over given chord progressions, each in a consistent style, meter, and tonality

NA.9-12.4 COMPOSING AND ARRANGING MUSIC WITHIN SPECIFIED GUIDELINES**Achievement Standard, Proficient:**

- Students compose music in several distinct styles, demonstrating creativity in using the elements of music for expressive effect
- Students arrange pieces for voices or instruments other than those for which the pieces were written in ways that preserve or enhance the expressive effect of the music
- Students compose and arrange music for voices and various acoustic and electronic instruments, demonstrating knowledge of the ranges and traditional usages of the sound sources

Achievement Standard, Advanced:

- Students compose music, demonstrating imagination and technical skill in applying the principles of composition

NA.9-12.5 READING AND NOTATING MUSIC**Achievement Standard, Proficient:**

- Students demonstrate the ability to read an instrumental or vocal score of up to four staves by describing how the elements of music are used
- Students who participate in a choral or instrumental ensemble or class sight-read, accurately and expressively, music with a level of difficulty of 3, on a scale of 1 to 6

Achievement Standard, Advanced:

- Students demonstrate the ability to read a full instrumental or vocal score by describing how the elements of music are used and explaining all transpositions and clefs

- Students interpret nonstandard notation symbols used by some 20th-century composers
- Students who participate in a choral or instrumental ensemble or class sight-read, accurately and expressively, music with a level of difficulty of 4, on a scale of 1 to 6

NA.9-12.6 LISTENING TO, ANALYZING, AND DESCRIBING MUSIC

Achievement Standard, Proficient:

- Students analyze aural examples of a varied repertoire of music, representing diverse genres and cultures, by describing the uses of elements of music and expressive devices
- Students demonstrate extensive knowledge of the technical vocabulary of music
- Students identify and explain compositional devices and techniques used to provide unity and variety and tension and release in a musical work and give examples of other works that make similar uses of these devices and techniques

Achievement Standard, Advanced:

- Students demonstrate the ability to perceive and remember music events by describing in detail significant events (e.g., fugal entrances, chromatic modulations, developmental devices) occurring in a given aural example
- Students compare ways in which musical materials are used in a given example relative to ways in which they are used in other works of the same genre or style
- Students analyze and describe uses of the elements of music in a given work that make it unique, interesting, and expressive

NA.9-12.7 EVALUATING MUSIC AND MUSIC PERFORMANCES

Achievement Standard, Proficient:

- Students evolve specific criteria for making informed, critical evaluations of the quality and effectiveness of performances, compositions, arrangements, and improvisations and apply the criteria in their personal participation in music
- Students evaluate a performance, composition, arrangement, or improvisation by comparing it to similar or exemplary models

Achievement Standard, Advanced:

- Students evaluate a given musical work in terms of its aesthetic qualities and explain the musical means it uses to evoke feelings and emotions

NA-M.9-12.8 UNDERSTANDING RELATIONSHIPS BETWEEN MUSIC, THE OTHER ARTS, AND DISCIPLINES OUTSIDE THE ARTS

Achievement Standard, Proficient:

- Students explain how elements, artistic processes (such as imagination or craftsmanship), and organizational principles (such as unity and variety or repetition and contrast) are used in similar and distinctive ways in the various arts and cite examples

- Students compare characteristics of two or more arts within a particular historical period or style and cite examples from various cultures
- Students explain ways in which the principles and subject matter of various disciplines outside the arts are interrelated with those of music (e.g., language arts: compare the ability of music and literature to convey images, feelings, and meanings; physics: describe the physical basis of tone production in string, wind, percussion, and electronic instruments and the human voice and of the transformation and perception of sound)

Achievement Standard, Advanced:

- Students compare the uses of characteristic elements, artistic processes, and organizational principles among the arts in different historical periods and different cultures
- Students explain how the roles of creators, performers, and others involved in the production and presentation of the arts are similar to and different from one another in the various arts (e.g., creators: painters, composers, choreographers, playwrights; performers: instrumentalists, singers, dancers, actors; others: conductors, costumers, directors, lighting designers)

NA-M.9-12.9 UNDERSTANDING MUSIC IN RELATION TO HISTORY AND CULTURE

Achievement Standard, Proficient:

- Students classify by genre or style and by historical period or culture unfamiliar but representative aural examples of music and explain the reasoning behind their classifications
- Students identify sources of American music genres (e.g., swing, Broadway musical, blues) trace the evolution of those genres, and cite well-known musicians associated with them
- Students identify various roles (e.g., entertainer, teacher, transmitter of cultural tradition) that musicians perform, cite representative individuals who have functioned in each role, and describe their activities and achievements

Achievement Standard, Advanced:

- Students identify and explain the stylistic features of a given musical work that serve to define its aesthetic tradition and its historical or cultural context
- Students identify and describe music genres or styles that show the influence of two or more cultural traditions, identify the cultural source of each influence, and trace the historical conditions that produced the synthesis of influences

DANCE

GRADES K – 4

NA-D.K-4.1 IDENTIFYING AND DEMONSTRATING MOVEMENT ELEMENTS AND SKILLS IN PERFORMING DANCE

Achievement Standard, Proficient:

- Students accurately demonstrate nonlocomotor/axial movements (such as bend, twist, stretch, swing)
- Students accurately demonstrate eight basic locomotor movements (such as walk, run, hop, jump, leap, gallop, slide, and skip), traveling forward, backward, sideward, diagonally, and turning
- Students create shapes at low, middle, and high levels
- Students demonstrate the ability to define and maintain personal space
- Students demonstrate movements in straight and curved pathways
- Students demonstrate accuracy in moving to a musical beat and responding to changes in tempo
- Students demonstrate kinesthetic awareness, concentration, and focus in performing movement skills
- Students attentively observe and accurately describe the action (such as skip, gallop) and movement elements (such as levels, directions) in a brief movement study

NA-D.K-4.2 UNDERSTANDING CHOREOGRAPHIC PRINCIPLES, PROCESSES, AND STRUCTURES

Achievement Standard, Proficient:

- Students create a sequence with a beginning, middle, and end, both with and without a rhythmic accompaniment; identify each of these parts of the sequence
- Students improvise, create, and perform dances based on their own ideas and concepts from other sources
- Students use improvisation to discover and invent movement and to solve movement problems
- Students create a dance phrase, accurately repeat it, and then vary it (making changes in the time, space, and/or force/energy)
- Students demonstrate the ability to work effectively alone and with a partner
- Students demonstrate the following partner skills: copying, leading and following, mirroring

NA-D.K-4.3 UNDERSTANDING DANCE AS A WAY TO CREATE AND COMMUNICATE MEANING

Achievement Standard, Proficient:

- Students observe and discuss how dance is different from other forms of human movement (such as sports, everyday gestures)
- Students take an active role in a class discussion about interpretations of and reactions to a dance

- Students present their own dances to peers and discuss their meanings with competence and confidence

NA-D.K-4.4 APPLYING AND DEMONSTRATING CRITICAL AND CREATIVE THINKING SKILLS IN DANCE

Achievement Standard, Proficient:

- Students explore, discover, and realize multiple solutions to a given movement problem; choose their favorite solution and discuss the reasons for that choice
- Students observe two dances and discuss how they are similar and different in terms of one of the elements of dance by observing body shapes, levels, pathways

NA-D.K-4.5 DEMONSTRATING AND UNDERSTANDING DANCE IN VARIOUS CULTURES AND HISTORICAL PERIODS

Achievement Standard, Proficient:

- Students perform folk dances from various cultures with competence and confidence
- Students learn and effectively share a dance from a resource in their own community; describe the cultural and/or historical context
- Students accurately answer questions about dance in a particular culture and time period (for example: In colonial America, why and in what settings did people dance? What did the dances look like?)

NA-D.K-4.6 MAKING CONNECTIONS BETWEEN DANCE AND HEALTHFUL LIVING

Achievement Standard, Proficient:

- Students identify at least three personal goals to improve themselves as dancers
- Students explain how healthy practices (such as nutrition, safety) enhance their ability to dance, citing multiple examples

NA-D.K-4.7 MAKING CONNECTIONS BETWEEN DANCE AND OTHER DISCIPLINES

Achievement Standard, Proficient:

- Students create a dance project that reveals understanding of a concept or idea from another discipline (such as pattern in dance and science)
- Students respond to a dance using another art form; explain the connections between the dance and their response to it (such as stating how their paintings reflect the dance they saw)

GRADES 5 – 8

NA-D.5-8.1 IDENTIFYING AND DEMONSTRATING MOVEMENT ELEMENTS AND SKILLS IN PERFORMING DANCE

Achievement Standard, Proficient:

- Students demonstrate the following movement skills and explain the underlying principles: alignment, balance, initiation of movement, articulation of isolated body parts, weight shift, elevation and landing, fall and recovery
- Students accurately identify and demonstrate basic dance steps, positions, and patterns for dance from two different styles or traditions (e.g., ballet, square, Ghanasian, Middle Eastern, modern)
- Students accurately transfer a spatial pattern from the visual to the kinesthetic
- Students accurately transfer a rhythmic pattern from the aural to the kinesthetic
- Students identify and clearly demonstrate a range of dynamics / movement qualities
- Students demonstrate increasing kinesthetic awareness, concentration, and focus in performing movement skills
- Students demonstrate accurate memorization and reproduction of movement sequences
- Students describe the action and movement elements observed in a dance, using appropriate movement/dance vocabulary

NA-D.5-8.2 UNDERSTANDING CHOREOGRAPHIC PRINCIPLES, PROCESSES, AND STRUCTURES

Achievement Standard, Proficient:

- Students clearly demonstrate the principles of contrast and transition
- Students effectively demonstrate the processes of reordering and chance
- Students successfully demonstrate the structures or forms of AB, ABA, canon, call and response, and narrative
- Students demonstrate the ability to work cooperatively in a small group during the choreographic process
- Students demonstrate the following partner skills in a visually interesting way: creating contrasting and complementary shapes, taking and supporting weight

NA-D.5-8.3 UNDERSTANDING DANCE AS A WAY TO CREATE AND COMMUNICATE MEANING

Achievement Standard, Proficient:

- Students effectively demonstrate the difference between pantomiming and abstracting a gesture
- Students observe and explain how different accompaniment (such as sound, music, spoken text) can affect the meaning of a dance
- Students demonstrate and/or explain how lighting and costuming can contribute to the meaning of a dance
- Students create a dance that successfully communicates a topic of personal significance

NA-D.5-8.4 APPLYING AND DEMONSTRATING CRITICAL AND CREATIVE THINKING SKILLS IN DANCE

Achievement Standard, Proficient:

- Students create a movement problem and demonstrate multiple solutions; choose the most interesting solutions and discuss the reasons for their choice
- Students demonstrate appropriate audience behavior in watching dance performances; discuss their opinions about the dances with their peers in a supportive and constructive way
- Students compare and contrast two dance compositions in terms of space (such as shape and pathways), time (such as rhythm and tempo), and force/energy (movement qualities)
- Students identify possible aesthetic criteria for evaluating dance (such as skill of performers, originality, visual and/or emotional impact, variety and contrast)

NA-D.5-8.5 DEMONSTRATING AND UNDERSTANDING DANCE IN VARIOUS CULTURES AND HISTORICAL PERIODS

Achievement Standard, Proficient:

- Students competently perform folk and/or classical dances from various cultures; describe similarities and differences in steps and movement styles
- Students competently perform folk, social, and/or theatrical dances from a broad spectrum of twentieth-century America
- Students learn from resources in their own community (such as people, books, videos) a folk dance of a different culture or a social dance of a different time period and the cultural/historical context of that dance, effectively sharing the dance and its context with their peers
- Students accurately describe the role of dance in at least two different cultures or time periods

NA-D.5-8.6 MAKING CONNECTIONS BETWEEN DANCE AND HEALTHFUL LIVING

Achievement Standard, Proficient:

- Students identify at least three personal goals to improve themselves as dancers and steps they are taking to reach those goals
- Students explain strategies to prevent dance injuries
- Students create their own warm-up and discuss how that warm-up prepares the body and mind for expressive purposes

NA-D.5-8.7 MAKING CONNECTIONS BETWEEN DANCE AND OTHER DISCIPLINES

Achievement Standard, Proficient:

- Students create a project that reveals similarities and differences between the arts
- Students cite examples of concepts used in dance and another discipline outside the arts (such as balance, shape, and pattern)
- Students observe the same dance both live and recorded on video; compare and contrast the aesthetic impact of the two observations

NA-D.9-12.1 IDENTIFYING AND DEMONSTRATING MOVEMENT ELEMENTS AND SKILLS IN PERFORMING DANCE

Achievement Standard, Proficient:

- Students demonstrate appropriate skeletal alignment, body-part articulation, strength, flexibility, agility, and coordination in locomotor and nonlocomotor/axial movements
- Students identify and demonstrate longer and more complex steps and patterns from two different dance styles/traditions
- Students demonstrate rhythmic acuity
- Students create and perform combinations and variations in a broad dynamic range
- Students demonstrate projection while performing dance skills
- Students demonstrate the ability to remember extended movement sequences

Achievement Standard, Advanced:

- Students demonstrate a high level of consistency and reliability in performing technical skills
- Students perform technical skills with artistic expression, demonstrating clarity, musicality, and stylistic nuance
- Students refine technique through self-evaluation and correction

NA-D.9-12.2 UNDERSTANDING CHOREOGRAPHIC PRINCIPLES, PROCESSES, AND STRUCTURES

Achievement Standard, Proficient:

- Students use improvisation to generate movement for choreography
- Students demonstrate understanding of structures or forms (such as palindrome, theme and variation, rondo, round, contemporary forms selected by the student) through brief dance studies
- Students choreograph a duet demonstrating an understanding of choreographic principles, processes, and structures

Achievement Standard, Advanced:

- Students demonstrate further development and refinement of the proficient skills to create a small group dance with coherence and aesthetic unity
- Students accurately describe how a choreographer manipulated and developed the basic movement content in a dance

NA-D.9-12.3 UNDERSTANDING DANCE AS A WAY TO CREATE AND COMMUNICATE MEANING

Achievement Standard, Proficient:

- Students formulate and answer questions about how movement choices communicate abstract ideas in dance

- Students demonstrate understanding of how personal experience influences the interpretation of a dance
- Students create a dance that effectively communicates a contemporary social theme

Achievement Standard, Advanced:

- Students examine ways that a dance creates and conveys meaning by considering the dance from a variety of perspectives
- Students compare and contrast how meaning is communicated in two of their own choreographic works

NA-D.9-12.4 APPLYING AND DEMONSTRATING CRITICAL AND CREATIVE THINKING SKILLS IN DANCE

Achievement Standard, Proficient:

- Students create a dance and revise it over time, articulating the reasons for their artistic decisions and what was lost and gained by those decisions
- Students establish a set of aesthetic criteria and apply it in evaluating their own work and that of others
- Students formulate and answer their own aesthetic questions (such as, What is it that makes a particular dance that dance? How much can one change that dance before it becomes a different dance?)

