DOCUMENT RESUME

ED 264 230 SP 026 942

TITLE	Basic Curriculum Content for Georgia's Public Schools.
INSTITUTION	Georgia State Dept. of Education, Atlanta.
PUB DATE	85
NOTE	55p.
PUB TYPE	Reports - Descriptive (141) -- Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Core Curriculum; Educational Improvement; Elementary Secondary Education; *Public Schools; Required Courses; State Curriculum Guides; *State Standards
IDENTIFIERS	*Georgia

ABSTRACT

Outlines are presented of the basic curriculum mandated for grades K-12 in the Georgia public schools. Concepts to be mastered at each level are listed for: (1) mathematics; (2) language arts (written and oral communication); (3) science; (4) social studies; (5) art; (6) music; (7) health and safety; and (8) physical education. At the secondary level foreign languages, technology, traffic safety education, and vocational education are added. A media skills continuum to help educators plan for improved student skills in acquiring and processing information is appended. (JD)

Basic Curriculum Content

For Georgia's Public Schools

Georgia Department of Education

Foreword

Georgia public schools have changed and improved significantly since *Standards for Georgia Public Schools* were first adopted and applied 17 years ago by the Georgia Board of Education. Since that time, *Standards* have been the primary instruments for evaluating curriculum in our schools.

With the development of this document, *Basic Curriculum Content*, Georgia takes a major step to augment and strengthen the curriculum requirements of *Standards*. Standards in 1985-86 that relate to this new document are the following.

124. Each teacher in grades kindergarten through eight uses the state identified *Basic Curriculum Content* as the minimum curriculum at the prescribed grade level.

125. Each teacher in grades nine through 12 uses the state identified *Basic Curriculum Content* as the minimum curriculum in the prescribed courses.

The purpose of these *Standards* is to support and ensure the effective and timely implementation of the *Basic Curriculum Content* throughout our state. Our intent in publishing the curriculum is ultimately to establish uniformity and consistency in curriculum offerings in all Georgia schools. We must ensure that students learn the same basic curriculum content in every grade and every subject throughout our education system.

I am pleased with the progress that local school systems have made in education. I am confident that improvement will continue as we work together to successfully implement this uniform curriculum.

Charles McDaniel
State Superintendent of Schools

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Preface

This document, *Basic Curriculum Content*, is an important part of the current initiatives to improve education in Georgia public schools. The Georgia Board of Education has identified six tasks to strengthen education in the state, and the development of uniform curriculum content for each elementary grade and high school subject is one of these.

An advisory task force composed of department of education representatives, local education representatives, professional organization representatives and lay persons was appointed to assist the department of education staff in developing a statewide consensus on the material that should be offered in each elementary grade subject and the most commonly offered high school subjects. Suggestions were received from the majority of local school systems, many professional organizations and lay persons concerned with curriculum. Care was taken to ensure that the basic curriculum content will be coordinated with the statewide testing program.

A draft of this document was circulated to all Georgia teachers and administrators in early 1985. Revisions and additions have been made as a result of the thoughtful evaluation and suggestions by those who used the publication. This feedback has increased its effectiveness. Staff development will play an essential part in the implementation of this document.

We hope this publication will be useful in helping to establish and improve education in Georgia's schools.

Lucille G. Jordan
Associate State Superintendent
Office of Instructional Services

R. Scott Bradshaw
Director
Division of Curriculum Service

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Editor's Note:

These goal statements are drawn from the Georgia Department of Education subject area guides. For more specific objectives refer to the subject area guides or contact state consultants for curriculum, technology and media.

For information on computer scope and sequences curricula, contact the Georgia Department of Education subject area specialists or the state consultants referred to above.

Kindergarten

Mathematics

Concepts

- Sorts objects by similarities
- Arranges/orders objects according to size, shape, color*
- Matches objects of sets one-to-one*
- Recognizes/names number of items in a set up to five*
- Counts number of items in a set up to 10*
- Combines and separates sets of objects by a given characteristic*
- Selects numeral that names the number of elements of a set up to 10*
- Compares two objects according to size*
- Measures length by counting nonstandard units*
- Moves oneself, or an object from one point to another point using given directions*
- Sorts and identifies basic geometric shapes* (circle, square, triangle, rectangle)
- Recognizes coins and bills as representing a system of exhange*
- Names coins up to 25 cents and bills up to $5*

Languages Arts

Oral Communication

Listening

- Listens attentively*
- Recognizes common sounds*
- Understands a basic vocabulary*
- Repeats auditory sequences: letters, words numbers
- Follows one- and two-part oral directions*
- Makes judgments*

Speaking

- Describes experiences*
- Uses understandable language*
- Uses functional vocabulary*
- Uses expressive language*

Written Communication

Reading

- Demonstrates an interest in reading*
- Understands the relationship between oral and written language*
- Recognizes similarities and differences in spoken words*
- Discriminates visual similarities and differences in colors, shapes, sizes, letters, words*
- Reproduces shapes, letters, numbers from memory given visual cue
- Demonstrates left to right and top to bottom progression*
- Recognizes letters and words including own name*
- Analyzes and interprets pictures using expressive language*
- Tells a story in sequence*
- Classifies pictures of objects as to color, size, shape, structure and function
- Uses creative arts to interpret literature

Writing

- Demonstrates interest in a variety of written materials*
- Demonstrates fine motor coordination*
- Copies simple shapes, designs, numbers and letters
- Prints name, letters and some meaningful words*
- Understands left to right pattern of writing*
- Dictates meaningful information to adult for experience story*

Science

- Sorts by shape, color, size, texture
- Identifies colors
- Identifies objects by characteristics such as lighter, heavier; larger, smaller; floatable, nonfloatable
- Describes differences in weather from day to day

*CRT objectives

- Identifies hot, cold; wet, dry; light, dark
- Identifies sounds such as loud, soft, high, low
- Differentiates between living, nonliving, plants, animals
- Observes growth changes in living things
- Identifies time frames such as day, night; yesterday, today; tomorrow, hours
- Identifies motion such as push, pull
- Identifies and experiences activities using the five senses

Social Studies

- Demonstrates self-awareness
- Describes families in regard to work and play, wants and needs
- Describes school in regard to rules, work in groups
- Identifies community rules
- Develops group relations with others
- Identifies community helpers
- Identifies children around the world (selected case studies)
- Identifies holidays
- Demonstrates appropriate work habits
- Demonstrates social studies skills related to earth—size, shape and motion (using map and globe), information processing, problem solving, social participation, time and chronology

Art

- Identifies and uses shapes/forms, textures, lines and colors
- Recognizes similarities and differences in shapes/forms, colors, textures and lines
- Paints, pastes, draws,weaves, models and cuts with art tools and materials
- Communicates ideas and experiences through artwork
- Identifies objects in artworks
- Expresses verbally thoughts and meanings regarding own artworks

Music

- Listens to music
- Responds rhythmically to music
- Participates in musical games
- Acts out song stories and dramatizations
- Responds to simple musical concepts
- Demonstrates imagination and mood reflection
- Sings simple songs
- Plays or claps a steady beat
- Claps simple rhythm patterns
- Plays rhythm instruments as accompaniment to music
- Recognizes rhythm instruments
- Listens for sounds of voices and certain musical instruments

Health and Safety

- Keeps foreign objects out of eyes, ears, nose and mouth
- Identifies danger around the home
- Recognizes and demonstrates bus safety
- Demonstrates safe use of school equipment
- Identifies appropriate pedestrian safety
- Identifies certain parts of body
- Demonstrates habits of cleanliness
- Identifies ways to care for the eyes, ears and teeth
- Identifies various foods by name
- Recognizes the importance of food in the growth process

Physical Education

- Participates in developmental activities related to strength, heart-lung endurance and flexibility
- Acquires basic movement skills: locomotor (leap, gallop, slide, walk, run, skip, jump, hop) and axial (bend, curl, stretch, twist, turn, swing, sway)
- Participates in fundamental and creative rhythmic activities
- Develops gross motor skills (orienting oneself in space, balance, eye-body coordination)
- Begins development of movement patterns: starting, stopping, dodging, throwing, kicking and catching
- Participates in rolling, balancing and lifting activities

First Grade

Mathematics

Concepts

- Recognizes different names for numbers: whole numbers up to 100 and fractions—1/2s, 1/3s, 1/4s*
- Relates numbers to models for numbers up to 60 and 1/2s, 1/3s, 1/4s*
- Identifies number of 10s and 1s in a given number*
- Recognizes sets that are equivalent*
- Recognizes ordinal numbers up to ninth*
- Identifies numerical relations: greater than, less than, equal to*
- Identifies sets of points and their relations and properties*
- Selects items belonging or not belonging to a given set*
- Identifies mathematical symbols (+ − = ><)*
- Selects appropriate units to measure time* (minutes, hours, days, weeks)

Process Skills

- Determines amounts of money up to 50 cents and change up to 25 cents*
- Applies units of measurement—time to half-hour, length with nonstandard units*
- Adds whole numbers—up to three one-digit, two two-digit, with no renaming*
- Subtracts whole numbers—up to two digits with no renaming*

Problem Solving

- Selects appropriate operation—addition or subtraction for a given problem situation
- Organizes elements of sets according to characteristics*
- Determines sequencing of numbers, points on a number line and shapes*

*CRT objectives — Refer to criterion-referenced tests objectives for specific assessment characteristics (grades 1, 2, 3, 4, 6, 8)

- Counts by 1s, 2s, 5s, 10s*
- Interprets data on simple graphs*

Language Arts

Oral Communication

Listening

- Listens attentively to variety of good literature
- Understands words and ideas when heard in context
- Understands specific (literal) meanings of words
- Retells information presented orally

Speaking

- Communicates fluently with peer group and adults
- Uses a basic vocabulary
- Uses language understandable to others
- Communicates ideas clearly
- Uses complete sentences
- Uses correct verb form with singular or plural nouns

Written Communication

Reading

- Distinguishes between letter/word, word/sentence, left/right, beginning/ending of words*
- Matches beginning sounds, ending sounds, letters and rhyming words*
- Selects letters representing beginning and ending sounds and simple vowel sounds in words*
- Identifies basic vocabulary words by sight
- Selects syntactically and semantically appropriate words*
- Recognizes explicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Makes predictions*
- Classifies words*
- Uses creative arts to interpret literature

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Writing

- Writes simple complete sentences using capital letters, periods or question marks
- Applies basic spelling rules to spell simple words and word families
- Prints all letters and numerals 0-9 legibly
- Writes creatively; develops stories
- Participates in the writing process: prewriting, writing, editing and publishing

Science

- Sorts and describes objects by shape, color, size, texture
- Identifies colors as a sorting characteristic
- Compares objects: lighter, heavier; larger, smaller; floatable, nonfloatable
- Observes changes in the weather
- Names the four seasons
- Identifies directional motion: back, forth; up, down
- Differentiates hot, cold; wet, dry
- Compares sounds as loud, soft; high, low
- Recognizes certain needs of living things: water, foods, temperature
- Differentiates between living and nonliving materials
- Observes changes in living things such as growth cycles
- Measures length with nonstandard units
- Measures time and duration
- Identifies visible celestial objects (sun, moon, Milky-Way)
- Discusses periodic motion of sun and moon.

Social Studies

- Demonstrates a positive self-concept
- Recognizes the uniqueness of the individual
- Identifies families in regard to children and families, wants and needs, the family at work, families around the world
- Identifies communities in regard to living by rules, community workers, transportation and communication
- Recognizes interdependence among groups
- Describes the U.S. in regard to holidays
- Develops awareness of citizenship responsibilities
- Exhibits respect for other people and the work they do
- Describes the U.S. in regard to symbols, citizenship responsibilities
- Demonstrates social studies skills related to earth-size, shape and motion (using map and globe), information processing, problem solving, social participation, time and chronology

Art

- Identifies and uses primary and secondary colors
- Compares and uses textures
- Uses lines to create shapes
- Repeats simple shapes to produce a pattern
- Develops basic understanding of space
- Recognizes geometric and nongeometric shapes/forms
- Creates original artworks in association with writing, story-telling and creative dramatics
- Describes subjects in artworks
- Expresses individual ideas, thoughts and feelings in artworks

Music

- Listens to a variety of musical styles
- Recognizes expressive qualities in music
- Moves to express mood (in twos and threes) exhibiting creativity
- Participates in musical games
- Listens for melody pattern, rhythm form
- Listens for high-low-same sounds
- Responds to simple musical concepts, such as up/down
- Plays rhythm instruments and bells
- Sings simple songs

Health and Safety

- Describes the danger of fire
- Gains basic knowledge of fire prevention
- Recognizes proper handling of medicines
- Demonstrates safety rules that protect one as a pedestrian and as a bicycle rider
- Recognizes and practices dental hygiene
- Describes the importance of rest and sleep
- Recognizes reasons people need food
- Recognizes importance of a good breakfast

Physical Education

- Participates in developmental activities related to strength, heart-lung endurance and flexibility
- Continues development of basic movement skills
- Participates in fundamental aerobic and creative rhythmic activities
- Changes directions and levels
- Locates pulse
- Understands directions (left, right, up, down) and levels (high, medium, low)
- Demonstrates relationships (near and far, over and under, alongside, front and behind)
- Continues development of skill patterns (starting, stopping, dodging, throwing kicking, catching)
- Creates and participates in simple games
- Participates in simple tumbling and balancing activities (side and log rolls, one-legged balance).

Second Grade

Mathematics

Concepts

- Recognizes different names for numbers: whole numbers up to 1000 and fractions—1/2s, 1/3s, 1/4s and relates models to numbers*
- Relates numbers to models—whole numbers and fractions*
- Identifies number of 100s, 10s, 1s in a given number*
- Recognizes equivalent sets*
- Identifies numerical relations: greater than, less than, equal to*
- Determines ordinal numbers to tenth*
- Identifies two-and three-dimensional geometric shapes*
- Identifies like shapes of the same size or different sizes*
- Selects units of measurement and time—minute, hour, week; and length—inch, centimeter, foot*

Process Skills

- Determines amounts of money—a collection up to $1 and change less than 50 cents*
- Selects appropriate symbol (+ − = > <)*
- Applies units of measurement—time (to quarter hours) and length (customary and metric)*
- Adds whole numbers—up to two digits (with no renaming)*
- Subtracts whole numbers—up to two digits (with no renaming)*

Problem Solving

- Selects appropriate operation—addition or subtraction—for given problem situation*
- Organizes elements of sets according to given characteristics*
- Orders whole numbers and identifies whole numbers on a number line*
- Counts by 1s, 2s, 5s, 10s, up to 100*
- Interprets simple bar graphs and pictographs*

*CRT objectives

Language Arts

Oral Communication

Listening

- Retells information presented orally
- Uses listening skills in following directions

Speaking

- Enunciates words clearly
- Uses standard language patterns
- Uses expressive and adaptive language