Achievement Standard, Advanced:

- Students discuss how skills developed in dance are applicable to a variety of careers
- Students analyze the style of a choreographer or cultural form; then create a dance in that style (choreographers that could be analyzed include George Balanchine, Alvin Ailey, Laura Dean; cultural forms include bharata natyam, classical ballet)
- Students analyze issues of ethnicity, gender, social/economic class, age and/or physical condition in relation to dance

NA-D.9-12.5 DEMONSTRATING AND UNDERSTANDING DANCE IN VARIOUS CULTURES AND HISTORICAL PERIODS

Achievement Standard, Proficient:

- Students perform and describe similarities and differences between two contemporary theatrical forms of dance
- Students perform or discuss the traditions and technique of a classical dance form (e.g., Balinese, ballet)
- Students create and answer twenty-five questions about dance and dancers prior to the twentieth century
- Students analyze how dance and dancers are portrayed in contemporary media

Achievement Standard, Advanced:

- Students create a time line illustrating important dance events in the twentieth century, placing them in their social/historical/cultural/political contexts
- Students compare and contrast the role and significance of dance in two different social/historical/cultural/political contexts

NA-D.9-12.6 MAKING CONNECTIONS BETWEEN DANCE AND HEALTHFUL LIVING

Achievement Standard, Proficient:

- Students reflect upon their own progress and personal growth during their study of dance
- Students effectively communicate how lifestyle choices affect the dancer
- Students analyze historical and cultural images of the body in dance and compare these to images of the body in contemporary media

Achievement Standard, Advanced:

- Students discuss challenges facing professional performers in maintaining healthy lifestyles

NA-D.9-12.7 MAKING CONNECTIONS BETWEEN DANCE AND OTHER DISCIPLINES

Achievement Standard, Proficient:

- Students create an interdisciplinary project based on a theme identified by the student, including dance and two other disciplines
- Students clearly identify commonalities and differences between dance and other disciplines with regard to fundamental concepts such as materials, elements, and ways of communicating meaning
- Students demonstrate/discuss how technology can be used to reinforce, enhance, or alter the dance idea in an interdisciplinary project

Achievement Standard, Advanced:

- Students compare one choreographic work to one other artwork from the same culture and time period in terms of how those works reflect the artistic/cultural/historical context
- Students create an interdisciplinary project using media technologies (such as video, computer) that presents dance in a new or enhanced form (such as video dance, video/computer-aided live performance, or animation)

THEATRE

GRADES K – 4

NA-T.K-4.1 SCRIPT WRITING BY PLANNING AND RECORDING IMPROVISATIONS BASED ON PERSONAL EXPERIENCE AND HERITAGE, IMAGINATION, LITERATURE, AND HISTORY

Achievement Standard:

- Students collaborate to select interrelated characters, environments, and situations for classroom dramatizations
- Students improvise dialogue to tell stories, and formalize improvisations by writing or recording the dialogue

NA-T.K-4.2 ACTING BY ASSUMING ROLES AND INTERACTING IN IMPROVISATIONS

Achievement Standard:

- Students imagine and clearly describe characters, their relationships, and their environments
- Students use variations of locomotor and nonlocomotor movement and vocal pitch, tempo, and tone for different characters
- Students assume roles that exhibit concentration and contribute to the action of classroom dramatizations based on personal experience and heritage, imagination, literature, and history

NA-T.K-4.3 DESIGNING BY VISUALIZING AND ARRANGING ENVIRONMENTS FOR CLASSROOM DRAMATIZATIONS

Achievement Standard:

- Students visualize environments and construct designs to communicate locale and mood using visual elements (such as space, color, line, shape, texture) and aural aspects using a variety of sound sources
- Students collaborate to establish playing spaces for classroom dramatizations and to select and safely organize available materials that suggest scenery, properties, lighting, sound, costumes, and makeup

NA-T.K-4.4 DIRECTING BY PLANNING CLASSROOM DRAMATIZATIONS

Achievement Standard:

- Students collaboratively plan and prepare improvisations and demonstrate various ways of staging classroom dramatizations

NA-T.K-4.5 RESEARCHING BY FINDING INFORMATION TO SUPPORT CLASSROOM DRAMATIZATIONS

Achievement Standard:

- Students communicate information to peers about people, events, time, and place related to classroom dramatizations

NA-T.K-4.6 COMPARING AND CONNECTING ART FORMS BY DESCRIBING THEATRE, DRAMATIC MEDIA (SUCH AS FILM, TELEVISION, AND ELECTRONIC MEDIA), AND OTHER ART FORMS

Achievement Standard:

- Students describe visual, aural, oral, and kinetic elements in theatre, dramatic media, dance, music, and visual arts

- Students compare how ideas and emotions are expressed in theatre, dramatic media, dance, music, and visual arts
- Students select movement, music, or visual elements to enhance the mood of a classroom dramatization

NA-T.K-4.7 ANALYZING AND EXPLAINING PERSONAL PREFERENCES AND CONSTRUCTING MEANINGS FROM CLASSROOM DRAMATIZATIONS AND FROM THEATRE, FILM, TELEVISION, AND ELECTRONIC MEDIA PRODUCTIONS

Achievement Standard:

- Students identify and describe the visual, aural, oral, and kinetic elements of classroom dramatizations and dramatic performances
- Students explain how the wants and needs of characters are similar to and different from their own
- Students articulate emotional responses to and explain personal preferences about the whole as well as the parts of dramatic performances
- Students analyze classroom dramatizations and, using appropriate terminology, constructively suggest alternative ideas for dramatizing roles, arranging environments, and developing situations along with means of improving the collaborative processes of planning, playing, responding, and evaluating

NA-T.K-4.8 UNDERSTANDING CONTEXT BY RECOGNIZING THE ROLE OF THEATRE, FILM, TELEVISION, AND ELECTRONIC MEDIA IN DAILY LIFE

Achievement Standard:

- Students identify and compare similar characters and situations in stories and dramas from and about various cultures, illustrate with classroom dramatizations, and discuss how theatre reflects life
- Students identify and compare the various settings and reasons for creating dramas and attending theatre, film, television, and electronic media productions

GRADES 5 – 8

NA-T.5-8.1 SCRIPT WRITING BY THE CREATION OF IMPROVISATIONS AND SCRIPTED SCENES BASED ON PERSONAL EXPERIENCE AND HERITAGE, IMAGINATION, LITERATURE, AND HISTORY

Achievement Standard:

- Students individually and in groups, create characters, environments, and actions that create tension and suspense
- Students refine and record dialogue and action

NA-T.5-8.2 ACTING BY DEVELOPING BASIC ACTING SKILLS TO PORTRAY CHARACTERS WHO INTERACT IN IMPROVISED AND SCRIPTED SCENES

Achievement Standard:

- Students analyze descriptions, dialogue, and actions to discover, articulate, and justify character motivation and invent character behaviors based on the observation of interactions, ethical choices, and emotional responses of people
- Students demonstrate acting skills (such as sensory recall, concentration, breath control, diction, body alignment, control of isolated body parts) to develop characterizations that suggest artistic choices
- Students in an ensemble, interact as the invented characters

NA-T.5-8.3 DESIGNING BY DEVELOPING ENVIRONMENTS FOR IMPROVISED AND SCRIPTED SCENES

Achievement Standard:

- Students explain the functions and interrelated nature of scenery, properties, lighting, sound, costumes, and makeup in creating an environment appropriate for the drama
- Students analyze improvised and scripted scenes for technical requirements
- Students develop focused ideas for the environment using visual elements (line, texture, color, space), visual principles (repetition, balance, emphasis, contrast, unity), and aural qualities (pitch, rhythm, dynamics, tempo, expression) from traditional and nontraditional sources
- Students work collaboratively and safely to select and create elements of scenery, properties, lighting, and sound to signify environments, and costumes and makeup to suggest character

NA-T.5-8.4 DIRECTING BY ORGANIZING REHEARSALS FOR IMPROVISED AND SCRIPTED SCENES

Achievement Standard:

- Students lead small groups in planning visual and aural elements and in rehearsing improvised and scripted scenes, demonstrating social, group, and consensus skills

NA-T.5-8.5 RESEARCHING BY USING CULTURAL AND HISTORICAL INFORMATION TO SUPPORT IMPROVISED AND SCRIPTED SCENES

Achievement Standard:

- Students apply research from print and nonprint sources to script writing, acting, design, and directing choices

NA-T.5-8.6 COMPARING AND INCORPORATING ART FORMS BY ANALYZING METHODS OF PRESENTATION AND AUDIENCE RESPONSE FOR THEATRE, DRAMATIC MEDIA (SUCH AS FILM, TELEVISION, AND ELECTRONIC MEDIA), AND OTHER ART FORMS

Achievement Standard:

- Students describe characteristics and compare the presentation of characters, environments, and actions in theatre, musical theatre, dramatic media, dance, and visual arts
- Students incorporate elements of dance, music, and visual arts to express ideas and emotions in improvised and scripted scenes
- Students express and compare personal reactions to several art forms
- Students describe and compare the functions and interaction of performing and visual artists and audience members in theatre, dramatic media, musical theatre, dance, music, and visual arts

NA-T.5-8.7 ANALYZING, EVALUATING, AND CONSTRUCTING MEANINGS FROM IMPROVISED AND SCRIPTED SCENES AND FROM THEATRE, FILM, TELEVISION, AND ELECTRONIC MEDIA PRODUCTIONS

Achievement Standard:

- Students describe and analyze the effect of publicity, study guides, programs, and physical environments on audience response and appreciation of dramatic performances
- Students articulate and support the meanings constructed from their and others' dramatic performances
- Students use articulated criteria to describe, analyze, and constructively evaluate the perceived effectiveness of artistic choices found in dramatic performances
- Students describe and evaluate the perceived effectiveness of students' contributions to the collaborative process of developing improvised and scripted scenes

NA-T.5-8.8 UNDERSTANDING CONTEXT BY ANALYZING THE ROLE OF THEATRE, FILM, TELEVISION, AND ELECTRONIC MEDIA IN THE COMMUNITY AND IN OTHER CULTURES

Achievement Standard:

- Students describe and compare universal characters and situations in dramas from and about various cultures and historical periods, illustrate in improvised and scripted scenes, and discuss how theatre reflects a culture
- Students explain the knowledge, skills, and discipline needed to pursue careers and vocational opportunities in theatre, film, television, and electronic media
- Students analyze the emotional and social impact of dramatic events in their lives, in the community, and in other cultures
- Students explain how culture affects the content and production values of dramatic performances
- Students explain how social concepts such as cooperation, communication, collaboration, consensus, self-esteem, risk taking, sympathy, and empathy apply in theatre and daily life

GRADES 9 - 12

NA-VA.9-12.1 UNDERSTANDING AND APPLYING MEDIA, TECHNIQUES, AND PROCESSES

Achievement Standard:

- Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks

- Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use

Achievement Standard, Advanced:

- Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium
- Students initiate, define, and solve challenging visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation

NA-VA.9-12.2 USING KNOWLEDGE OF STRUCTURES AND FUNCTIONS

Achievement Standard:

- Students demonstrate the ability to form and defend judgments about the characteristics and structures to accomplish commercial, personal, communal, or other purposes of art
- Students evaluate the effectiveness of artworks in terms of organizational structures and functions
- Students create artworks that use organizational principles and functions to solve specific visual arts problems

Achievement Standard, Advanced:

- Students demonstrate the ability to compare two or more perspectives about the use of organizational principles and functions in artwork and to defend personal evaluations of these perspectives
- Students create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions

NA-VA.9-12.3 CHOOSING AND EVALUATING A RANGE OF SUBJECT MATTER, SYMBOLS, AND IDEAS

Achievement Standard:

- Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture
- Students apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life

Achievement Standard, Advanced:

- Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others
- Students evaluate and defend the validity of sources for content and the manner in which subject matter, symbols, and images are used in the students' works and in significant works by others

NA-VA.9-12.4 UNDERSTANDING THE VISUAL ARTS IN RELATION TO HISTORY AND CULTURES

Achievement Standard:

- Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art
- Students describe the function and explore the meaning of specific art objects within varied cultures, times, and places
- Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making

Achievement Standard, Advanced:

- Students analyze and interpret artworks for relationships among form, context, purposes, and critical models, showing understanding of the work of critics, historians, aestheticians, and artists
- Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning

NA-VA.9-12.5 REFLECTING UPON AND ASSESSING THE CHARACTERISTICS AND MERITS OF THEIR WORK AND THE WORK OF OTHERS**Achievement Standard:**

- Students identify intentions of those creating artworks, explore the implications of various purposes, and justify their analyses of purposes in particular works
- Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts
- Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art

Achievement Standard, Advanced:

- Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions

NA-VA.9-12.6 MAKING CONNECTIONS BETWEEN VISUAL ARTS AND OTHER DISCIPLINES**Achievement Standard:**

- Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis
- Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences

Achievement Standard, Advanced:

- Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences

National Standards for Language Arts Education

ENGLISH

NL-ENG.K-12.1 READING FOR PERSPECTIVE

Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

NL-ENG.K-12.2 UNDERSTANDING THE HUMAN EXPERIENCE

Students read a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.

NL-ENG.K-12.3 EVALUATION STRATEGIES

Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

NL-ENG.K-12.4 COMMUNICATION SKILLS

Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

NL-ENG.K-12.5 COMMUNICATION STRATEGIES

Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

NL-ENG.K-12.6 APPLYING KNOWLEDGE

Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts.

NL-ENG.K-12.7 EVALUATING DATA

Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

NL-ENG.K-12.8 DEVELOPING RESEARCH SKILLS

Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

NL-ENG.K-12.9 MULTICULTURAL UNDERSTANDING

Students develop an understanding of and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions, and social roles.

NL-ENG.K-12.10 APPLYING NON-ENGLISH PERSPECTIVES

Students whose first language is not English make use of their first language to develop competency in the English language arts and to develop understanding of content across the curriculum.

NL-ENG.K-12.11 PARTICIPATING IN SOCIETY

Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

NL-ENG.K-12.12 APPLYING LANGUAGE SKILLS

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

FOREIGN LANGUAGES

GRADE K - 12

NL-FL.K-12.1 COMMUNICATION

Communicate in Languages Other Than English--

- Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions
- Students understand and interpret written and spoken language on a variety of topics
- Students present information, concepts, and ideas to an audience of listeners or readers on a variety of topics.

NL-FL.K-12.2 CULTURES

Gain Knowledge and Understanding of Other Cultures

- Students demonstrate an understanding of the relationship between the practices and perspectives of the culture studied
- Students demonstrate an understanding of the relationship between the products and perspectives of the culture studied

NL-FL.K-12.3 CONNECTIONS

Connect with Other Disciplines and Acquire Information

- Students reinforce and further their knowledge of other disciplines through the foreign language
- Students acquire information and recognize the distinctive viewpoints that are only available through the foreign language and its cultures

NL-FL.K-12.4 COMPARISONS

Develop Insight into the Nature of Language and Culture

- Students demonstrate understanding of the nature of language through comparisons of the language studied and their own
- Students demonstrate understanding of the concept of culture through comparisons of the cultures studied and their own.

NL-FL.K-12.5 COMMUNITIES

Participate in Multilingual Communities at Home & Around the World

- Students use the language both within and beyond the school setting
- Students show evidence of becoming life-long learners by using the language for personal enjoyment and enrichment.