Written Communication

Reading

- Selects letters representing beginning or ending sounds, matches single vowel sounds in words and rhyming words*
- Uses context to identify and understand meanings of words
- Recognizes basic vocabulary by sight
- Selects syntactically and semantically appropriate words*
- Interprets written instructions*
- Alphabetizes words to the second letter*
- Recognizes explicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Identifies the main character in a story*
- Recognizes implicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Makes predictions*
- Summarizes material read silently
- Distinguishes between fantasy and realism
- Classifies words*

Writing

- Writes complete sentences
- Uses capitalization and punctuation
- Demonstrates an interest in literature by choosing appropriate books

- Uses creative arts to interpret literature
- Recognizes noun and verb function
- Applies basic spelling rules
- Prints legibly
- Writes several sentences about one subject
- Writes creatively—stories, poetry
- Participates in the writing process: prewriting, writing, editing and publishing

Science

- Sorts, classifies objects by size, shape, color
- Identifies colors by hue and shade
- Compares objects: lighter, heavier, floatable, nonfloatable
- Describes differences in weather by seasons
- Uses simple machines
- Describes sounds: high, low, loud, soft, harsh, pleasant
- Recognizes certain needs of different living things: water, foods, temperature
- Differentiates between living and non-living material
- Observes and describes changes in living things: growth cycles
- Measures length and time
- Recognizes the sun as the primary source of light for plant growth on earth

Social Studies

- Identifies communities in regard to people living in neighborhoods, kinds of communities, communities around the world, the fact that communities change
- Identifies world of work
- Traces development of communication and transportation
- Identifies needs and wants of people and how they obtain them
- Recognizes interdependence of people/ groups within the community
- Describes natural resources and conservation
- Demonstrates how art, music and literature reflect the cultural values of a society
- Identifies citizenship responsibilities in communities
- Demonstrates awareness of basic ideas of work
- Demonstrates social studies skills related to earth—size, shape and motion (using map and globe), information processing, problem solving, social participation, time and chronology

Art

- Mixes and compares the values (lights, darks) of a color
- Creates textures in various ways
- Explores lines made with a variety of art tools and materials
- Repeats a design (color, shape/form, line, texture) in sequence to form a pattern
- Uses geometric and nongeometric shapes/ forms in artworks
- Creates original and imaginative artworks expressing own ideas and feelings
- Describes subjects and events in artworks
- Looks at art of different cultures and times

Music

- Plays musical games
- Listens to a variety of musical styles
- Recognizes tone center
- Distinguishes beat, melody, rhythm, meter in twos and threes; even and uneven
- Recognizes musical steps, leaps and repeated tones
- Sings on pitch within a comfortable range
- Sings, with attention to dynamics, tempo, accurate pitch and rhythm
- Plays rhythm instruments and bells
- Uses autoharp to reinforce rhythmic and singing skills
- Responds to musical notation
- Learns simple musical terms
- Composes original tunes

Health and Safety

- Identifies procedures to follow in case of an accident or sudden illness
- Recognizes ways to prevent disease by keeping the home, school and community clean
- Defines germs and communicable diseases
- Identifies basic emotions
- Demonstrates positive personal attitudes

- Recognizes the importance of the family
- Identifies food groups and a variety of foods from each group
- Explains the importance of eating foods from each food group daily

Physical Education

- Participates in developmental and self-testing activities related to strength, heart-lung endurance and flexibility
- Identifies heart rate increase during exercise
- Develops basic movement skills with balls and other equipment (beanbags, ropes, wands, hoops)
- Participates in fundamental creative and aerobic rhythmic activities
- Demonstrates body shapes(twisted, symmetrical, wide, narrow)
- Travels using straight, curved and zigzag pathways
- Creates and performs simple games
- Participates in simple stunts, tumbling and balancing activities (rolling, climbing, tipup)

Third Grade

Mathematics

Concepts

- Recognizes different names for numbers, whole numbers up to 10,000 and fractions—1/2s, 1/3s, 1/4s, 1/8s, 1/10s—and relates models to numbers*
- Identifies place value*
- Compares whole numbers up to 100 and compares fractions with like denominators*
- Selects appropriate symbol (+ − = > < × ÷) for use*
- Determines sequences*
- Determines pairs of numbers given a relation or rule*
- Determines ordinal numbers to 12th*
- Identifies even and odd numbers*
- Recognizes geometric figures or shapes which are alike*
- Locates points on a map or grid*
- Identifies geometrical relations—parallel, perpendicular, inside, outside, symmetrical, same size, same shape*
- Selects units of measurement: time, length, volume, weight, temperature (customary/metric)*

Process Skills

- Determines amounts of money: collections up to $5, amount spent and change up to $1*
- Uses units of measurement: length, volume (capacity), weight and temperature (customary and metric)*
- Adds whole numbers up to three digits*
- Subtracts whole numbers up to four digits (with regrouping)*
- Multiplies whole numbers up to two digits by one-digit numbers*
- Divides whole numbers—basic facts only*
- Uses properties of numbers and operations*

Problem Solving

- Estimates results of measurement or computation*
- Selects appropriate operation—addition, subtraction or multiplication—for given problem situation*
- Solves simple word problems*
- Organizes data into charts, tables, graphs*
- Identifies information needed to solve a given problem
- Interprets data in charts, tables, graphs*
- Determines probability of event-likely, not likely, least likely, most likely*

Language Arts

Oral Communication

Listening

- Summarizes information presented orally
- Understands words and ideas when heard in context

Speaking

- Enunciates words clearly
- Uses conventional and appropriate language
- Reads aloud with expression and fluency

Written Communication

Reading

- Matches similar sounds represented by letters*
- Interprets semantic relationships*
- Interprets written instructions*
- Alphabetizes to the third letter*
- Uses dictionary and table of contents*
- Recognizes explicitly s[illegible] main ideas, details, sequence of ev[illegible] and cause-effect relationships*

*CRT objectives

- Recognizes implicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Makes predictions*
- Classifies words*
- Reads for a variety of purposes in a variety of sources; obtains directions, information
- Demonstrates an interest in literature by choosing appropriate books
- Uses creative arts to interpret literature

Writing

- Uses correct noun/verb agreement
- Uses descriptive words, elaborative language
- Uses capitalization and punctuation correctly
- Applies basic spelling rules and patterns
- Spells accurately using dictionary and other spelling aids
- Writes cursively using legible letter formation
- Writes a simple paragraph and identifies the main idea, summarizes stories
- Writes creatively: stories, poetry, autobiography
- Participates in the writing process: prewriting, writing, editing and publishing

Science

- Compares objects by characteristics
- Describes states of matter: solid, liquid, gas
- Observes and describes sky phenomena
- Describes weather phenomena
- Identifies and uses simple machines
- Describes sources of sound production
- Differentiates between living and nonliving materials
- Observes and describes changes in living things—and in systems
- Recognizes certain needs of different living things
- Measures length, time, temperature
- Observes relations of locations and points on map
- Differentiates among land and sea forms as illustrated with maps
- Recognizes the earth environments: land, water and air

Social Studies

- Describes cities in regard to origin, growth and change, comparative studies of own community and other communities
- Identifies how communities provide needs and services (functions of urban areas)
- Describes cultural expressions of values (art, music, writing etc.)
- Relates how people conserve and use natural resources
- Explains how communities change in size, shape and condition
- Explains how communities govern themselves
- Explains how people adapt to their environment
- Exhibits awareness of economic factors that affect self, family, school and community
- Demonstrates social studies skills related to earth—size, shape and motion(use of map and globe), information processing, problem solving, social participation, time and chronology

Art

- Expresses ideas using primary and secondary colors, warm and cool colors
- Uses lines, dots, shapes/forms to produce objects that have texture
- Identifies and uses a variety of lines in artworks to create movement
- Uses overlapping shapes to create a feeling of depth
- Uses different combinations of art materials, tools and techniques for two-dimensional and three-dimensional artworks
- Creates artworks with a foreground and a background
- Creates artworks which demonstrate an awareness of details observed in the environment
- Recognizes art of different cultures

Music

- Listens to music various ethnic cultural groups
- Learns simple folk rhythmic games

- Recognizes phrases, rhythm and melody, notation
- Distinguishes between harmony and no harmony
- Reads simple rhythmic patterns from notation
- Plays instruments to accompany simple songs
- Identifies composers and their works
- Identifies musical instruments by sight
- Sings on pitch within a comfortable range
- Sings with attention to dynamics, tempo, accurate pitch and rhythm

Health and Safety

- Identifies safety risks in the immediate environment
- Describes the correct procedure in reporting an emergency
- Recognizes the potential dangers of electricity and the importance of electrical safety
- Demonstrates knowledge of bicycle safety
- Recognizes individual growth patterns
- Demonstrates correct brushing and flossing of teeth
- Recognizes importance of exercise and health
- Plans a balanced meal
- Identifies nutritious snacks which promote good health
- Identifies foods that affect growth and development

Physical Education

- Demonstrates understanding of the components of health-related fitness
- Participates in activities related to strength, heart-lung endurance and flexibility
- Counts resting heart rate
- Identifies correct stretching techniques (reach and hold for 15-45 seconds, breathe continuously)
- Develops basic movement skills with balls and other equipment
- Demonstrates relationships of unison and contrast, leading and following, meeting and parting
- Participates in fundamental, aerobic and creative rhythmic activities
- Participates in activities to help refine eye-foot and eye-hand coordination
- Participates in individual, partner and small group games
- Participates in specific stunts and tumbling skills and apparatus activities (use of tires, climbing frames, balance beams)

Fourth Grade

Mathematics

Concepts

- Identifies different names for numbers: whole numbers up to one million and fractions; relates models to numbers*
- Identifies place value for a given digit in a number*
- Compares numbers—whole numbers and fractions*
- Determines ordinal numbers to 12th*
- Determines pairs of numbers, given a relation or rule*
- Determines a missing number from a pair, given a rule*
- Identifies relations of numbers—factors, multiples, odds, evens*
- Identifies geometric shapes*
- Identifies geometric relations*
- Selects appropriate symbol (+ − = > < × ÷) to use in mathematical statement*

Process Skills

- Identifies geometric shapes*
- Identifies geometric relations*
- Identifies shapes alike in size and in shape*
- Locates points on grid*
- Selects appropriate units of measurement for length, area, volume, capacity, weight, time, temperature (customary and metric)*
- Determines amounts of money up to $20*
- Uses units of measurement for length, area, volume, capacity, weight, time, temperature (customary and metric)*
- Adds, subtracts, multiplies and divides with whole numbers*
- Adds and subtracts with like fractions*

Problem Solving

- Estimates results of computations or measurement*
- Selects appropriate operation for a given problem situation*
- Solves simple word problems*
- Organizes data in charts, tables, graphs*
- Interprets data in charts, tables, graphs*
- Determines probability of event—likely, not likely, least likely, most likely*

*CRT objectives

Language Arts

Oral Communication

Listening

- Listens to and summarizes oral reports
- Determines meaning of unknown words when heard in context

Speaking

- Uses conventional language patterns
- Selects appropriate word usage
- Enunciates words clearly

Written Communication

Reading

- Matches similar sounds represented by letters*
- Identifies multiple meanings of words
- Interprets semantic and syntactic relationships*
- Interprets instructions
- Uses dictionary, index, table of contents, telephone book and other informational books*
- Recognizes explicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Recognizes implicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Makes generalizations, draws conclusions*
- Makes predictions and comparisons*
- Distinguishes between fact and opinion*
- Recognizes the relevance of data*
- Classifies words*
- Demonstrates an interest in literature by choosing appropriate books
- Uses creative arts to interpret literature

Writing

- Uses correct punctuation, capitalization and grammar
- Spells words used with accuracy using dictionary and other spelling aids
- Writes legibly
- Summarizes information from a variety of sources on one topic
- Constructs paragraph with main idea, topic sentence and supporting details
- Writes creatively: stories, poetry, tales/ myths
- Participates in the writing process: pre-writing, writing, editing and publishing

Science

- Compares objects by special characteristics
- Describes states of matter by special characteristics
- Uses models which relate earth's polar axis to seasonal variations
- Identifies and uses simple machines
- Observes sources of light
- Observes sources of sound and its effects
- Describes changes in living things and in systems
- Recognizes and identifies evidences of interdependence of living things
- Measures length, area (by counting blocks), time, temperature
- Collects and writes information in tables, charts, graphs
- Reads information in tables, charts, graphs
- Locates points on maps and globes
- Identifies effects of soil/water interaction; observes rainwater, stream and/or beach erosion.

Social Studies

- Identifies the characteristics of the earth's geographic patterns—deserts, grasslands, tropical rain-forests, etc.
- Explains different ways that regions may be classified—cultural, political, economic, etc.
- Explains how people adapt to and modify their environments
- Identifies how people use and conserve their natural resources
- Illustrates how the values of a society are reflected through the arts (music, art, literature, etc.)
- Describes how societies change over time
- Explains that political regions are defined by legal boundaries
- Describes the interdependence of people in economic systems
- Demonstrates an awareness that geographic location may affect occupations
- Develops an awareness unit on Georgia—past, present and government
- Demonstrates social studies skills related to earth-size, shape, motion(using map and globe), information processing, problem solving, social participation, time and chronology

Art

- Mixes black to darken (shades) and white to lighten (tints) colors
- Uses contrasting colors, shapes/forms, textures to create interest in two-dimensional and three-dimensional artworks
- Draws the outlines and details of forms and objects
- Creates artworks by overlapping objects and by making objects smaller and higher on the picture
- Identifies three-dimensional artworks (architecture, sculpture and crafts)
- Generates creative ideas through experimentation with different art materials, tools and techniques
- Describes details in famous artworks
- Gives examples of careers in art

Music

- Listens to musical form and style
- Describes style, form and medium of expression
- Studies a variety of melodic patterns
- Recognizes rhythmic notation, uneven rhythm
- Sings songs in rounds
- Sings foreign songs
- Composes original work with other students
- Identifies contemporary music
- Identifies instruments of the orchestra by ear and eye
- Identifies composers

Health and Safety

- Recognizes importance of safety rules
- Discusses the digestive and skeletal system
- Recognizes the importance of water to the human body
- Explains the structure, function and care of major body parts
- Recognizes the need for foods that contain nutritive value
- Evaluates a personal diet
- Recognizes symptoms of illness that may indicate a more serious disease

Physical Education

- Participates in developmental activities for strength, heart-lung and muscular endurance flexibility, speed, balance, power and agility
- Benefits from physical fitness testing and appraisal
- Performs basic locomotor skill combinations
- Moves with changes in tempo, directions, levels and pathways
- Participates in more complex rhythmic activities (lummi sticks, tinikling folk dancing)
- Performs skills of endurance and coordination such as jumping rope
- Participates in activities combining sports skills
- Refines skill patterns
- Participates in individual, partner and group games
- Participates in stunts, tumbling and apparatus activities

Fifth Grade

Mathematics

Concepts

- Identifies different names for numbers—with whole numbers up to one billion, fractions and decimals
- Compares and orders whole numbers, fractions, decimals
- Identifies relations of numbers: primes, factors, multiples
- Determines pairs of numbers given a relation or rule
- Determines relation of given pairs of numbers
- Selects units of measurement: length, volume, capacity, weight, time, temperature (customary and metric)
- Identifies geometrical relations
- Identifies shapes alike in size and in shape