National Standards for Mathematics Education

NUMBER AND OPERATIONS

GRADES PRE - K - 2

NM-NUM.PK-2.1

Understand numbers, ways of representing numbers, relationships among numbers, and number systems

- Count with understanding and recognize "how many" in sets of objects;
- Use multiple models to develop initial understandings of place value and the base-ten number system;
- Develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections;
- Develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers;
- Connect number words and numerals to the quantities they represent, using various physical models and representations;
- Understand and represent commonly used fractions, such as $\frac{1}{4}$, $\frac{1}{3}$, and $\frac{1}{2}$.

NM-NUM.PK-2.2

Understand meanings of operations and how they relate to one another

- Understand various meanings of addition and subtraction of whole numbers and the relationship between the two operations;
- Understand the effects of adding and subtracting whole numbers;
- Understand situations that entail multiplication and division, such as equal groupings of objects and sharing equally.

NM-NUM.PK-2.3

Compute fluently and make reasonable estimates

- Develop and use strategies for whole-number computations, with a focus on addition and subtraction;
- Develop fluency with basic number combinations for addition and subtraction;
- Use a variety of methods and tools to compute, including objects, mental computation, estimation, paper and pencil, and calculators.

GRADES 3 - 5

NM-NUM.3-5.1

Understand numbers, ways of representing numbers, relationships among numbers, and number systems

- Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers and decimals;
- Recognize equivalent representations for the same number and generate them by decomposing and composing numbers;
- Develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers;
- Use models, benchmarks, and equivalent forms to judge the size of fractions;
- Recognize and generate equivalent forms of commonly used fractions, decimals, and percents;
- Explore numbers less than 0 by extending the number line and through familiar applications;
- Describe classes of numbers according to characteristics such as the nature of their factors.

NM-NUM.3-5.2

Understand meanings of operations and how they relate to one another

- Understand various meanings of multiplication and division;
- Understand the effects of multiplying and dividing whole numbers;
- Identify and use relationships between operations, such as division as the inverse of multiplication, to solve problems;

- Understand and use properties of operations, such as the distributivity of multiplication over addition.

NM-NUM.3-5.3

Compute fluently and make reasonable estimates

- Develop fluency with basic number combinations for multiplication and division and use these combinations to mentally compute related problems, such as 30×50 ;
- Develop fluency in adding, subtracting, multiplying, and dividing whole numbers;
- Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results;
- Develop and use strategies to estimate computations involving fractions and decimals in situations relevant to students' experience;
- Use visual models, benchmarks, and equivalent forms to add and subtract commonly used fractions and decimals;
- Select appropriate methods and tools for computing with whole numbers from among mental computation, estimation, calculators, and paper and pencil according to the context and nature of the computation and use the selected method or tools.

GRADES 6 - 8

NM-NUM.6-8.1

Understand numbers, ways of representing numbers, relationships among numbers, and number systems

- Work flexibly with fractions, decimals, and percents to solve problems;
- Compare and order fractions, decimals, and percents efficiently and find their approximate locations on a number line;
- Develop meaning for percents greater than 100 and less than 1;
- Understand and use ratios and proportions to represent quantitative relationships;
- Develop an understanding of large numbers and recognize and appropriately use exponential, scientific, and calculator notation;
- Use factors, multiples, prime factorization, and relatively prime numbers to solve problems;
- Develop meaning for integers and represent and compare quantities with them.

NM-NUM.6-8.2

Understand meanings of operations and how they relate to one another

- Understand the meaning and effects of arithmetic operations with fractions, decimals, and integers;
- Use the associative and commutative properties of addition and multiplication and the

- distributive property of multiplication over addition to simplify computations with integers, fractions, and decimals;
- Understand and use the inverse relationships of addition and subtraction, multiplication and division, and squaring and finding square roots to simplify computations and solve problems.

NM-NUM.6-8.3

Compute fluently and make reasonable estimates

- Select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods;
- Develop and analyze algorithms for computing with fractions, decimals, and integers and develop fluency in their use;
- Develop and use strategies to estimate the results of rational-number computations and judge the reasonableness of the results;
- Develop, analyze, and explain methods for solving problems involving proportions, such as scaling and finding equivalent ratios.

GRADES 9 - 12

NM-NUM.9-12.1

Understand numbers, ways of representing numbers, relationships among numbers, and number systems

- Develop a deeper understanding of very large and very small numbers and of various representations of them;
- Compare and contrast the properties of numbers and number systems, including the rational and real numbers, and understand complex numbers as solutions to quadratic equations that do not have real solutions;
- Understand vectors and matrices as systems that have some of the properties of the real-number system;
- Use number-theory arguments to justify relationships involving whole numbers.

NM-NUM.9-12.2

Understand meanings of operations and how they relate to one another

- Judge the effects of such operations as multiplication, division, and computing powers and roots on the magnitudes of quantities;
- Develop an understanding of properties of, and representations for, the addition and multiplication of vectors and matrices;
- Develop an understanding of permutations and combinations as counting techniques.

NM-NUM.9-12.3

Compute fluently and make reasonable estimates

- Develop fluency in operations with real numbers, vectors, and matrices, using mental computation or paper-and-pencil calculations for simple cases and technology for more-complicated cases;
- Judge the reasonableness of numerical computations and their results.

ALGEBRA

GRADES PRE-K - 2

NM-ALG.PK-2.1

Understand patterns, relations, and functions

- Sort, classify, and order objects by size, number, and other properties;
- Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another;
- Analyze how both repeating and growing patterns are generated.

NM-ALG.PK-2.2

Represent and analyze mathematical situations and structures using algebraic symbols

- Illustrate general principles and properties of operations, such as commutativity, using specific numbers;
- Use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic notations.

NM-ALG.PK-2.3

Use mathematical models to represent and understand quantitative relationships

- Model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols.

NM-ALG.PK-2.4

Analyze change in various contexts

- Describe qualitative change, such as a student's growing taller;
- Describe quantitative change, such as a student's growing two inches in one year.

GRADES 3 - 5

NM-ALG.3-5.1

Understand patterns, relations, and functions

- Describe, extend, and make generalizations about geometric and numeric patterns;
- Represent and analyze patterns and functions, using words, tables, and graphs.

NM-ALG.3-5.2

Represent and analyze mathematical situations and structures using algebraic symbols

- Identify such properties as commutativity, associativity, and distributivity and use them to compute with whole numbers;
- Represent the idea of a variable as an unknown quantity using a letter or a symbol;
- Express mathematical relationships using equations.

NM-ALG.3-5.3

Use mathematical models to represent and understand quantitative relationships

- Model problem situations with objects and use representations such as graphs, tables, and equations to draw conclusions.

NM-ALG.3-5.4

Analyze change in various contexts

- Investigate how a change in one variable relates to a change in a second variable;
- Identify and describe situations with constant or varying rates of change and compare them.

GRADES 6 - 8

NM-ALG.6-8.1

Understand patterns, relations, and functions

- Represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic rules;
- Relate and compare different forms of representation for a relationship;
- Identify functions as linear or nonlinear and contrast their properties from tables, graphs, or equations.

NM-ALG.6-8.2

Represent and analyze mathematical situations and structures using algebraic symbols

- Develop an initial conceptual understanding of different uses of variables;
- Explore relationships between symbolic expressions and graphs of lines, paying particular attention to the meaning of intercept and slope;
- Use symbolic algebra to represent situations and to solve problems, especially those that involve linear relationships;
- Recognize and generate equivalent forms for simple algebraic expressions and solve linear equations.

NM-ALG.6-8.3

Use mathematical models to represent and understand quantitative relationships

- Model and solve contextualized problems using various representations, such as graphs, tables, and equations.

NM-ALG.6-8.4

Analyze change in various contexts

- Use graphs to analyze the nature of changes in quantities in linear relationships.

GRADES 9 - 12

NM-ALG.9-12.1

Understand patterns, relations, and functions

- Generalize patterns using explicitly defined and recursively defined functions;
- Understand relations and functions and select, convert flexibly among, and use various representations for them;
- Analyze functions of one variable by investigating rates of change, intercepts, zeros, asymptotes, and local and global behavior;
- Understand and perform transformations such as arithmetically combining, composing, and inverting commonly used functions, using technology to perform such operations on more-complicated symbolic expressions;
- Understand and compare the properties of classes of functions, including exponential, polynomial, rational, logarithmic, and periodic functions;
- Interpret representations of functions of two variables.

NM-ALG.9-12.2

Represent and analyze mathematical situations and structures using algebraic symbols

- Understand the meaning of equivalent forms of expressions, equations, inequalities, and relations;
- Write equivalent forms of equations, inequalities, and systems of equations and solve them

- with fluency -- mentally or with paper and pencil in simple cases and using technology in all cases;
- Use symbolic algebra to represent and explain mathematical relationships;
 - Use a variety of symbolic representations, including recursive and parametric equations, for functions and relations;
 - Judge the meaning, utility, and reasonableness of the results of symbol manipulations, including those carried out by technology.

NM-ALG.9-12.3

Use mathematical models to represent and understand quantitative relationships

- Identify essential quantitative relationships in a situation and determine the class or classes of functions that might model the relationships;
- Use symbolic expressions, including iterative and recursive forms, to represent relationships arising from various contexts;
- Draw reasonable conclusions about a situation being modeled.

NM-ALG.9-12.4

Analyze change in various contexts

- Approximate and interpret rates of change from graphical and numerical data.

GEOMETRY

GRADES PRE - K - 2

NM-GEO.PK-2.1

Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

- Recognize, name, build, draw, compare, and sort two- and three-dimensional shapes;
- Describe attributes and parts of two- and three-dimensional shapes;
- Investigate and predict the results of putting together and taking apart two- and three-dimensional shapes.

NM-GEO.PK-2.2

Specify locations and describe spatial relationships using coordinate geometry and other representational systems

- Describe, name, and interpret relative positions in space and apply ideas about relative position;
- Describe, name, and interpret direction and distance in navigating space and apply ideas

- about direction and distance;
- Find and name locations with simple relationships such as "near to" and in coordinate systems such as maps.

NM-GEO.PK-2.3

Apply transformations and use symmetry to analyze mathematical situations

- Recognize and apply slides, flips, and turns;
- Recognize and create shapes that have symmetry.

NM-GEO.PK-2.4

Use visualization, spatial reasoning, and geometric modeling to solve problems

- Create mental images of geometric shapes using spatial memory and spatial visualization;
- Recognize and represent shapes from different perspectives;
- Relate ideas in geometry to ideas in number and measurement;
- Recognize geometric shapes and structures in the environment and specify their location.

GRADES 3 - 5

NM-GEO.3-5.1

Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

- Identify, compare, and analyze attributes of two- and three-dimensional shapes and develop vocabulary to describe the attributes;
- Classify two- and three-dimensional shapes according to their properties and develop definitions of classes of shapes such as triangles and pyramids;
- Investigate, describe, and reason about the results of subdividing, combining, and transforming shapes;
- Explore congruence and similarity;
- Make and test conjectures about geometric properties and relationships and develop logical arguments to justify conclusions.

NM-GEO.3-5.2

Specify locations and describe spatial relationships using coordinate geometry and other representational systems

- Describe location and movement using common language and geometric vocabulary;
- Make and use coordinate systems to specify locations and to describe paths;
- Find the distance between points along horizontal and vertical lines of a coordinate system.

NM-GEO.3-5.3

Apply transformations and use symmetry to analyze mathematical situations

- Predict and describe the results of sliding, flipping, and turning two-dimensional shapes;
- Describe a motion or a series of motions that will show that two shapes are congruent;
- Identify and describe line and rotational symmetry in two- and three-dimensional shapes and designs.

NM-GEO.3-5.4

Use visualization, spatial reasoning, and geometric modeling to solve problems

- Build and draw geometric objects;
- Create and describe mental images of objects, patterns, and paths;
- Identify and build a three-dimensional object from two-dimensional representations of that object;
- Identify and draw a two-dimensional representation of a three-dimensional object;
- Use geometric models to solve problems in other areas of mathematics, such as number and measurement;
- Recognize geometric ideas and relationships and apply them to other disciplines and to problems that arise in the classroom or in everyday life.

GRADES 6 - 8

NM-GEO.6-8.1

Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

- Precisely describe, classify, and understand relationships among types of two- and three-dimensional objects using their defining properties;
- Understand relationships among the angles, side lengths, perimeters, areas, and volumes of similar objects;
- Create and critique inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.

NM-GEO.6-8.2

Specify locations and describe spatial relationships using coordinate geometry and other representational systems

- Use coordinate geometry to represent and examine the properties of geometric shapes;
- Use coordinate geometry to examine special geometric shapes, such as regular polygons or

those with pairs of parallel or perpendicular sides.

NM-GEO.6-8.3

Apply transformations and use symmetry to analyze mathematical situations

- Describe sizes, positions, and orientations of shapes under informal transformations such as flips, turns, slides, and scaling;
- Examine the congruence, similarity, and line or rotational symmetry of objects using transformations.

NM-GEO.6-8.4

Use visualization, spatial reasoning, and geometric modeling to solve problems

- Draw geometric objects with specified properties, such as side lengths or angle measures;
- Use two-dimensional representations of three-dimensional objects to visualize and solve problems such as those involving surface area and volume;
- Use visual tools such as networks to represent and solve problems;
- Use geometric models to represent and explain numerical and algebraic relationships;
- Recognize and apply geometric ideas and relationships in areas outside the mathematics classroom, such as art, science, and everyday life.

GRADES 9 - 12

NM-GEO.9-12.1

Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships

- Analyze properties and determine attributes of two- and three-dimensional objects;
- Explore relationships (including congruence and similarity) among classes of two- and three-dimensional geometric objects, make and test conjectures about them, and solve problems involving them;
- Establish the validity of geometric conjectures using deduction, prove theorems, and critique arguments made by others;
- Use trigonometric relationships to determine lengths and angle measures.

NM-GEO.9-12.2

Specify locations and describe spatial relationships using coordinate geometry and other representational systems

- Use Cartesian coordinates and other coordinate systems, such as navigational, polar, or spherical systems, to analyze geometric situations;
- Investigate conjectures and solve problems involving two- and three-dimensional objects

represented with Cartesian coordinates.

NM-GEO.9-12.3

Apply transformations and use symmetry to analyze mathematical situations

- Understand and represent translations, reflections, rotations, and dilations of objects in the plane by using sketches, coordinates, vectors, function notation, and matrices;
- Use various representations to help understand the effects of simple transformations and their compositions.

NM-GEO.9-12.4

Use visualization, spatial reasoning, and geometric modeling to solve problems

- Draw and construct representations of two- and three-dimensional geometric objects using a variety of tools;
- Visualize three-dimensional objects and spaces from different perspectives and analyze their cross sections;
- Use vertex-edge graphs to model and solve problems;
- Use geometric models to gain insights into, and answer questions in, other areas of mathematics;
- Use geometric ideas to solve problems in, and gain insights into, other disciplines and other areas of interest such as art and architecture.

MEASUREMENT

PRE-K - 2

NM-MEA.PK-2.2

Apply appropriate techniques, tools, and formulas to determine measurements

- Measure with multiple copies of units of the same size, such as paper clips laid end to end;
- Use repetition of a single unit to measure something larger than the unit, for instance, measuring the length of a room with a single meter stick;
- Use tools to measure;
- Develop common referents for measures to make comparisons and estimates.

GRADES 3 - 5

NM-MEA.3-5.1

Understand measurable attributes of objects and the units, systems, and processes of measurement

- Understand such attributes as length, area, weight, volume, and size of angle and select the

- appropriate type of unit for measuring each attribute;
- Understand the need for measuring with standard units and become familiar with standard units in the customary and metric systems;
 - Carry out simple unit conversions, such as from centimeters to meters, within a system of measurement;
 - Understand that measurements are approximations and how differences in units affect precision;
 - Explore what happens to measurements of a two-dimensional shape such as its perimeter and area when the shape is changed in some way.

NM-MEA.3-5.2

Apply appropriate techniques, tools, and formulas to determine measurements

- Develop strategies for estimating the perimeters, areas, and volumes of irregular shapes;
- Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles;
- Select and use benchmarks to estimate measurements;
- Develop, understand, and use formulas to find the area of rectangles and related triangles and parallelograms;
- Develop strategies to determine the surface areas and volumes of rectangular solids.

GRADES 6 - 8

NM-MEA.6-8.1

Understand measurable attributes of objects and the units, systems, and processes of measurement

- Understand both metric and customary systems of measurement;
- Understand relationships among units and convert from one unit to another within the same system;
- Understand, select, and use units of appropriate size and type to measure angles, perimeter, area, surface area, and volume.

NM-MEA.6-8.2

Apply appropriate techniques, tools, and formulas to determine measurements

- Use common benchmarks to select appropriate methods for estimating measurements;
- Select and apply techniques and tools to accurately find length, area, volume, and angle measures to appropriate levels of precision;
- Develop and use formulas to determine the circumference of circles and the area of triangles, parallelograms, trapezoids, and circles and develop strategies to find the area of more-complex shapes;

- Develop strategies to determine the surface area and volume of selected prisms, pyramids, and cylinders;
- Solve problems involving scale factors, using ratio and proportion;
- Solve simple problems involving rates and derived measurements for such attributes as velocity and density.

GRADES 9 - 12

NM-MEA.9-12.1

Understand measurable attributes of objects and the units, systems, and processes of measurement

- Make decisions about units and scales that are appropriate for problem situations involving measurement.

NM-MEA.9-12.2

Apply appropriate techniques, tools, and formulas to determine measurements

- Analyze precision, accuracy, and approximate error in measurement situations;
- Understand and use formulas for the area, surface area, and volume of geometric figures, including cones, spheres, and cylinders;
- Apply informal concepts of successive approximation, upper and lower bounds, and limit in measurement situations;
- Use unit analysis to check measurement computations.

DATA ANALYSIS AND PROBABILITY

GRADES PRE - K - 2

NM-DATA.PK-2.1

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer

- Pose questions and gather data about themselves and their surroundings;
- Sort and classify objects according to their attributes and organize data about the objects;
- Represent data using concrete objects, pictures, and graphs.

NM-DATA.PK-2.2

Select and use appropriate statistical methods to analyze data

- Describe parts of the data and the set of data as a whole to determine what the data show.

NM-DATA.PK-2.3

Develop and evaluate inferences and predictions that are based on data

- Discuss events related to students' experiences as likely or unlikely.

GRADES 3 - 5

NM-DATA.3-5.1

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer

- Design investigations to address a question and consider how data-collection methods affect the nature of the data set;
- Collect data using observations, surveys, and experiments;
- Represent data using tables and graphs such as line plots, bar graphs, and line graphs;
- Recognize the differences in representing categorical and numerical data.

NM-DATA.3-5.2

Select and use appropriate statistical methods to analyze data

- Describe the shape and important features of a set of data and compare related data sets, with an emphasis on how the data are distributed;
- Use measures of center, focusing on the median, and understand what each does and does not indicate about the data set;
- Compare different representations of the same data and evaluate how well each representation shows important aspects of the data.

NM-DATA.3-5.3

Develop and evaluate inferences and predictions that are based on data

- Propose and justify conclusions and predictions that are based on data and design studies to further investigate the conclusions or predictions.

NM-DATA.3-5.4

Understand and apply basic concepts of probability

- Describe events as likely or unlikely and discuss the degree of likelihood using such words as certain, equally likely, and impossible;
- Predict the probability of outcomes of simple experiments and test the predictions;
- Understand that a number can represent the measure of the likelihood of an event from 0 to 1.

GRADES 6 - 8

NM-DATA.6-8.1

Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer

- Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population;
- Select, create, and use appropriate graphical representations of data, including histograms, box plots, and scatterplots.

NM-DATA.6-8.2

Select and use appropriate statistical methods to analyze data

- Find, use, and interpret measures of center and spread, including mean and interquartile range;
- Discuss and understand the correspondence between data sets and their graphical representations, especially histograms, stem-and-leaf plots, box plots, and scatterplots.

NM-DATA.6-8.3

Develop and evaluate inferences and predictions that are based on data

- Use observations about differences between two or more samples to make conjectures about the populations from which the samples were taken;
- Make conjectures about possible relationships between two characteristics of a sample on the basis of scatterplots of the data and approximate lines of fit;
- Use conjectures to formulate new questions and plan new studies to answer them.

NM-DATA.6-8.4

Understand and apply basic concepts of probability

- Understand and use appropriate terminology to describe complementary and mutually exclusive events;
- Use proportionality and a basic understanding of probability to make and test conjectures about the results of experiments and simulations;
- Compute probabilities for simple compound events, using such methods as organized lists, tree diagrams, and area models.

GRADES 9 - 12

NM-DATA.9-12.1

Formulate questions that can be addressed with data and collect, organize, and display relevant

data to answer

- Understand the differences among various kinds of studies and which types of inferences can legitimately be drawn from each;
- Know the characteristics of well-designed studies, including the role of randomization in surveys and experiments;
- Understand the meaning of measurement data and categorical data, of univariate and bivariate data, and of the term variable;
- Understand histograms, parallel box plots, and scatterplots and use them to display data;
- Compute basic statistics and understand the distinction between a statistic and a parameter.

NM-DATA.9-12.2

Select and use appropriate statistical methods to analyze data

- For univariate measurement data, be able to display the distribution, describe its shape, and select and calculate summary statistics;
- For bivariate measurement data, be able to display a scatterplot, describe its shape, and determine regression coefficients, regression equations, and correlation coefficients using technological tools;
- Display and discuss bivariate data where at least one variable is categorical;
- Recognize how linear transformations of univariate data affect shape, center, and spread;
- Identify trends in bivariate data and find functions that model the data or transform the data so that they can be modeled.

NM-DATA.9-12.3

Develop and evaluate inferences and predictions that are based on data

- Use simulations to explore the variability of sample statistics from a known population and to construct sampling distributions;
- Understand how sample statistics reflect the values of population parameters and use sampling distributions as the basis for informal inference;
- Evaluate published reports that are based on data by examining the design of the study, the appropriateness of the data analysis, and the validity of conclusions;
- Understand how basic statistical techniques are used to monitor process characteristics in the workplace.

NM-DATA.9-12.4

Understand and apply basic concepts of probability

- Understand the concepts of sample space and probability distribution and construct sample spaces and distributions in simple cases;

- Use simulations to construct empirical probability distributions;
- Compute and interpret the expected value of random variables in simple cases;
- Understand the concepts of conditional probability and independent events;
- Understand how to compute the probability of a compound event.

PROBLEM SOLVING

GRADES PRE-K - 12

NM-PROB.PK-12.1

Instructional programs from prekindergarten through grade 12 should enable all students to

- Build new mathematical knowledge through problem solving

NM-PROB.PK-12.2

- Solve problems that arise in mathematics and in other contexts

NM-PROB.PK-12.3

- Apply and adapt a variety of appropriate strategies to solve problems

NM-PROB.PK-12.4:

- Monitor and reflect on the process of mathematical problem solving.

REASONING AND PROOF

GRADES PRE-K - 12

NM-PROB.REA.PK-12.1

Instructional programs from prekindergarten through grade 12 should enable all students to

- Recognize reasoning and proof as fundamental aspects of mathematics

NM-PROB.REA.PK-12.2

- Make and investigate mathematical conjectures

NM-PROB.REA.PK-12.3

- Develop and evaluate mathematical arguments and proofs

NM-PROB.REA.PK-12.4

- Select and use various types of reasoning and methods of proof.

COMMUNICATION

GRADES PRE - K - 12

NM-PROB.COMM.PK-12.1

Instructional programs from prekindergarten through grade 12 should enable all students to

- Organize and consolidate their mathematical thinking through communication

NM-PROB.COMM.PK-12.2

- Communicate their mathematical thinking coherently and clearly to peers, teachers, and others;

NM-PROB.COMM.PK-12.3

- Analyze and evaluate the mathematical thinking and strategies of others

NM-PROB.COMM.PK-12.4

- Use the language of mathematics to express mathematical ideas precisely.

CONNECTIONS

GRADES PRE - K - 12

NM-PROB.CONN.PK-12.1

Instructional programs from prekindergarten through grade 12 should enable all students to

- Recognize and use connections among mathematical ideas

NM-PROB.CONN.PK-12.2

- Understand how mathematical ideas interconnect and build on one another to produce a coherent whole

NM-PROB.CONN.PK-12.3

- Recognize and apply mathematics in contexts outside of mathematics.

REPRESENTATION

GRADES PRE - K - 12

NM-PROB.REP.PK-12.1

Instructional programs from prekindergarten through grade 12 should enable all students to

- Create and use representations to organize, record, and communicate mathematical ideas

NM-PROB.REP.PK-12.2

- Select, apply, and translate among mathematical representations to solve problems

NM-PROB.REP.PK-12.3

- Use representations to model and interpret physical, social, and mathematical phenomena.

National Standards for Physical Education and Health Education

PHYSICAL EDUCATION

GRADES K – 12

NPH.K-12.1 MOVEMENT FORMS

A physically educated student

- Demonstrates competency in many movement forms and proficiency in a few movement forms.

NPH.K-12.2 MOVEMENT CONCEPTS

A physically educated student

- Applies movement concepts and principles to the learning and development of motor skills.

NPH.K-12.3 PHYSICAL ACTIVITY

A physically educated student

- Exhibits a physically active lifestyle.

NPH.K-12.4 PHYSICAL FITNESS

A physically educated student

- Achieves and maintains a health-enhancing level of physical fitness.

NPH.K-12.5 RESPONSIBLE BEHAVIOR

A physically educated student

- Demonstrates responsible personal and social behavior in physical activity settings.

NPH.K-12.6 RESPECT FOR OTHERS

A physically educated student

- Demonstrates understanding and respect for differences among people in physical activity settings.

NPH.K-12.7 UNDERSTANDING CHALLENGE

A physically educated student

- Understands that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction.

HEALTH

GRADE K - 4

NPH-H.K-4.1 HEALTH PROMOTION AND DISEASE PREVENTION

Students will comprehend concepts related to health promotion and disease prevention.

- Describe relationships between personal health behaviors and individual well-being.
- Identify indicators of mental, emotional, social, and physical health during childhood.
- Describe the basic structure and functions of the human body systems.
- Describe how the family influences personal health.
- Describe how physical, social, and emotional environments influence personal health.
- Identify common health problems of children.
- Identify health problems that should be detected and treated early.
- Explain how childhood injuries and illnesses can be prevented or treated.

NPH-H.K-4.2 HEALTH INFORMATION, PRODUCTS AND SERVICES

Students will identify characteristics of valid health information and health-promoting products and services.

- Demonstrate the ability to locate resources from home, school and community that provide valid health information.
- Explain how media influences the selection of health information, products and services.
- Demonstrate the ability to locate school and community health helpers.

NPH-H.K-4.3 REDUCING HEALTH RISKS

Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks--

- Identify responsible health behaviors.
- Identify personal health needs.
- Compare behaviors that are safe to those that are risky or harmful.
- Demonstrate strategies to improve or maintain personal health.
- Develop injury prevention and management strategies for personal health.
- Demonstrate ways to avoid and reduce threatening situations.
- Apply skills to manage stress.

NPH-H.K-4.4 INFLUENCES ON HEALTH

Students will analyze the influence of culture, media, technology, and other factors on health--

- Describe how culture influences personal health behaviors.
- Explain how media influences thoughts, feelings, and health behaviors.
- Describe ways technology can influence personal health.
- Explain how information from school and family influences health.

NPH-H.K-4.5 USING COMMUNICATION SKILLS TO PROMOTE HEALTH

Students will demonstrate the ability to use interpersonal communication skills to enhance health--

- Distinguish between verbal and non-verbal communication.
- Describe characteristics needed to be a responsible friend and family member.
- Demonstrate healthy ways to express needs, wants, and feelings.
- Demonstrate ways to communicate care, consideration, and respect of self and others.
- Demonstrate attentive listening skills to build and maintain healthy relationships.
- Demonstrate refusal skills to enhance health.
- Differentiate between negative and positive behaviors used in conflict situations.
- Demonstrate non-violent strategies to resolve conflicts.

NPH-H.K-4.6 SETTING GOALS FOR GOOD HEALTH

Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health--

- Demonstrate the ability to apply a decision-making process to health issues and problems.
- Explain when to ask for assistance in making health-related decisions and setting health goals.
- Predict outcomes of positive health decisions.
- Set a personal health goal and track progress toward its achievement.

NPH-H.K-4.7 HEALTH ADVOCACY

Students will demonstrate the ability to advocate for personal, family, and community health--

- Describe a variety of methods to convey accurate health information and ideas.
- Express information and opinions about health issues.
- Identify community agencies that advocate for healthy individuals, families, and communities.
- Demonstrate the ability to influence and support others in making positive health choices.

GRADE 5 - 8

NPH-H.5-8.1 HEALTH PROMOTION AND DISEASE PREVENTION

Students will comprehend concepts related to health promotion and disease prevention--

- Explain the relationship between positive health behaviors and the prevention of injury, illness, disease, and premature death.
- Describe the interrelationship of mental, emotional, social, and physical health during adolescence.
- Explain how health is influenced by the interaction of body systems.
- Describe how family and peers influence the health of adolescents.
- Analyze how environment and personal health are interrelated.
- Describe ways to reduce risks related to adolescent health problems.
- Explain how appropriate health care can prevent premature death and disability.
- Describe how lifestyle, pathogens, family history, and other risk factors are related to the cause or prevention of disease and other health problems.

NPH-H.5-8.2 HEALTH INFORMATION, PRODUCTS AND SERVICES

Students will demonstrate the ability to access valid health information and health-promoting products and services--

- Analyze the validity of health information, products, and services.
- Demonstrate the ability to utilize resources from home, school, and community that provide valid health information.
- Analyze how media influences the selection of health information and products.
- Demonstrate the ability to locate health products and services.
- Compare the costs and validity of health products.
- Describe situations requiring professional health services.