Process Skills

- Applies units of measurement for length, area, volume, capacity, weight, time, temperature (customary and metric)
- Performs computations with whole numbers
- Performs addition and subtraction of decimals

Problem Solving

- Estimates results of computations or measurements
- Selects appropriate operation for a given problem situation
- Determines probabilities
- Organizes data in charts, tables, graphs
- Interprets data in charts, tables, graphs

Language Arts

Oral Communication

Listening

- Recalls main ideas and some supporting details of information presented orally
- Discusses the literal and figurative meaning of words

Speaking

- Presents oral reports
- Selects appropriate word usage
- Reads orally, clearly conveys meaning

Written Communication

Reading

- Uses all basic word attack skills
- Recognizes different forms of literature (short story, biography, etc.)
- Uses a card catalog, atlas, almanac, encyclopedia to locate information
- Uses study skills (i.e., SQ3R)
- Shares and discusses ideas gained from reading done independently
- Reads and interprets different types of material: books, directories, forms, catalogs, newspaper, etc.
- Distinguishes ~~between~~ fact, opinion, fiction, nonfiction
- Outlines main idea and subtopics from a selection on a given topic
- Reads and interprets maps, charts, graphs, tables
- Interprets basic instructions and labeling information
- Demonstrates an interest in literature by choosing appropriate books
- Uses creative arts to interpret literature

Writing

- Writes simple, complex, compound sentences using correct capitalization and punctuation
- Demonstrates correct word usage
- Uses logical sequence in presenting ideas
- Spells words used with accuracy
- Edits and proofreads own work
- Writes legibly
- Writes two quality paragraphs from a given main idea
- Prepares a bibliography
- Writes stories, poems, plays
- Participates in the writing process. prewriting, writing, editing and publishing

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Science

- Describes mixtures and solutions
- Describes characteristics of matter, i.e. density, structural component
- Describes earth as part of solar system
- Identifies climatic zones of the earth
- Observes results of electromagnetic forces (attraction, repulsion)
- Observes light phenomena through lenses and mirrors
- Classifies sources of sound as mechanical or electrical
- Recognizes sun as principal source of earth energy
- Constructs experiments using simple machines
- Observes models of interdependence of living things
- Collects quantitative data by measuring and reading charts and graphs

Social Studies*

The middle grades program should be treated as a block for cultural area studies. The content for achieving the objectives should be drawn from the following cultural and geographic areas: Anglo-America, Africa, Europe, Middle East, Latin America, Asia and Australia

**Flexibility within grades 5—8 for the organizational pattern of the content of cultural and geographic area studies is allowed; however, the most common pattern used in Georgia is as follows.*

Fifth grade	Sixth grade	Seventh grade	Eighth grade
Anglo America	Middle East Europe Africa	Latin America Asia Australia	Georgia Studies

- Identifies selected cultural regions to study in regard to geographic patterns, climate, topography, natural resources
- Identifies ethnic groups and linguistic patterns
- Describes historical, political, economic, social, cultural, religious development
- Describes cultural expressions of values (art, music, literature, etc.)
- Explains how the value system of a society exerts great influence on the attitudes and behavior of people
- Identifies the different types of political systems that have evolved to deal with basic political decisions
- Identifies different types of economic systems that have evolved to deal with basic economic functions
- Explains how nations of the modern world are interdependent
- Demonstrates social studies skills related to earth—size, shape, motion(using map and globe), information processing, problem solving, social participation, time and chronology

Art

- Produces and uses light and dark, bright and dull colors
- Uses art materials, tools and techniques to create texture or the appearance of texture
- Organizes colors, lines, shapes/forms and textures to create the appearance of movement in artworks
- Creates artworks with forms in the background, middleground and foreground
- Describes difference between two-dimensional and three-dimensional artworks
- Identifies and describes themes in artworks (Georgia art, friendship, seasons)

Music

- Listens to a variety of music from different times and places
- Relates musical words to visual art work
- Identifies major and minor scales and chords
- Identifies homophony, polyphony and form in music and small ensembles
- Reads rhythmic patterns from musical notation
- Performs accompaniments on various instruments and in various styles by ear and from notation
- Composes original music
- Participates in singing activities

Health and Safety

- Describes how safe behavior can reduce risk of accidents
- Demonstrates basic first aid measures
- Demonstrates an awareness and acceptance of self and others

- Develops beginning skills in interpersonal relationships
- Plans a balanced diet for one day using the basic four food groups and suggested numbers of servings
- Identifies methods of illness prevention
- Recognizes that alcohol causes harmful changes in the body
- Describes alternatives to drug use and abuse, i.e. hobbies, interests and other leisure time activities
- Counts exercise heartrate
- Recognizes that smoking tobacco or marijuana is harmful to the body

Physical Education

- Participates in developmental activities in health-related fitness
- Benefits from physical fitness testing and appraisal using a health-related fitness or skill-related fitness test or both
- Continues basic skills refinement
- Participates in complex rhythmic activities
- Practices adapting and varying basic motor skills to different games, sports, dances, and gymnastics
- Participates in lead-up or modified individual, dual and team sports
- Describes strategy and rule concepts
- Practices good sportsmanship
- Participates in stunts, tumbling and apparatus activities (rolls, handstands, cartwheels)
- Identifies correct strength exercise techniques (proper form, overload, progressive increase)

School systems are encouraged to offer a middle school program. Some flexibility may be necessary in program planning. Refer to subject areas for specific information (i.e., technology, fine arts, foreign language, science, social studies and vocational education).

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Sixth Grade

Mathematics

Concepts

- Identifies different names for numbers: whole numbers, fractions, decimals, percents*
- Compares and orders whole numbers, fractions, decimals*
- Identifies relations and properties of numbers and operations*
- Determines pairs of numbers when given relations*
- Determines relation when given pairs of numbers*
- Selects appropriate units of measurement: length, area, volume, capacity, time, temperature (customary and metric)*
- Identifies geometric relations*
- Determines shapes that are alike in size and shape*

Process Skills

- Applies formulas: length, area, volume capacity, time, temperature*
- Applies units of measurement: length area, volume, capacity, weight, time, temperature (customary and metric)*
- Performs computations with whole numbers, fractions, decimals, percents*

Problem Solving

- Estimates results of computations of measurements*
- Selects appropriate operation for a given problem situation*
- Solves word problems with one or two operations*
- Organizes data into charts, tables, graphs*
- Determines probabilities*
- Interprets data in charts, tables, graphs*

*CRT objectives

Language Arts

Oral Communication

Listening

- Follows directions
- Writes from dictation, interprets correctly

Speaking

- Presents oral reports
- Conducts and reports interviews
- Demonstrates understanding of specialized vocabularies related to subject areas

Written Communication

Reading

- Uses context clues to determine the meaning of unknown words*
- Interprets nonliteral meanings of words*
- Interprets semantic relationships*
- Interprets instructions*
- Selects and uses reference sources: dictionary/thesaurus, index, table of contents, telephone book, maps/diagrams and other sources*
- Uses study strategies
- Recognizes explicitly and implicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Makes generalizations, draws conclusions*
- Makes predictions and comparisons*
- Distinguishes between fact and opinion*
- Recognizes relevance of data
- Outlines main ideas and supporting details from two or more sources on a given topic
- Recognizes persuasion techniques in propaganda and advertising
- Demonstrates an interest in literature by choosing appropriate books
- Uses creative arts to interpret literature

Writing

- Prepares reports with correct word usage, capitalization, punctuation and spelling
- Writes legibly

- Writes for a variety of purposes: inform, entertain
- Writes quality paragraphs on a given subject
- Writes using a variety of forms: reports, stories, poetry, news articles, etc.
- Participates in the writing process: prewriting, writing, editing and publishing

Science*

- Describes mixtures and solutions by special characteristics
- Observes diagrams or descriptions of atomic structures
- Observes different types of rocks
- Describes specified relationships between solar system components
- Defines water cycle and related weather phenomena
- Identifies and describes results of forces in electromagnetic attraction, repulsion
- Classifies light by its origin
- Describes sound as compression wave phenomena
- Demonstrates heat as change agent
- Qualitatively describes mechanical advantage
- Identifies change as necessary for species survival
- Describes models of interdependence of living things
- Collects and organizes quantitative data by measuring and reading charts and graphs

* *Note on 6th - 8th grade science*

Some school systems will find the general science approach to science curriculum development to be appropriate to their needs. Such general science curriculum sequencing will contain the instructional objectives found in seventh grade life science and eighth grade earth science in addition to the following.

- Constructs motors to observe conversion of electricity to motion
- Demonstrates light control using optical devices
- Measures sound in terms of energy units
- Predicts changes of direction of forces using simple machines

School systems will be required to follow the proposed science sequence as they adopt new textbooks.

Social Studies

The middle grades program should be treated as a block for cultural area studies. The content for achieving these objectives should be drawn from the following cultural and geographic areas: Anglo-America, Africa, Europe, Middle East, Latin America, Asia and Australia.

**Flexibility within grades 5-8 for the organisational pattern of the content of cultural and geographic area studies is allowed; however, the most common pattern used in Georgia is as follows.*

Fifth grade	Sixth grade	Seventh grade	Eighth grade
Anglo-America	Middle East Europe Africa	Latin America Asia Australia	Georgia Studies

- Identifies selected cultural regions to study in regard to geographic patterns, climate, topography, natural resources
- Identifies ethnic groups and linguistic patterns
- Describes historical, policical, economic, social, cultural, religious development
- Describes cultural expressions of values (art, music, literature, etc.)
- Explains how the value system of a society exerts great influence on the attitudes and behavior of people
- Identifies the different types of political systems that have evolved to deal with basic political decisions
- Identifies different types of economic systems that have evolved to deal with basic economic functions
- Explains how nations of the modern world are interdependent
- Demonstrates social studies skills related to earth—size, shape, motion (using map and globe), information processing, problem solving, social participation, time and chronology

Art

- Identifies, uses different color combinations (primary, secondary)
- Creates artworks using a variety of color, shapes/forms, sizes, textures and space arrangements

- Describes use of colors, lines, shapes/forms, textures and space to communicate moods and ideas
- Recognizes the use of perspective in artworks
- Identifies use of light and shadow in two-dimensional and on three-dimensional artworks
- Describes typical artworks from people in a few cultures and time periods
- Recognizes the role of artist in society

Music

- Describes the roles of music in society
- Relates other performing arts to music
- Listens to familiar music, popular music and small ensemble music.
- Analyzes qualities of performance
- Participates in singing activities
- Sings songs in three parts
- Performs original melodies and rhythms
- Listens to diverse sound sources (including electronics) as media for improvisation and composition
- Identifies musical instruments

Health and Safety

- Demonstrates appropriate emergency response for a variety of accidents
- Identifies methods to prevent the spread of communicable diseases and risk factors of noncommunicable diseases
- Describes how drugs can be valuble when used correctly and safely
- Demonstrates knowledge of the most commonly misused drugs
- Recognizes the environmental factors which affect health in the community

Physical Education

- Demonstrates heart-lung endurance, abdominal strength, low back/hamstring flexibility and upper body strength
- Benefits from physical fitness testing and appraisal and remediates in areas of performance under the 25th percentile
- Compute training heart rate
- Continues refinement of basic movement skills and combination of skills with balls and other equipment
- Demonstrates ability to perform creative and fundamental rhythmic activities
- Identifies terminology in area of rhythmic activities
- Participates in individual, dual and team sports (lead-up and modified)
- Performs basic skills in two or more individual sports
- Demonstrates knowledge of basic rules in team sports
- Performs basic skills in team sport lead-up games
- Continues to refine stunts, tumbling and/or gymnastic skills (rolls, cartwheels, headstands and movement sequences)

Seventh Grade

Mathematics

Concepts

- Identifies different names for numbers: whole numbers, fractions, decimals, percents
- Identifies relations and properties of numbers: prime and composite numbers, ratio, proportion.
- Selects appropriate units of measurement. length, area, volume, capacity, weight, time, temperature (customary and metric)
- Determines pairs of numbers when given relations
- Determines relations when given pairs of numbers
- Selects units of measurement: length, area, volume, capacity, weight, time, temperature (customary and metric)
- Identifies geometric relations
- Determines shapes alike in size and shape

Process Skills

- Determines probabilities
- Performs computation with whole numbers, fractions, decimals, percents
- Applies formulas: length, area, volume, weight, time, temperature (customary and metric)
- Applies units of measurement: length, area, volume, capacity, weight (customary and metric)
- Solves for missing term in a proportion

Problem Solving

- Selects appropriate operation for a given problem situation
- Estimates results of computations of measurements
- Solves word problems with one or two operations
- Organizes data in charts, tables, graphs
- Interprets data in charts, tables, graphs

Language Arts

Oral Communication

Listening

- Organizes, summarizes, interprets information
- Discusses the denotative and connotative meanings of words heard in context
- Takes notes and develops outlines

Speaking

- Demonstrates appropriate word usage
- Reads orally with expression and meaning
- Describes the function of dialect and the use of standard English

Written Communication

Reading

- Recognizes the structure of four types of sentences, paragraphs
- Identifies parts of speech
- Recognizes the different uses of all punctuation marks
- Recognizes basic elements of fiction: setting, characterization, plot, theme, point of view
- Identifies types and elements of literature· poetry, novel, short story, biography, autobiography, news articles
- Identifies types of folk literature: myths, tales, fables, parables, legends, tall tales
- Selects and uses reference guides and reference materials
- Reads typical textbook passages and accurately interprets the information
- Reads poetry and recognizes obvious and implied meanings
- Discusses the culture and values of people described in literature
- Demonstrates an interest in literature by choosing appropriate books
- Uses creative arts to interpret literature

Writing

- Fills out commonly used forms
- Applies rules of capitalization, punctuation, spelling, and grammar
- Uses elaborative language in own writing
- Spells words used with accuracy
- Edits and proofreads own work
- Writes legibly
- Writes for a variety of purposes: inform, entertain, persuade
- Uses specialized vocabularies related to subject areas
- Writes poetry, stories, plays, tales/myths, biographies
- Participates in the writing process. prewriting, writing, editing and publishing

Life Science*

- Uses mixtures and solutions in prescribed and experimental activities
- Differentiates elements and compounds
- Relates elements and compounds to atomic structure
- Differentiates between heat and temperature
- Identifies functions of cellular parts
- Describes functions of cellular parts
- Describes changes as necessity for species survival
- Develops models of interdependence of living things
- Collects, organizes, interprets and communicates quantitative data
- Compares models of typical plant and animal cells
- Identifies evidence of interdependence of living things and the physical environment
- Demonstrates energy transformations in living systems
- Demonstrates complex body systems

* *Note on 6th - 8th grade science*

Some school systems will find the general science approach to science curriculum development to be appropriate to their needs. Such general science curriculum sequencing will contain the instructional objectives found in seventh grade life science and eighth grade earth science in addition to the following.