NPH-H.5-8.3 REDUCING HEALTH RISKS

Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks--

- Explain the importance of assuming responsibility for personal health behaviors.
- Analyze a personal health assessment to determine health strengths and risks.
- Distinguish between safe and risky or harmful behaviors in relationships.
- Demonstrate strategies to improve or maintain personal and family health.
- Develop injury prevention and management strategies for personal and family health.
- Demonstrate ways to avoid and reduce threatening situations.
- Demonstrate strategies to manage stress.

NPH-H.5-8.4 INFLUENCES ON HEALTH

Students will analyze the influence of culture, media, technology, and other factors on health--

- Describe the influence of cultural beliefs on health behaviors and the use of health services.
- Analyze how messages from media and other sources influence health behaviors.
- Analyze the influence of technology on personal and family health.
- Analyze how information from peers influences health.

NPH-H.5-8.5 USING COMMUNICATION SKILLS TO PROMOTE HEALTH

Students will demonstrate the ability to use interpersonal communication skills to enhance health--

- Demonstrate effective verbal and non-verbal communication skills to enhance health.
- Describe how the behavior of family and peers affects interpersonal communication.
- Demonstrate healthy ways to express needs, wants and feelings.
- Demonstrate ways to communicate care, consideration, and respect of self and others.
- Demonstrate communication skills to build and maintain healthy relationships.
- Demonstrate refusal and negotiation skills to enhance health.
- Analyze the possible causes of conflict among youth in schools and communities.
- Demonstrate strategies to manage conflict in healthy ways.

NPH-H.5-8.6 SETTING GOALS FOR GOOD HEALTH

Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health--

- Demonstrate the ability to apply a decision-making process to health issues and problems individually and collaboratively.
- Analyze how individuals, family, and community values influence health-related decisions.
- Predict how decisions regarding health behaviors have consequences for self and others.
- Apply strategies and skills needed to attain personal health goals.
- Describe how personal health goals are influenced by changing information, abilities, priorities, and responsibilities.
- Develop a plan that addresses personal strengths, needs, and health risks.

NPH-H.5-8.7 HEALTH ADVOCACY

Students will demonstrate the ability to advocate for personal, family, and community health--

- Analyze various communication methods to accurately express health information and ideas.
- Express information and opinions about health issues.
- Identify barriers to effective communication of information, ideas, feelings, and opinions about health issues.
- Demonstrate the ability to influence and support others in making positive health choices.
- Demonstrate the ability to work cooperatively when advocating for healthy individuals, families, and schools.

GRADE 9 - 12

NPH-H.9-12.1 HEALTH PROMOTION AND DISEASE PREVENTION

Students will comprehend concepts related to health promotion and disease prevention.

- Analyze how behavior can impact health maintenance and disease prevention.
- Describe the interrelationships of mental, emotional, social, and physical health throughout adulthood.
- Explain the impact of personal health behaviors on the functioning of body systems.
- Analyze how the family, peers, and community influence the health of individuals.
- Analyze how the environment influences the health of the community.
- Describe how to delay onset and reduce risks of potential health problems during adulthood.
- Analyze how public health policies and government regulations influence health promotion and disease prevention.
- Analyze how the prevention and control of health problems are influenced by research and medical advances.

NPH-H.9-12.2 HEALTH INFORMATION, PRODUCTS AND SERVICES

Students will demonstrate the ability to access valid health information and health-promoting products and services--

- Evaluate the validity of health information, products, and services.
- Demonstrate the ability to evaluate resources from home, school, and community that provide valid health information.
- Evaluate factors that influence personal selection of health products and services.
- Demonstrate the ability to access school and community health services for self and others.
- Analyze the cost and accessibility of health care services.
- Analyze situations requiring professional health services.

NPH-H.9-12.3 REDUCING HEALTH RISKS

Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks--

- Analyze the role of individual responsibility for enhancing health.
- Evaluate a personal health assessment to determine strategies for health enhancement and risk reduction.
- Analyze the short-term and long-term consequences of safe, risky and harmful behaviors.
- Develop strategies to improve or maintain personal, family and community health.
- Develop injury prevention and management strategies for personal, family, and community health.
- Demonstrate ways to avoid and reduce threatening situations.
- Evaluate strategies to manage stress.

NPH-H.9-12.4 INFLUENCES ON HEALTH

Students will analyze the influence of culture, media, technology, and other factors on health--

- Analyze how cultural diversity enriches and challenges health behaviors.
- Evaluate the effect of media and other factors on personal, family, and community health.
- Evaluate the impact of technology on personal, family, and community health.
- Analyze how information from the community influences health.

NPH-H.9-12.5 USING COMMUNICATION SKILLS TO PROMOTE HEALTH

Students will demonstrate the ability to use interpersonal communication skills to enhance health--

- Demonstrate skills for communicating effectively with family, peers, and others.
- Analyze how interpersonal communication affects relationships.
- Demonstrate healthy ways to express needs, wants, and feelings.
- Demonstrate ways to communicate care, consideration, and respect of self and others.
- Demonstrate strategies for solving interpersonal conflicts without harming self or others.
- Demonstrate refusal, negotiation, and collaboration skills to avoid potentially harmful situations.
- Analyze the possible causes of conflict in schools, families, and communities.
- Demonstrate strategies used to prevent conflict.

NPH-H.9-12.6 SETTING GOALS FOR GOOD HEALTH

Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health--

- Demonstrate the ability to utilize various strategies when making decisions related to health needs and risks of young adults.
- Analyze health concerns that require collaborative decision-making.
- Predict immediate and long-term impact of health decisions on the individual, family, and community.
- Implement a plan for attaining a personal health goal.
- Evaluate progress toward achieving personal health goals.
- Formulate an effective plan for lifelong health.

NPH-H.9-12.7 HEALTH ADVOCACY

Students will demonstrate the ability to advocate for personal, family, and community health--

- Evaluate the effectiveness of communication methods for accurately expressing health information and ideas.
- Express information and opinions about health issues.
- Utilize strategies to overcome barriers when communicating information, ideas, feelings, and opinions about health issues.
- Demonstrate the ability to influence and support others in making positive health choices.
- Demonstrate the ability to work cooperatively when advocating for healthy communities.
- Demonstrate the ability to adapt health messages and communication techniques to the characteristics of a particular audience.

National Standards for Science Education

GRADES K - 4

NS.K-4.1 SCIENCE AS INQUIRY

As a result of activities in grades K-4, all students should develop

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

NS.K-4.2 PHYSICAL SCIENCE

As a result of the activities in grades K-4, all students should develop an understanding of

- Properties of objects and materials
- Position and motion of objects
- Light, heat, electricity, and magnetism

NS.K-4.3 LIFE SCIENCE

As a result of activities in grades K-4, all students should develop understanding of

- The characteristics of organisms
- Life cycles of organisms
- Organisms and environments

NS.K-4.4 EARTH AND SPACE SCIENCE

As a result of their activities in grades K-4, all students should develop an understanding of

- Properties of earth materials
- Objects in the sky
- Changes in earth and sky

NS.K-4.5 SCIENCE AND TECHNOLOGY

As a result of activities in grades K-4, all students should develop

- Abilities of technological design
- Understanding about science and technology
- Abilities to distinguish between natural objects and objects made by humans

NS.K-4.6 PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades K-4, all students should develop understanding of

- Personal health
- Characteristics and changes in populations
- Types of resources
- Changes in environments
- Science and technology in local challenges

NS.K-4.7 HISTORY OF NATURE AND SCIENCE:

As a result of activities in grades K-4, all students should develop understanding of

- Science as a human endeavor

GRADES 5 - 8

NS.5-8.1 SCIENCE AS INQUIRY

As a result of activities in grades 5-8, all students should develop--

- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry

NS.5-8.2 PHYSICAL SCIENCE

As a result of their activities in grades 5-8, all students should develop an understanding

- Properties and changes of properties in matter
- Motions and forces
- Transfer of energy

NS.5-8.3 LIFE SCIENCE

As a result of their activities in grades 5-8, all students should develop understanding

- Structure and function in living systems
- Reproduction and heredity
- Regulation and behavior
- Populations and ecosystems
- Diversity and adaptations of organisms

NS.5-8.4 EARTH AND SPACE SCIENCE

As a result of their activities in grades 5-8, all students should develop an understanding

- Structure of the earth system
- Earth's history
- Earth in the solar system

NS.5-8.5 SCIENCE AND TECHNOLOGY

As a result of activities in grades 5-8, all students should develop--

- Abilities of technological design
- Understandings about science and technology

NS.5-8.6 PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 5-8, all students should develop understanding

- Personal health
- Populations, resources, and environments
- Natural hazards
- Risks and benefits
- Science and technology in society

NS.5-8.7 HISTORY AND NATURE OF SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of

- Science as a human endeavor
- Nature of science
- History of science

NS.9-12.1 SCIENCE AS INQUIRY

As a result of activities in grades 9-12, all students should develop

- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry

NS.9-12.2 PHYSICAL SCIENCE

As a result of their activities in grades 9-12, all students should develop an understanding of

- Structure of atoms
- Structure and properties of matter
- Chemical reactions
- Motions and forces
- Conservation of energy and increase in disorder
- Interactions of energy and matter

NS.9-12.3 LIFE SCIENCE

As a result of their activities in grades 9-12, all students should develop understanding of

- The cell
- Molecular basis of heredity
- Biological evolution
- Interdependence of organisms
- Matter, energy, and organization in living systems
- Behavior of organisms

NS.9-12.4 EARTH AND SPACE SCIENCE

As a result of their activities in grades 9-12, all students should develop an understanding of

- Energy in the earth system
- Geochemical cycles
- Origin and evolution of the earth system
- Origin and evolution of the universe

NS.9-12.5 SCIENCE AND TECHNOLOGY

As a result of activities in grades 9-12, all students should develop

- Abilities of technological design
- Understandings about science and technology

NS.9-12.6 PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 9-12, all students should develop understanding of

- Personal and community health

- Population growth
- Natural resources
- Environmental quality
- Natural and human-induced hazards
- Science and technology in local, national, and global challenges

NS.9-12.7 HISTORY AND NATURE OF SCIENCE

As a result of activities in grades 9-12, all students should develop understanding of

- Science as a human endeavor
- Nature of scientific knowledge
- Historical perspectives

National Standards for Social Science Education

CIVICS

GRADES K - 4

NSS-C.K-4.1 WHAT IS GOVERNMENT?

What is Government and What Should It Do?

- What is government?
- Where do people in government get the authority to make, apply, and enforce rules and laws and manage disputes about them?
- Why is government necessary?
- What are some of the most important things governments do?
- What are the purposes of rules and laws?
- How can you evaluate rules and laws?
- What are the differences between limited and unlimited governments?
- Why is it important to limit the power of government?

NSS-C.K-4.2 VALUES AND PRINCIPLES OF DEMOCRACY

What are the Basic Values and Principles of American Democracy?

- What are the most important values and principles of American democracy?
- What are some important beliefs Americans have about themselves and their government?
- Why is it important for Americans to share certain values, principles, and beliefs?
- What are the benefits of diversity in the United States?
- How should conflicts about diversity be prevented or managed?
- How can people work together to promote the values and principles of American democracy?

NSS-C.K-4.3 PRINCIPLES OF DEMOCRACY

How Does the Government Established by the Constitution Embody the Purposes, Values, and Principles of American Democracy?

- What is the United States Constitution and why is it important?
- What does the national government do and how does it protect individual rights and promote the common good?
- What are the major responsibilities of state governments?
- What are the major responsibilities of local governments?
- Who represents you in the legislative and executive branches of your local, state, and national governments?

NSS-C.K-4.4 OTHER NATIONS AND WORLD AFFAIRS

What is the Relationship of the United States to Other Nations and to World Affairs?

- How is the world divided into nations?
- How do nations interact with one another?

NSS-C.K-4.5 ROLES OF THE CITIZEN

What are the Roles of the Citizen in American Democracy?

- What does it mean to be a citizen of the United States?
- How does a person become a citizen?
- What are important rights in the United States?
- What are important responsibilities of Americans?
- What dispositions or traits of character are important to the preservation and improvement of American democracy?
- How can Americans participate in their government?
- What is the importance of political leadership and public service?
- How should Americans select leaders?

GRADES 5 - 8

NSS-C.5-8.1 CIVIC LIFE, POLITICS AND GOVERNMENT

What are Civic Life, Politics, and Government?

- What is civic life? What is politics? What is government? Why are government and politics necessary? What purposes should government serve?
- What are the essential characteristics of limited and unlimited government?
- What are the nature and purposes of constitutions?
- What are alternative ways of organizing constitutional governments?

NSS-C.5-8.2 FOUNDATIONS OF THE POLITICAL SYSTEM

What are the Foundations of the American Political System?

- What is the American idea of constitutional government?

- What are the distinctive characteristics of American society?
- What is American political culture?
- What values and principles are basic to American constitutional democracy?

NSS-C.5-8.3 PRINCIPLES OF DEMOCRACY

How Does the Government Established by the Constitution Embody the Purposes, Values, and Principles of American Democracy?

- How are power and responsibility distributed, shared, and limited in the government established by the United States Constitution?
- What does the national government do?
- How are state and local governments organized and what do they do?
- Who represents you in local, state, and national governments?
- What is the place of law in the American constitutional system?
- How does the American political system provide for choice and opportunities for participation?

NSS-C.5-8.4 OTHER NATIONS AND WORLD AFFAIRS

What is the Relationship of the United States to Other Nations and to World Affairs?

- How is the world organized politically?
- How has the United States influenced other nations and how have other nations influenced American politics and society?

NSS-C.5-8.5 ROLES OF THE CITIZEN

What are the Roles of the Citizen in American Democracy?

- What is citizenship?
- What are the rights of citizens?
- What are the responsibilities of citizens?
- What dispositions or traits of character are important to the preservation and improvement of American constitutional democracy?
- How can citizens take part in civic life?

GRADES 9 - 12

NSS-C.9-12.1 CIVIC LIFE, POLITICS AND GOVERNMENT

What are Civic Life, Politics, and Government?

- What is civic life? What is politics? What is government? Why are government and politics necessary? What purposes should government serve?
- What are the essential characteristics of limited and unlimited government?
- What are the nature and purposes of constitutions?
- What are alternative ways of organizing constitutional governments?

NSS-C.9-12.2 FOUNDATIONS OF THE POLITICAL SYSTEM

What are the Foundations of the American Political System?

- What is the American idea of constitutional government?
- What are the distinctive characteristics of American society?
- What is American political culture?
- What values and principles are basic to American constitutional democracy?

NSS-C.9-12.3 PRINCIPLES OF DEMOCRACY

How Does the Government Established by the Constitution Embody the Purposes, Values, and Principles of American Democracy?

- How are power and responsibility distributed, shared, and limited in the government established by the United States Constitution?
- How is the national government organized and what does it do?
- How are state and local governments organized and what do they do?
- What is the place of law in the American constitutional system?
- How does the American political system provide for choice and opportunities for participation?

NSS-C.9-12.4 OTHER NATIONS AND WORLD AFFAIRS

What is the Relationship of the United States to Other Nations and to World Affairs?