- Constructs motors to observe conversion of electricity to motion
- Demonstrates light control using optical devices
- Measures sound in terms of energy units
- Predicts changes of direction of forces using simple machines

School systems will be required to follow the proposed science sequence as they adopt new textbooks.

Social Studies*

The middle grades program should be treated as a block for cultural area studies. The content for achieving these objectives should be drawn from the following cultural and geographic areas: Anglo-America, Africa, Europe, Middle East, Latin America, Asia and Australia.

**Flexibility within grades 5—8 for the organizational pattern of the content of cultural and geographic area studies is allowed; however, the most common pattern used in Georgia is as follows.*

Fifth grade	Sixth grade	Seventh grade	Eighth grade
Anglo-America	Middle East Europe Africa	Latin America Asia Australia	Georgia Studies

- Identifies selected cultural regions to study in regard to geographic patterns, climate, topography, natural resources
- Identifies ethnic groups and linguistic patterns
- Describes historical, policical, economic, social, cultural, religious development
- Describes cultural expressions of values (art, music, literature)
- Explains how the value system of a society exerts great influence on the attitudes and behavior of people
- Identifies the different types of political systems that have evolved to deal with basic political decisions
- Identifies different types of economic systems that have evolved to deal with basic economic functions
- Explains how nations of the modern world are interdependent
- Demonstrates social studies skills related to earth—size, shape, motion (using map and globe), information processing, problem solving, social participation, time and chronology

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Art

- Uses receding cool and advancing warm colors to suggest depth in artworks
- Uses line and color to create the effect of light and shade
- Uses color, line and shape/form and space to express emotions in artworks
- Produces artworks showing figures and objects in motion
- Uses overlapping, size relationship, position on picture plane and color changes to show perspective
- Compares how art is used to affect our daily life (media, advertising, packaging)
- Compares various art careers

Music

- Recognizes music as an expressive form
- Listens and discusses music of various periods
- Studies various styles of performance
- Relates specific styles of visual art to music
- Listens to performances of other students
- Expands use of expressive elements of music through singing and playing
- Develops increasing skill in reading and writing musical notation
- Expands musical vocabulary
- Creates composition
- Explores the use of rhythm, melody, tone color, texture, dynamics and harmony as they function in creating musical form

Health and Safety

- Demonstrates knowledge and understanding of the effects of fatigue, emotions and drugs on accidents
- Identifies factors contributing to accidents
- Describes effective strategies for coping with physical, social and mental stress
- Describes the forces that affect food selection
- Demonstrates knowledge of diseases, their causes and methods of prevention
- Describes the relationship between tobacco use and the development of serious health problems
- Identifies the physical effects alcohol can have on the body

Physical Education

- Maintains heart-lung endurance, abdominal strength, low back/hamstring flexibility, upper body strength and weight control awareness
- Understands components of fitness programs (frequency, duration, intensity, type of activity)
- Engages in a personal fitness program including one or more heart-lung endurance activities
- Benefits from physical fitness testing and appraisal
- Sets intelligent personal fitness goals
- Efficiently performs combinations of basic movement patterns
- Participates in varied rhythmic and dance activities such as clogging, folk, modern square and rope jumping
- Participates in a variety of individual, dual and team sports
- Develops new and more complex skills needed for success in sports
- Participates in varied activities that can be used throughout life

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Eighth Grade

Mathematics

Concepts

- Identifies different names for numbers: whole numbers, fractions, decimals, percents*
- Identifies relations and properties*
- Compares and orders whole numbers, fractions, decimals*
- Selects units of measurement: length, area, volume, weight, time, temperature (customary and metric)*
- Identifies relations and properties of sets of points: including geometric shapes and graphs*

Process Skills

- Determines probabilities*
- Computes with whole numbers, integers, fractions, decimals, percents*
- Applies formulas*
- Solves for missing term in a proportion*
- Applies units of measurement: length, areas, volume, capacity, weight, time, temperature (customary and metric)*

Problem Solving

- Selects appropriate operation for given problem situation*
- Solves word problem situation*
- Solves word problems with two or more operations*
- Organizes data into tables, charts, graphs, diagrams*
- Interprets data given in tables, charts, graphs, diagrams*
- Estimates results of computations or measurements*

Language Arts

Oral Communication

Listening

- Summarizes, interprets and contrasts information presented orally

Speaking

- Speaks to groups formally and informally
- Demonstrates good usage with emphasis on subject/verb agreement, principal parts of sentences, regular/irregular verbs, pronouns, modifiers, punctuation

Written Communication

Reading

- Interprets word meanings and patterns of language*
- Interprets figurative language*
- Interprets instructions*
- Selects and uses reference guides and reference materials*
- Demonstrates use of study skills
- Demonstrates an interest in literature by choosing appropriate books
- Uses creative arts to interpret literature
- Recognizes explicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Recognizes implicitly stated main ideas, details, sequence of events and cause-effect relationships*
- Makes generalizations and draws conclusions*
- Makes predictions and comparisons*
- Reads from various types of literature for a variety of purposes*
- Distinguishes between fact and opinion*
- Recognizes relevance of data*
- Recognizes propaganda techniques*

Writing

- Uses correct semantic and syntactic structure
- Uses all punctuation marks and capitalizes words correctly
- Spells words used with accuracy
- Edits and proofreads own writing
- Writes legibly
- Uses specialized vocabularies related to various subject areas
- Expands writing activities to include: social writing, business/vocational writing, scholastic/academic writing, self-expression/personal writing

*CRT objectives

- Participates in the writing process: prewriting, writing, editing and publishing

Earth Science*

- Uses mixtures and solutions in prescribed and experimental activities
- Differentiates elements and compounds
- Relates elements and compounds to atomic structure
- Describes forces which change earth's surface
- Describes water cycle and some related phenomena
- Differentiates between heat and temperature
- Observe crystal structure
- Observes and describes crystal structure by shape
- Describes forces making changes on earth's surface
- Relates heat transfer concepts
- Describes solar system as part of the galaxy
- Describes earth, solar system and galaxy as parts of the universe
- Explains water cycle and related weather phenomena
- Relates electro-magnetic forces to structure of matter
- Identifies evidence of interdependence of living things and the physical environment
- Collects, organizes, interprets and communicates quantitative data
- Demonstrates energy transformations

** Note on 6th - 8th grade science*

Some school systems will find the general science approach to science curriculum development to be appropriate to their needs. Such general science curriculum sequencing will contain the instructional objectives found in seventh grade life science and eighth grade earth science in addition to the following.

- Constructs motors to observe conversion of electricity to motion
- Demonstrates light control using optical devices
- Measures sound in terms of energy units
- Predicts changes of direction of forces using simple machines

School systems will be required to follow the proposed science sequence as they adopt new textbooks.