- How is the world organized politically?
- How do the domestic politics and constitutional principles of the United States affect its relations with the world?
- How has the United States influenced other nations, and how have other nations influenced American politics and society?

NSS-C.9-12.5 ROLES OF THE CITIZEN

What are the Roles of the Citizen in American Democracy?

- What is citizenship?
- What are the rights of citizens?
- What are the responsibilities of citizens?
- What civic dispositions or traits of private and public character are important to the preservation and improvement of American constitutional democracy?
- How can citizens take part in civic life?

ECONOMICS

GRADES K - 4

NSS-EC.K-4.1 SCARCITY

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- People make choices because they can't have everything they want. Whenever a choice is made, something is given up.
- Economic wants are desires that can be satisfied by consuming a good, service, or leisure activity.
- Goods are objects that can satisfy people's wants; services are actions that can satisfy people's wants.
- People's choices about what goods and services to buy and consume determine how resources will be used.
- The opportunity cost of a choice is the value of the best alternative given up.
- People who make goods and provide services are called producers. People whose wants are satisfied by using goods and services are called consumers.
- Productive resources are the natural resources, human resources, and capital goods available to make goods and services. Natural resources, such as land, are "gifts of nature;" they are present without human intervention. Human resources are the quantity and quality of human effort directed toward producing goods and services.
- Capital goods are goods that are produced and used to make other goods and services. Human capital refers to the quality of labor resources, which can be improved through investments in education, training, and health.
- Entrepreneurs are people who organize other productive resources to make goods and services.

NSS-EC.K-4.2 MARGIN COST/BENEFIT

Different methods can be used to allocate goods and services. People acting individually or collectively through government, must choose which methods to use to allocate different kinds of goods and services.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- No method of distributing goods and services can satisfy all wants.
- There are different ways to distribute goods and services (by prices, command, majority rule, contests, force, first-come/first-served, sharing equally, lottery, personal characteristics, and others), and there are advantages and disadvantages to each.

NSS-EC.K-4.3 ALLOCATION OF GOODS AND SERVICES

Different methods can be used to allocate goods and services. People acting individually or collectively through government, must choose which methods to use to allocate different kinds of goods and services.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- No method of distributing goods and services can satisfy all wants.
- There are different ways to distribute goods and services (by prices, command, majority rule, contests, force, first-come/first-served, sharing equally, lottery, personal characteristics, and others), and there are advantages and disadvantages to each.

NSS-EC.K-4.4 ROLE OF INCENTIVES

People respond predictably to positive and negative incentives.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Rewards are positive incentives that make people better off.
- Penalties are negative incentives that make people worse off.
- Both positive and negative incentives affect people's choices and behavior.
- People's views of rewards and penalties differ because people have different values. Therefore, an incentive can influence different individuals in different ways.

NSS-EC.K-4.5 GAIN FROM TRADE

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Exchange is trading goods and services with people for other goods and services or for money.
- The oldest form of exchange is bartering the direct trading of goods and services between people.
- People voluntarily exchange goods and services because they expect to be better off after the exchange.

NSS-EC.K-4.6 SPECIALIZATION AND TRADE

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Economic specialization occurs when people concentrate their production on fewer kinds of goods and services than they consume.
- Division of labor occurs when the production of a good is broken down into numerous separate tasks, with different workers performing each task.
- Specialization and division of labor usually increase the productivity of workers.
- Greater specialization leads to increasing interdependence among producers and consumers.

NSS-EC.K-4.7 MARKETS -- PRICE AND QUANTITY DETERMINATION

Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- A price is what people pay when they buy a good or service, and what they receive when they sell a good or service.
- A market exists whenever buyers and sellers exchange goods and services.
- Most people produce and consume. As producers they make goods and services; as consumers they use goods and services.

NSS-EC.K-4.8 ROLE OF PRICE IN MARKET SYSTEM

Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- High prices for a good or service provide incentives for buyers to purchase less of that good or service, and for producers to make or sell more of it. Lower prices for a good or service provide incentives for buyers to purchase more of that good or service, and for producers to make or sell less of it.

NSS-EC.K-4.9 ROLE OF COMPETITION

Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Competition takes place when there are many buyers and sellers of similar products.
- Competition among sellers results in lower costs and prices, higher product quality, and better customer service.

NSS-EC.K-4.10 ROLE OF MARKET INSTITUTIONS

Institutions evolve in market economies to help individuals and groups accomplish their goals. Banks, labor unions, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Banks are institutions where people save money and earn interest, and where other people borrow money and pay interest.
- Saving is the part of income not spent on taxes or consumption.

NSS-EC.K-4.11 ROLE OF MONEY

Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services.

At the completion of Grade 4, students should know the Grade 4 benchmarks for this standard:

- Money is anything widely accepted as final payment for goods and services.
- Money makes trading easier by replacing barter with transactions involving currency, coins, or checks.
- People consume goods and services, not money; money is useful primarily because it can be used to buy goods and services.
- Producers use natural resources, human resources, and capital goods, (not money) to make goods and services.
- Most countries create their own currency for use as money.

NSS-EC.K-4.12 ROLE OF INTEREST RATES

Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, which affects the allocation of scarce resources between present and future uses.

There are no Grade 4 benchmarks for this standard.

NSS-EC.K-4.13 ROLE OF RESOURCES IN DETERMINING INCOME

Income for most people is determined by the market value of the productive resources they sell. What workers earn depends, primarily, on the market value of what they produce and how productive they are.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Labor is a human resource that is used to produce goods and services.

- People can earn income by exchanging their human resources (physical or mental work) for wages or salaries.

NSS-EC.K-4.14 PROFIT AND THE ENTREPRENEUR

Entrepreneurs are people who take the risks of organizing productive resources to make goods and services. Profit is an important incentive that leads entrepreneurs to accept the risks of business failure.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Entrepreneurs are individuals who are willing to take risks, to develop new products, and start new businesses. They recognize opportunities, like working for themselves, and accept challenges.
- An invention is a new product. Innovation is the introduction of an invention into a use that has economic value.
- Entrepreneurs often are innovative. They attempt to solve problems by developing and marketing new or improved products.

NSS-EC.K-4.15 GROWTH

Investment in factories, machinery, new technology, and in the health, education, and training of people can raise future standards of living.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- When workers learn and practice new skills they are improving their human capital.
- Workers can improve their productivity by improving their human capital.
- Workers can improve their productivity by using physical capital such as tools and machinery.

NSS-EC.K-4.16 ROLE OF GOVERNMENT

There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also redistribute income.

At the completion of Grade 4, students should know the following benchmarks for this standard:

- Governments provide certain kinds of goods and services in a market economy.
- Governments pay for the goods and services they use or provide by taxing or borrowing from people.

NSS-EC.K-4.17 USING COST/BENEFIT ANALYSIS TO EVALUATE GOVERNMENT PROGRAMS

Costs of government policies sometimes exceed benefits. This may occur because of incentives facing voters, government officials, and government employees, because of actions by special interest groups that can impose costs on the general public, or because social goals other than economic efficiency are being pursued.

There are no Grade 4 benchmarks for this standard.

NSS-EC.K-4.18 MACROECONOMY-INCOME/EMPLOYMENT, PRICES

A nation's overall levels of income, employment, and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies, and others in the economy.

There are no Grade 4 benchmarks for this standard.

NSS-EC.K-4.19 UNEMPLOYMENT AND INFLATION

Unemployment imposes costs on individuals and nations. Unexpected inflation imposes costs on many people and benefits some others because it arbitrarily redistributes purchasing power. Inflation can reduce the rate of growth of national living standards because individuals and organizations use resources to protect themselves against the uncertainty of future prices.

At the completion of Grade 4, students should know the Grade 4 benchmarks for this standard:

- Inflation is an increase in most prices; deflation is a decrease in most prices.
- Unemployment exists when people who are willing and able to work do not have jobs.

NSS-EC.K-4.20 MONETARY AND FISCAL POLICY

Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.

There are no Grade 4 benchmarks for this standard.

GRADES 5 - 8

NSS-EC.5-8.1 SCARCITY

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard and also understand:

- Scarcity is the condition of not being able to have all of the goods and services that one wants. It exists because human wants for goods and services exceed the quantity of goods and services that can be produced using all available resources.
- Like individuals, governments and societies experience scarcity because human wants exceed what can be made from all available resources.
- Choices involve trading off the expected value of one opportunity against the expected value of its best alternative.
- The choices people make have both present and future consequences.
- The evaluation of choices and opportunity costs is subjective; such evaluations differ across individuals and societies.

NSS-EC.5-8.2 MARGINAL COST/BENEFIT

Effective decision-making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something: few choices are "all or nothing" decisions.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- To determine the best level of consumption of a product, people must compare the additional benefits with the additional costs of consuming a little more or a little less.

NSS-EC.5-8.3 ALLOCATION OF GOODS AND SERVICES

Different methods can be used to allocate goods and services. People acting individually or collectively through government, must choose which methods to use to allocate different kinds of goods and services.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Scarcity requires the use of some distribution method, whether the method is selected explicitly or not.
- There are essential differences between a market economy, in which allocations result from individuals making decisions as buyers and sellers, and a command economy, in which resources are allocated according to central authority.
- People in all economies must address three questions: What goods and services will be produced? How will these goods and services be produced? Who will consume them?
- National economies vary in the extent to which they rely on government directives (central planning) and signals from private markets (prices) to allocate scarce goods, services, and productive resources.
- As consumers, people use resources in different ways to satisfy different wants. Productive resources can be used in different ways to produce different goods and services.

NSS-EC.5-8.4 ROLE OF INCENTIVES

People respond predictably to positive and negative incentives.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Responses to incentives are predictable because people usually pursue their self-interest.
- Changes in incentives cause people to change their behavior in predictable ways.
- Incentives can be monetary or non-monetary.

NSS-EC.5-8.5 GAIN FROM TRADE

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- When people buy something, they value it more than it costs them; when people sell something, they value it less than the payment they receive.
- Free trade increases worldwide material standards of living.
- Despite the mutual benefits from trade among people in different countries, many nations employ trade barriers to restrict free trade for national defense reasons or because some companies and workers are hurt by free trade.
- Imports are foreign goods and services that are purchased from sellers in other nations.
- Exports are domestic goods and services that are sold to buyers in other nations.
- Voluntary exchange among people or organizations in different countries gives people a broader range of choices in buying goods and services.

NSS-EC.5-8.6 SPECIALIZATION AND TRADE

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Labor productivity is output per worker.
- Like trade among individuals within one country, international trade promotes specialization and division of labor and increases output and consumption.
- As a result of growing international economic interdependence, economic conditions and policies in one nation increasingly affect economic conditions and policies in other nations.

NSS-EC.5-8.7 MARKETS -- PRICE AND QUANTITY DETERMINATION

Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Market prices are determined through the buying and selling decisions made by buyers and sellers.
- Relative prices refer to the price of one good or service compared to the prices of other goods and services. Relative prices are the basic measures of the relative scarcity of products when prices are set by market forces (supply and demand).
- The market clearing or equilibrium price for a good or service is the one price at which quantity supplied equals quantity demanded.
- If a price is above the market clearing price, it will fall, causing sellers to produce less and buyers to purchase more; if it is below the market clearing price, it will rise, causing sellers to produce more and buyers to purchase less.
- An exchange rate is the price of one nation's currency in terms of another nation's currency. Like other prices, the forces of supply and demand determine exchange rates. Foreign exchange markets allocate international currencies.

NSS-EC.5-8.8 ROLE OF PRICE IN MARKET SYSTEM

Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- An increase in the price of a good or service encourages people to look for substitutes, causing the quantity demanded to decrease, and vice versa. This relationship between price and quantity demanded, known as the law of demand, exists as long as other factors influencing demand do not change.
- An increase in the price of a good or service enables producers to cover higher per-unit costs, causing the quantity supplied to increase, and vice versa. This relationship between price and quantity supplied is normally true as long as other factors influencing costs of production and supply do not change.
- Markets are interrelated; changes in the price of one good or service can lead to changes in prices of many other goods and services.
- Scarce goods and services are allocated in a market economy through the influence of prices on production and consumption decisions.

NSS-EC.5-8.9 ROLE OF COMPETITION

Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Sellers compete on the basis of price, product quality, customer service, product design and variety, and advertising.
- Competition among buyers of a product results in higher product prices.
- The number of buyers and sellers influences the level of competition in a market.

NSS-EC.5-8.10 ROLE OF ECONOMIC INSTITUTIONS

Institutions evolve in market economies to help individuals and groups accomplish their goals. Banks, labor unions, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Banks and other financial institutions channel funds from savers to borrowers and investors.
- Through the process of collective bargaining with employers, labor unions represent some workers in negotiations involving wages, fringe benefits, and work rules.
- Not-for-profit organizations are established primarily for religious, health, educational, civic, or social purposes and are exempt from certain taxes.

NSS-EC.5-8.11 ROLE OF MONEY

Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- As a store of value, money makes it easier for people to save and defer consumption until the future.
- As a unit of account, money is used to compare the market value of different goods and services.
- Money encourages specialization by decreasing the costs for exchange.
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NSS-EC.5-8.12 ROLE OF INTEREST RATES

Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, which affects the allocation of scarce resources between present and future uses.

There are no Grade 8 benchmarks for this standard.

NSS-EC.5-8.13 ROLE OF RESOURCES IN DETERMINING INCOME

Income for most people is determined by the market value of the productive resources they sell. What workers earn depends, primarily, on the market value of what they produce and how productive they are.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Employers are willing to pay wages and salaries to workers because they expect to be able to sell the goods and services that those workers produce at prices high enough to cover the wages and salaries and all other costs of production.
- To earn income people sell productive resources. These include their labor, capital, natural resources, and entrepreneurial talents.
- A wage or salary is the price of labor; it usually is determined by the supply of and demand for labor.
- More productive workers are likely to be of greater value to employers and earn higher wages than less productive workers.
- People's incomes, in part, reflect choices they have made about education, training, skill development, and careers. People with few skills are more likely to be poor.

NSS-EC.5-8.14 PROFIT AND THE ENTREPRENEUR

Entrepreneurs are people who take the risks of organizing productive resources to make goods and services. Profit is an important incentive that leads entrepreneurs to accept the risks of business failure.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Entrepreneurs compare the expected benefits of entering a new enterprise with the expected costs.
- Entrepreneurs accept the risks in organizing resources to produce goods and services because they hope to earn profits.
- Entrepreneurs and other sellers earn profits when buyers purchase the product they sell at prices high enough to cover the costs of production.
- Entrepreneurs and other sellers incur losses when buyers do not purchase the products they sell at prices high enough to cover costs of production.

- In addition to profits, entrepreneurs respond to other incentives including the opportunity to be their own boss, the chance to achieve recognition, and the satisfaction of creating new products or improving existing ones. In addition to financial losses, other disincentives to which entrepreneurs respond include the responsibility, long hours, and stress of running a business.

NSS-EC.5-8.15 GROWTH

Investment in factories, machinery, new technology, and in the health, education, and training of people can raise future standards of living.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Standards of living increase as the productivity of labor improves.
- Productivity is measured by dividing output (goods and services) by the number of inputs used to produce the output. A change in productivity is a change in output relative to input.
- Technological change is an advance in knowledge leading to new and improved goods and services and better ways of producing them.
- Increases in productivity result from advances in technology and other sources.

NSS-EC.5-8.16 ROLE OF GOVERNMENT

There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also redistribute income.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Public goods and services provide benefits to more than one person at a time, and their use cannot be restricted to only those people who have paid to use them.
- If a good or service cannot be withheld from those who do not pay for it, providers expect to be unable to sell it and, therefore, will not produce it. In market economies, governments provide some of these goods and services.
- In the United States, the federal government enforces antitrust laws and regulations to try to maintain effective levels of competition in as many markets as possible; frequently, however, laws and regulations also have unintended effects for example reducing competition.
- Most federal government tax revenue comes from personal income and payroll taxes. Payments to social security recipients, the costs of national defense, medical expenditures, and interest payments on the national debt constitute the bulk of federal government spending.
- Most state and local government revenues come from sales taxes, grants from the federal government, personal income taxes, and property taxes. The bulk of state and local government revenue is spent is for education, public welfare, road construction and repair, and public safety expenditures in their state and community with those for the U.S. federal government.

NSS-EC.5-8.17 USING COST/BENEFIT ANALYSIS TO EVALUATE GOVERNMENT PROGRAMS

Costs of government policies sometimes exceed benefits. This may occur because of incentives facing voters, government officials, and government employees, because of actions by special interest groups that can impose costs on the general public, or because social goals other than economic efficiency are being pursued.

There are no Grade 8 benchmarks for this standard.

NSS-EC.5-8.18 MACROECONOMY-INCOME/EMPLOYMENT, PRICES

A nation's overall levels of income, employment, and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies, and others in the economy.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- Gross Domestic Product (GDP) is a basic measure of a nation's economic output and income. It is the total market value, measured in dollars, of all final goods and services produced in the economy in one year.
- Per capita GDP is GDP divided by the number of people living in a country.
- When consumers make purchases, goods and services are transferred from businesses to households in exchange for money payments. That money is used in turn by businesses to pay for productive resources (natural, human, and capital), and to pay taxes.

NSS-EC.5-8.19 UNEMPLOYMENT AND INFLATION

Unemployment imposes costs on individuals and nations. Unexpected inflation imposes costs on many people and benefits some others because it arbitrarily redistributes purchasing power. Inflation can reduce the rate of growth of national living standards because individuals and organizations use resources to protect themselves against the uncertainty of future prices.

At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also understand:

- When unemployment exists, an economy's production is less than potential GDP and some labor resources are not used.
- The labor force consists of people age 16 and over who are employed or actively seeking work.
- Inflation reduces the value of money.
- When people's incomes increase more slowly than the inflation rate, their purchasing power declines.

NSS-EC.5-8.20 MONETARY AND FISCAL POLICYS

Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.

There are no Grade 8 benchmarks for this standard.

GRADES 9 - 12

NSS-EC.9-12.1 SCARCITY

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Choices made by individuals, firms, or government officials often have long run unintended consequences that can partially or entirely offset the initial effects of the decision.

NSS-EC.9-12.2 MARGINAL COST/BENEFIT

Effective decision-making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something: few choices are "all or nothing" decisions.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Marginal benefit is the change in total benefit resulting from an action. Marginal cost is the change in total cost resulting from an action.
- As long as the marginal benefit of an activity exceeds the marginal cost, people are better off doing more of it; when the marginal cost exceeds the marginal benefit, they are better off doing less of it.
- To produce the profit-maximizing level of output and hire the optimal number of workers, and other resources, producers must compare the marginal benefits and marginal costs of producing a little more with the marginal benefits and marginal costs of producing a little less.
- To determine the optimal level of a public policy program, voters and government officials must compare the marginal benefits and marginal costs of providing a little more of a little less of the program's services.

NSS-EC.9-12.3 ALLOCATION OF GOODS AND SERVICES

Different methods can be used to allocate goods and services. People acting individually or collectively through government, must choose which methods to use to allocate different kinds of goods and services.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Comparing the benefits and costs of different allocation methods in order to choose the method that is most appropriate for some specific problem can result in more effective allocations and a more effective overall allocation system.

NSS-EC.9-12.4 ROLE OF INCENTIVES

People respond predictably to positive and negative incentives.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Acting as consumers, producers, workers, savers, investors, and citizens, people respond to incentives in order to allocate their scarce resources in ways that provide the highest possible returns to them.
- Small and large firms, labor unions and educational, and other not-for-profit organizations have different goals and face different rules and constraints. These goals, rules, and constraints influence the benefits and costs of those who work with or for those organizations, and, therefore, their behavior.

NSS-EC.9-12.5 GAIN FROM TRADE

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- A nation pays for its imports with its exports.
- When imports are restricted by public policies, consumers pay higher prices and job opportunities and profits in exporting firms decrease.

NSS-EC.9-12.6 SPECIALIZATION AND TRADE

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand

- Two factors that prompt international trade are international differences in the availability of productive resources and differences in relative prices.
- Transaction costs are costs (other than price) that are associated with the purchase of a good or service. When transaction costs decrease, trade increases.

- Individuals and nations have a comparative advantage in the production of goods or services if they can produce a product at a lower opportunity cost than other individuals or nations.
- Comparative advantages change over time because of changes in factor endowments, resource prices, and events that occur in other nations.

NSS-EC.9-12.7 MARKETS -- PRICE AND QUANTITY DETERMINATION

Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- A shortage occurs when buyers want to purchase more than producers want to sell at the prevailing price.
- A surplus occurs when producers want to sell more than buyers want to purchase at the prevailing price.
- Shortages of a product usually result in price increases in a market economy; surpluses usually result in price decreases.
- When the exchange rate between two currencies changes, the relative prices of the goods and services traded among countries using those currencies change; as a result, some groups gain and others lose.

NSS-EC.9-12.8 ROLE OF PRICE IN MARKET SYSTEM

Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Demand for a product changes when there is a change in consumers' incomes or preferences, or in the prices of related goods or services, or in the number of consumers in a market.
- Supply of a product changes when there are changes in either the prices of the productive resources used to make the good or service, the technology used to make the good or service, the profit opportunities available to producers by selling other goods or services, or the number of sellers in a market.
- Changes in supply or demand cause relative prices to change; in turn, buyers and sellers adjust their purchase and sales decisions.
- Government-enforced price ceilings set below the market-clearing price and government-enforced price floors set above the market-clearing price distort price signals and incentives to producers and consumers. The price ceilings cause persistent shortages, while the price floors cause persistent surpluses.

NSS-EC.9-12.9 ROLE OF COMPETITION

Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- The pursuit of self-interest in competitive markets generally leads to choices and behavior that also promote the national level of economic well-being.
- The level of competition in an industry is affected by the ease with which new producers can enter the industry and by consumers' information about the availability, price and quantity of substitute goods and services.
- Collusion among buyers or sellers reduces the level of competition in a market. Collusion is more difficult in markets with large numbers of buyers and sellers.
- The introduction of new products and production methods by entrepreneurs is an important form of competition and is a source of technological progress and economic growth.

NSS-EC.9-12.10 ROLE OF MARKET INSTITUTIONS

Institutions evolve in market economies to help individuals and groups accomplish their goals. Banks, labor unions, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Property rights, contract enforcement, standards for weights and measures, and liability rules affect incentives for people to produce and exchange goods and services.
- Incorporation allows firms to accumulate sufficient financial capital to make large-scale investments and achieve economies of scale. Incorporation also reduces the risk to investors by limiting stockholders' liability to their share of ownership of the corporation.

NSS-EC.9-12.11 ROLE OF MONEY

Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- The basic money supply in the United States consists of currency, coins, and checking account deposits.

- In many economies, when banks make loans, the money supply increases; when loans are paid off, the money supply decreases.
- In many economies, when banks make loans, the money supply increases; when loans are paid off, the money supply decreases.

NSS-EC.9-12.12 ROLE OF INTEREST RATES

Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, which affects the allocation of scarce resources between present and future uses.

At the completion of Grade 12, students will understand:

- An interest rate is a price of money that is borrowed or saved.
- Like other prices, the forces of supply and demand determine interest rates.
- The real interest rate is the nominal or current market interest rate minus the expected rate of inflation.
- Higher real interest rates provide incentives for people to save more and borrow less. Lower real interest rates provide incentives for people to save less and borrow more.
- Real interest rates normally are positive because people must be compensated for deferring the use of resources from the present into the future.
- Riskier loans command higher interest rates than safer loans because of the greater chance of default on the repayment of the risky loan. Higher interest rates reduce business investment spending and consumer spending on housing, cars, and other major purchases. Policies that raise interest rates can be used to reduce these kinds of spending, while policies that decrease interest rates can be used to increase these kinds of spending.

NSS-EC.9-12.13 ROLE OF RESOURCES IN DETERMINING INCOME

Income for most people is determined by the market value of the productive resources they sell. What workers earn depends, primarily, on the market value of what they produce and how productive they are.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand

- Changes in the structure of the economy, the level of gross domestic product, technology, government policies, and discrimination can influence personal income.
- In a labor market, in the absence of other changes, if wage or salary payments increase, workers will increase the quantity of labor they supply and firms will decrease the quantity of labor they demand.
- Changes in the prices for productive resources affect the incomes of the owners of those productive resources and the combination of those resources used by firms.
- Changes in demand for specific goods and services often affect the incomes of the workers who make those goods and services.

- Two methods for classifying how income is distributed in a nation the personal distribution of income and the functional distribution reflect, respectively, the distribution of income among different groups of households and the distribution of income among different businesses and occupations in the economy.

NSS-EC.9-12.14 PROFIT AND THE ENTREPRENEUR

Entrepreneurs are people who take the risks of organizing productive resources to make goods and services. Profit is an important incentive that leads entrepreneurs to accept the risks of business failure.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Entrepreneurial decisions affect job opportunities for other workers.
- Entrepreneurial decisions are influenced by government tax and regulatory policies.

NSS-EC.9-12.15 GROWTH

Investment in factories, machinery, new technology, and in the health, education, and training of people can raise future standards of living.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Economic growth is a sustained rise in a nation's production of goods and services. It results from investments in human and physical capital, research and development, and technological change, and from improved institutional arrangements and incentives.
- Historically, economic growth has been the primary vehicle for alleviating poverty and raising standards of living.
- Economic growth creates new employment and profit opportunities in some industries, but growth reduces opportunities in others.
- Investments in physical and or human capital can increase productivity, but such investments entail opportunity costs and economic risks.
- Investing in new physical or human capital can increase productivity, but such investments entail opportunity costs and economic risks.
- Higher interest rates discourage investment.
- The rate of productivity increase in an economy is strongly affected by the incentives that reward successful innovation and investments (in research and development, and in physical and human capital).

NSS-EC.9-12.16 ROLE OF GOVERNMENT

There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address

environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also redistribute income.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- Markets do not allocate resources effectively if: (1) property rights are not clearly defined or enforced, (2) externalities (spillover effects) affecting large numbers of people are associated with the production or consumption of a product; or (3) markets are not competitive.
- An important role for government in the economy is to define, establish, and enforce property rights. A property right to a good or service includes the right to exclude others from using the good or service and the right to transfer the ownership or use of the resource to others.
- Property rights provide incentives for the owners of resources to weigh the value of present uses against the value of conserving the resources for future use.
- Externalities exist when some of the costs and benefits associated with production and consumption falls on someone other than the producers or consumers of the product.
- When a price fails to reflect all the benefits of a product, too little of the product is produced and consumed. When a price fails to reflect all the costs of a product, too much of it is produced and consumed. Government can use subsidies to help correct for insufficient output; it can use taxes to help correct for excessive output; or it can regulate output directly to correct for over- or under-production or consumption of a product.
- When one producer can supply total output in a market at a cost that is lower than when two or more producers divide production, competition may be impossible. In the absence of competition, government regulations may then be used to try to control price, output, and quality.
- Governments often redistribute income directly when individuals or interest groups are not satisfied with the income distribution resulting from markets; governments also redistribute income indirectly as side-effects of other government actions that affect prices or output levels for various goods and services.
- Governments provide an alternative method to markets for supplying goods and services when it appears that the benefits to society of doing so outweigh the costs to society. Not all individuals will bear the same costs or share the same benefits of those policies.
- A government policy to correct a market imperfection is not justified economically if the cost of implementing it exceeds its expected net benefits.

NSS-EC.9-12.17 USING COST/BENEFIT ANALYSIS TO EVALUATE GOVERNMENT PROGRAMS

Costs of government policies sometimes exceed benefits. This may occur because of incentives facing voters, government officials, and government employees, because of actions by special interest groups that can impose costs on the general public, or because social goals other than economic efficiency are being pursued.

At the completion of Grade 12, students will understand:

- Citizens, government employees, and elected officials do not always directly bear the costs of their political decisions. This often leads to policies whose costs outweigh their benefits for society.
- Incentives exist for political leaders to implement policies that disperse costs widely over large groups of people and benefit small, and politically powerful groups of people.
- Incentives exist for political leaders to favor programs that entail immediate benefits and deferred costs; few incentives favor programs promising immediate costs and deferred benefits, even though the latter programs are sometimes economically more effective than the former programs.
- Although barriers to international trade usually impose more costs than benefits, they are often advocated by people and groups who expect to gain substantially from them. Because the costs of these barriers are typically spread over a large number of people who each pay only a little and may not recognize the cost, policies supporting trade barriers are often adopted through the political process.
- Special interest groups often advocate Price controls. Price controls reduce the quantity of goods and services produced, thus depriving consumers of some goods and services whose value would exceed their cost.

NSS-EC.9-12.18 MACROECONOMY-INCOME/EMPLOYMENT, PRICES

A nation's overall levels of income, employment, and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies, and others in the economy.

At the completion of Grade 12, students will know the Grade 8 benchmarks for this standard, and also understand:

- Nominal GDP is measured in current dollars; thus, an increase in GDP may reflect not only increases in the production of goods and services, but also increases in prices. GDP adjusted for price changes is called "real GDP." Real GDP per capita is a measure that permits comparisons of material living standards over time and among different nations.
- The potential level of real GDP for a nation is determined by the quantity and quality of its natural resources, the size and skills of its labor force, and the size and quality of its stock of capital resources.
- One person's spending is other people's income. Consequently, an initial change in spending (consumption, investment, government, or net exports) usually results in a larger change in national levels of income, spending, and output.
- When desired expenditures for consumption, investment, government spending, and net exports are greater than the value of a nation's output of final goods and services, GDP rises, and inflation occurs and/or employment rises.
- When desired expenditures for consumption, investment, government spending, and net exports are less than the value of a nation's output of final goods and services, GDP decreases and inflation and/or employment decreases.

NSS-EC.9-12.19 UNEMPLOYMENT AND INFLATION

Unemployment imposes costs on individuals and nations. Unexpected inflation imposes costs on many people and benefits some others because it arbitrarily redistributes purchasing power. Inflation can reduce the rate of growth of national living standards because individuals and organizations use resources to protect themselves against the uncertainty of future prices.

At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also understand:

- The unemployment rate is the percentage of the labor force that is willing and able to work, does not currently have a job, and is actively looking for work.
- The unemployment rate is an imperfect measure of unemployment because it does not: (1) include workers whose job prospects are so poor that they are discouraged from seeking jobs, (2) reflect part-time workers who are looking for full-time work.
- Unemployment rates differ for people of different ages, races, and sexes. This reflects differences in work experience, education, training, and skills, as well as discrimination.
- Unemployment can be caused by people changing jobs, by seasonal fluctuations in demand, by changes in the skills needed by employers, or by cyclical fluctuations in the level of national spending.
- Explain why some people are unemployed when the economy is said to be functioning at full employment.
- The consumer price index (CPI) is the most commonly used measure of price-level changes. It can be used to compare the price level in one year with price levels in earlier or later periods.
- Expectations of inflation may lead to higher interest rates.
- The costs of inflation are different for different groups of people. Unexpected inflation hurts savers and people on fixed incomes; it helps people who have borrowed money at a fixed rate of interest.
- Inflation imposes costs on people beyond its effects on wealth distribution because people devote resources to protect themselves from expected inflation.

NSS-EC.9-12.20 MONETARY AND FISCAL POLICY

Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices. At the completion of Grade 12, students will understand:

- Fiscal policies are decisions to change spending and tax levels by the federal government. These decisions are adopted to influence national levels of output, employment, and prices.
- In the short run, increasing federal spending and/or reducing taxes can promote more employment and output, but these policies also put upward pressure on the price level and interest rates. Decreased federal spending and/or increased taxes tend to lower price levels and interest rates, but they reduce employment and output levels in the short run.

- In the long run, the interest-rate effects of fiscal policies lead to changes in private investment spending by businesses and individuals that partially, if not entirely, offset the output and employment effects of fiscal policy.
- The federal government's annual budget is balanced when its revenues from taxes and user fees equal its expenditures. The government runs a budget deficit when its expenditures exceed its revenues. The government runs a surplus when its revenues exceed its expenditures.
- When the government runs a budget deficit, it must borrow from individuals, corporation, or financial institutions to finance that deficit.
- The national debt is the total amount of money the federal government owes. This is the accumulated sum of its annual deficits and surpluses. The government pays interest on the money it borrows to finance the national debt.
- In the long-run, inflation results from increases in a nation's money supply that exceed increases in its output of goods and services.
- Monetary policies are decisions by the Federal Reserve System that lead to changes in the supply of money and the availability of credit. Changes in the money supply can influence overall levels of spending, employment, and prices in the economy by inducing changes in interest rates charged for credit, and by affecting the levels of personal and business investment spending.
- The major monetary policy tool that the Federal Reserve System uses is open market purchases or sales of government securities. Other policy tools used by the Federal Reserve System include increasing or decreasing the discount rate charged on loans it makes to commercial banks and raising or lowering reserve requirements for commercial banks.

GEOGRAPHY

GRADES K - 12

NSS-G.K-12.1 THE WORLD IN SPATIAL TERMS

As a result of activities in grades K-12, all students should

- Understand how to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.
- Understand how to use mental maps to organize information about people, places, and environments in a spatial context.
- Understand how to analyze the spatial organization of people, places, and environments on Earth's surface.

NSS-G.K-12.2 PLACES AND REGIONS

As a result of their activities in grades K-12, all students should

- Understand the physical and human characteristics of places.
- Understand that people create regions to interpret Earth's complexity.
- Understand how culture and experience influence people's perceptions of places and regions.

NSS-G.K-12.3 PHYSICAL SYSTEMS

As a result of their activities in grades K-12, all students should

- Understand the physical processes that shape the patterns of Earth's surface.
- Understand the characteristics and spatial distribution of ecosystems on Earth's surface.

NSS-G.K-12.4 HUMAN SYSTEMS

As a result of their activities in grades K-12, all students should

- Understand the characteristics, distribution, and migration of human populations on Earth's surface.
- Understand the characteristics, distribution, and complexity of Earth's cultural mosaics.
- Understand the patterns and networks of economic interdependence on Earth's surface.
- Understand the processes, patterns, and functions of human settlement.
- Understand how the forces of cooperation and conflict among people influence the division and control of Earth's surface.

NSS-G.K-12.5 ENVIRONMENT AND SOCIETY

As a result of activities in grades K-12, all students should

- Understand how human actions modify the physical environment.
- Understand how physical systems affect human systems.
- Understand the changes that occur in the meaning, use, distribution, and importance of resources.

NSS-G.K-12.6 THE USES OF GEOGRAPHY

As a result of activities in grades K-12, all students should

- Understand how to apply geography to interpret the past.
- Understand how to apply geography to interpret the present and plan for the future.

U.S. HISTORY

GRADES K - 4

NSS-USH.K-4.1 LIVING AND WORKING TOGETHER IN FAMILIES AND COMMUNITIES, NOW AND LONG AGO

- Understands family life now and in the past, and family life in various places long ago
- Understands the history of the local community and how communities in North America varied long ago

NSS-USH.K-4.2 THE HISTORY OF STUDENTS' OWN STATE OR REGION

- Understands the people, events, problems, and ideas that were significant in creating the history of their state

NSS-USH.K-4.3 THE HISTORY OF THE UNITED STATES: DEMOCRATIC PRINCIPLES AND VALUES AND THE PEOPLE FROM MANY CULTURES WHO CONTRIBUTED TO ITS CULTURAL, ECONOMIC, AND POLITICAL HERITAGE

- Understands how democratic values came to be, and how they have been exemplified by people, events, and symbols
- Understands the causes and nature of movements of large groups of people into and within the United States, now and long ago
- Understands the folklore and other cultural contributions from various regions of the United States and how they helped to form a national heritage

NSS-USH.K-4.4 THE HISTORY OF PEOPLES OF MANY CULTURES AROUND THE WORLD

- Understands selected attributes and historical developments of societies in Africa, the Americas, Asia, and Europe
- Understands major discoveries in science and technology, some of their social and economic effects, and the major scientists and inventors responsible for them

GRADES 5 - 12

NSS-USH.5-12.1 ERA 1: THREE WORLDS MEET (BEGINNINGS TO 1620)

- Understands comparative characteristics of societies in the Americas, Western Europe, and Western Africa that increasingly interacted after 1450
- Understands how early European exploration and colonization resulted in cultural and ecological interactions among previously unconnected peoples

NSS-USH.5-12.2 ERA 2: COLONIZATION AND SETTLEMENT (1585-1763)

- Understands why the Americas attracted Europeans, why they brought enslaved Africans to their colonies, and how Europeans struggled for control of North America and the Caribbean
- Understands how political, religious, and social institutions emerged in the English colonies
- Understands how the values and institutions of European economic life took root in the colonies, and how slavery reshaped European and African life in the Americas

NSS-USH.5-12.3 ERA 3: REVOLUTION AND THE NEW NATION (1754-1820s)

- Understands the causes of the American Revolution, the ideas and interests involved in forging the revolutionary movement, and the reasons for the American victory
- Understands the impact of the American Revolution on politics, economy, and society

- Understands the institutions and practices of government created during the Revolution and how they were revised between 1787 and 1815 to create the foundation of the American political system based on the U.S. Constitution and the Bill of Rights

NSS-USH.5-12.4 ERA 4: EXPANSION AND REFORM (1801-1861)

- Understands United States territorial expansion between 1801 and 1861, and how it affected relations with external powers and Native Americans
- Understands how the industrial revolution, increasing immigration, the rapid expansion of slavery, and the westward movement changed the lives of Americans and led toward regional tensions
- Understands the extension, restriction, and reorganization of political democracy after 1800
- Understands the sources and character of cultural, religious, and social reform movements in the antebellum period.

NSS-USH.5-12.5 ERA 5: CIVIL WAR AND RECONSTRUCTION (1850-1877)

- Understands the causes of the Civil War
- Understands the course and character of the Civil War and its effects on the American people
- Understands how various reconstruction plans succeeded or failed

NSS-USH.5-12.6 ERA 6: THE DEVELOPMENT OF THE INDUSTRIAL UNITED STATES (1870-1900)

- Understands how the rise of corporations, heavy industry, and mechanized farming transformed the American people
- Understands massive immigration after 1870 and how new social patterns, conflicts, and ideas of national unity developed amid growing cultural diversity
- Understands the rise of the American labor movement and how political issues reflected social and economic changes
- Understands Federal Indian policy and United States foreign policy after the Civil War

NSS-USH.5-12.7 ERA 7: THE EMERGENCE OF MODERN AMERICA (1890-1930)

- Understands how Progressives and others addressed problems of industrial capitalism, urbanization, and political corruption
- Understands the changing role of the United States in world affairs through World War I
- Understands how the United States changed from the end of World War I to the eve of the Great Depression

NSS-USH.5-12.8 ERA 8: THE GREAT DEPRESSION AND WORLD WAR II (1929-1945)

- Understands the causes of the Great Depression and how it affected American society
- Understands how the New Deal addressed the Great Depression, transformed American federalism, and initiated the welfare state

- Understands the causes and course of World War II, the character of the war at home and abroad, and its reshaping of the U.S. role in world affairs

NSS-USH.5-12.9 ERA 9: POSTWAR UNITED STATES (1945 TO EARLY 1970s)

- Understands the economic boom and social transformation of postwar United States
- Understands how the Cold War and conflicts in Korea and Vietnam influenced domestic and international politics
- Understands domestic policies after World War II
- Understands the struggle for racial and gender equality and the extension of civil liberties

NSS-USH.9-12.10 ERA 10: CONTEMPORARY UNITED STATES (1968 TO THE PRESENT)

- Understands recent developments in foreign and domestic politics
- Understands economic, social, and cultural developments in contemporary United States

WORLD HISTORY

GRADES 5 - 12

NSS-WH.5-12.1 ERA 1: THE BEGINNINGS OF HUMAN SOCIETY

The student in grades 5-12 should understand

- The biological and cultural processes that gave rise to the earliest human communities
- The processes that led to the emergence of agricultural societies around the world

NSS-WH.5-12.2 ERA 2: EARLY CIVILIZATIONS AND THE EMERGENCE OF PASTORAL PEOPLES, 4000-1000 BCE

The student in grades 5-12 should understand

- The major characteristics of civilization and how civilizations emerged in Mesopotamia, Egypt, and the Indus valley.
- How agrarian societies spread and new states emerged in the third and second millennia BCE.
- The political, social, and cultural consequences of population movements and militarization in Eurasia in the second millennium BCE.
- Major trends in Eurasia and Africa from 4000 to 1000 BCE.

NSS-WH.5-12.3 ERA 3: CLASSICAL TRADITIONS, MAJOR RELIGIONS, AND GIANT EMPIRES, 1000 BCE-300 BCE

The student in grades 5-12 should understand

- Innovation and change from 1000-600 BCE: horses, ships, iron, and monotheistic faith.
- The emergence of Aegean civilization and how interrelations developed among peoples of the eastern Mediterranean and Southwest Asia, 600-200 BCE.

- How major religions and large-scale empires arose in the Mediterranean basin, China, and India, 500 BCE-300 CE.
- The development of early agrarian civilizations in Mesoamerica.
- Major global trends from 1000 BCE-300 CE.

NSS-WH.5-12.4 ERA 4: EXPANDING ZONES OF EXCHANGE AND ENCOUNTER, 300-1000 CE

The student in grades 5-12 should understand

- Imperial crises and their aftermath, 300-700 CE.
- Causes and consequences of the rise of Islamic civilization in the 7th-10th centuries.
- Major developments in East Asia in the era of the Tang dynasty, 600-900 CE.
- The search for political, social, and cultural redefinition in Europe, 500-1000 CE.
- The development of agricultural societies and new states in tropical Africa and Oceania.
- The rise of centers of civilization in Mesoamerica and Andean South America in the first millennium CE.
- Major global trends from 300-1000 CE.

NSS-WH.5-12.5 ERA 5: INTENSIFIED HEMISPHERIC INTERACTIONS, 1000-1500 CE

The student in grades 5-12 should understand

- The maturing of an interregional system of communication, trade, and cultural exchange in an era of Chinese economic power and Islamic expansion.
- The redefining of European society and culture, 1000-1300 CE.
- The rise of the Mongol empire and its consequences for Eurasian peoples, 1200-1350.
- The growth of states, towns, and trade in Sub-Saharan Africa between the 11th and 15th centuries.
- Patterns of crisis and recovery in Afro-Eurasia, 1300-1450.
- The expansion of states and civilizations in the Americas, 1000-1500.
- Major global trends from 1000-1500 CE.

NSS-WH.5-12.6 ERA 6: THE EMERGENCE OF THE FIRST GLOBAL AGE, 1450-1770

The student in grades 5-12 should understand

- How the transoceanic interlinking of all major regions of the world from 1450 to 1600 led to global transformations.
- How European society experienced political, economic, and cultural transformations in an age of global intercommunication, 1450-1750.
- How large territorial empires dominated much of Eurasia between the 16th and 18th centuries.
- Economic, political, and cultural interrelations among peoples of Africa, Europe, and the Americas, 1500-1750.
- Transformations in Asian societies in the era of European expansion.
- Major global trends from 1450 to 1770.

NSS-WH.5-12.7 ERA 7: AN AGE OF REVOLUTIONS, 1750-1914

The student in grades 5-12 should understand

- The causes and consequences of political revolutions in the late 18th and early 19th centuries.
- The causes and consequences of the agricultural and industrial revolutions, 1700-1850.
- The transformation of Eurasian societies in an era of global trade and rising European power, 1750-1850.
- Patterns of nationalism, state building, and social reform in Europe and the Americas, 1830-1914.
- Patterns of global change in the era of Western military and economic domination, 1850-1914.
- Major global trends from 1750 to 1914.

NSS-WH.5-12.8 ERA 8: A HALF-CENTURY OF CRISIS AND ACHIEVEMENT, 1900-1945

The student in grades 5-12 should understand

- Reform, revolution, and social change in the world economy of the early century.
- The causes and global consequences of World War I.
- The search for peace and stability in the 1920s and 1930s.
- The causes and global consequences of World War II.
- Major global trends from 1900 to the end of World War II.

NSS-WH.5-12.9 ERA 9: THE 20TH CENTURY SINCE 1945: PROMISES AND PARADOXES

The student in grades 5-12 should understand

- How post-World War II reconstruction occurred, new international power relations took shape, and colonial empires broke up.
- The search for community, stability, and peace in an interdependent world.
- Major global trends since World War II.

National Standards for Technology Education

GRADES K - 12

NT.K-12.1 BASIC OPERATIONS AND CONCEPTS

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

NT.K-12.2 SOCIAL, ETHICAL AND HUMAN ISSUES

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

NT.K-12.3 TECHNOLOGY PRODUCTIVITY TOOLS

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

NT.K-12.4 TECHNOLOGY COMMUNICATION TOOLS

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

NT.K-12.5 TECHNOLOGY RESEARCH TOOLS

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

NT.K-12.6 TECHNOLOGY PROBLEM- SOLVING AND DECISION-MAKING TOOLS

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.