Social Studies*

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**Flexibility within grades 5-8 for the organizational pattern of the content of cultural and geographic area studies is allowed; however, the most common pattern used in Georgia is as follows:*

Fifth grade	Sixth grade	Seventh grade	Eighth grade
Anglo-America	Middle East Europe Africa	Latin America Asia Australia	Georgia Studies

- Identifies geographic and environmental patterns of Georgia
- Describes historical development in regard to political, economic, social, cultural development
- Identifies ethnic groups and linguistic patterns
- Describes cultural expressions of values (art, music, literature) as related to Georgia
- Discusses modern Georgia in regard to communication, transportation, urbanism
- Describes technology and a changing society in Georgia
- Discusses social issues in modern Georgia
- Explains that the economy of an area is related to available natural and human resources
- Explains state and local government
- Explains rights and responsibilities of citizen in a democracy
- Describes the interdependence of Georgia and the United States in regard to local, state and national relationships (political, economic, social, cultural)
- Demonstrates social studies skills related to earth size, shape, motion (using map and globe), information processing, problem solving, social participation, time and chronology

Art

- Incorporates one or more of the design elements of color, line, shape/form and texture in artworks
- Identifies the different ways artists have used color, line shape/form, texture in artworks
- Repeats shapes/forms, textures, lines and colors for variety and interest
  Knows and applies art media, tools and techniques
- Records the human figure and objects in artworks
- Uses imaginative thinking to create artworks
- Identifies four or more master artists and their artworks
- Identifies the role of artists in mass media (television, product packaging, advertising)

Music

- Listens to music literature of various periods
- Discusses basic musical involvement for the consumer
- Listens to social and recreational instruments such as keyboard instruments, recorder and guitar
- Listens to music in several different performance media, e.g., music, theatre, orchestra, band, chorus, exploratory music
- Listens to and discusses a variety of performing groups
- Explores a variety of musical careers
- Identifies major composers

Health and Safety

- Identifies safety factors in the home, automobile, school, lab, bicycling, motorcycling and water
- Demonstrates skills needed in stress management
- Identifies health problems associated with obesity
- Describes causes and effects of contagious diseases peculiar to the adolescent
- Identifies diseases that result from malfunctions of the body systems
- Identifies the effects of alcohol, smoking and other drugs on the unborn child
- Evaluates advertisements as powerful influences in persuading people to develop smoking habits
- Describe opportunities for careers in the health field

Physical Education

- Participates in fitness activities that maintain health-related fitness
- Participates in continuing physical fitness testing and appraisal
- Demonstrates continuing ability to set personal fitness goals, develop a fitness program, carry out the program and evaluate the results
- Identifies mental and physical benefits of exercise
- Develops ability to analyze, review and improve movement skills basic to the activity being taught
- Improves skills necessary for participation in physical activities
- Understands basics of cooperation, competition and leadership
- Participates in a variety of individual, dual and team sports
- Participates in a variety of rhythmic and dance activities
- Continues to develop understanding of rules, strategies, protocol, terminology, safety practices and basic officiating techniques
- Develops concept of physical activity as a worthwhile use of leisure time throughout life

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Grades 9-12

English Language Arts

The English language arts curriculum in Georgia's schools should provide a program of instruction which assures each student the opportunity to obtain the fundamental language skills necessary to function effectively within our society. These fundamental skills—listening, reading, speaking and writing—should be the basis upon which an optimal curriculum of English language arts is developed. Opportunities for study in areas such as drama, language, literature, mass media, nonverbal communication and speech should be an integral part of the total English language arts curriculum. The curriculum should develop the fundamental skills within the larger context of the discipline.

Since the English language arts are best taught as a spiral, each year's instruction should include the following areas as individual courses, in a quarter program or in an integrated fashion in quarter, semester or year long programs.

Speaking

- Speak clearly and expressively
- Adapt words and strategies according to varying situations and audiences
- Participate productively and harmoniously in both small and large groups
- Present arguments in orderly and convincing ways
- Interpret and assess various kinds of communication
- Use language appropriate to both the situation and the audience

Language

- Learn how the English language has developed, changed and survived
- Understand that varieties of English usage are shaped by social, cultural and geographical differences
- Recognizes that language is a powerful tool for thinking and learning
- Become aware of how grammar represents the orderliness of language and makes meaningful communication possible
- Recognize how content (topic, purpose, audience) influences the structure and use of language

Logical Thinking

- Create hypotheses and predict outcomes
- Test the validity of an assertion by examining the evidence
- Understand logical relationships
- Construct logical sequences and understand the conclusions to which they lead
- Detect fallacies in reasoning
- Recognize that "how to think" is different from "what to think"

Writing

- Write clearly to communicate ideas
- Participates in the writing process. writing, prewriting, editing and publishing
- Generate ideas for writing, select and arrange them, find appropriate ways for expressing them and evaluate and revise what is written
- Adapt expression to various audiences
- Learn the techniques of writing for appealing to and persuading others
- Develop creative and imaginative expression
- Be precise in punctuation, capitalization, spelling and other elements of manuscript form

Listening

- Determine a speaker's purpose
- Attend to detail and relate it to the overall purpose of a communication
- Evaluate the messages and the effects of mass communication

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Reading

- Recognize that reading may be a vehicle for self-improvement
- Learn that reading is a pleasurable activity as well as a means to acquire knowledge
- Approach reading as a search for meaning
- Comprehend material appearing in a variety of forms
- Read accurately, make valid inferences and draw proper conclusions
- Develop habits of reading that carry over into adult life

Literature

- Realize the importance of literature as a mirror of human experience
- Identify with fictional characters in human situations as a means of relating to others
- Gain insights into behavior from the study of literature
- Be aware of important writers representing diverse backgrounds and traditions
- Be familiar with the masterpieces of literature
- Develop effective ways of telling and writing about literature
- Judge literature critically on the basis of personal response and literary quality

The specific content of the literature program should reflect and support the school's total program. A typical form of organization offers thematic approaches to literature in the ninth grade, world literature in the tenth grade, American literature in the eleventh grade and English literature in the twelfth grade.

Fine Arts

The Fine Arts include high school classes in music, visual arts, drama and dance. There is no single course but rather a wide variety of possibilities. A fine arts offering which fulfills the need for a required course for graduation in Georgia schools can be chosen from the following types of courses.

Music

- Music history
- Music theory
- Musical compositions
- Music analysis
- Choral music
- Instrumental music

School systems are encouraged to offer instrumental and choral music experiences (i.e., band, orchestra, chorus) in the upper elementary and middle school grades.

Music for Lifelong Learning

- Identify music in the community
- Explore careers in music
- Study music in technology
- Study role of music: avocational and leisure music study

Visual Arts

- Develop perceptual awareness
- Value art as an important realm of human experience
- Produce works of art
- Know about art history and its relationship to other disciplines
- Make and justify judgments concerning aesthetic quality and merit of works of art

Examples of courses include environmental design (community planning, interior design, architecture), commercial design (fashion design, advertising design), photography, film-making, printmaking, drawing, painting, sculpture, ceramics, jewelry design and fibers. Art history/criticism courses may be offered or the major concepts and skills may be included within the studio courses.

Drama

- Study the theatre and theatre history
- Read dramatic literature
- Act
- Study movement for actors
- Study beginning/advanced acting
- Study oral interpretation and reader's theatre
- Recognize drama in radio, television and film
- Direct theatre
- Study technical theatre
- Study artistic design
- Learn production techniques, staging
- Study the management of major productions

If advanced placement credit is to be awarded for art of music, content and specific objectives developed by the College Board should be awarded.

Dance

- Study and perform different forms of dance (ballet, modern, jazz, tap, folk, square, social, ethnic)
- Study different dance techniques (Cecchetti, Graham, Luigi)
- Study dance literature, notation, history and films
- Study different styles of dance improvisation and choreography

Foreign Language

The instruction of foreign languages in the grades 9-12 Georgia public schools curriculum should have as its focus linguistic skill development and the acquisition of knowledge of foreign cultures. In the case of the modern foreign languages, emphasis should be placed on the teaching of spoken language with attention also being given to teaching the skills of listening, reading and writing. Instruction in the classical languages may not center around the teaching of oral facility but certainly should include emphasis in all skill areas. Of equal importance in the foreign language classroom is the teaching of culture. While daily customs and folkways are of importance, teachers should first seek to develop in students an awareness of the different value systems embraced by the foreign cultures. The awareness and acceptance of cultural differences should be primary goals of culture instruction in the foreign language classroom.

Modern Languages

General Concepts — phonology, morphology, syntax, vocabulary, culture (geography, history, literature, folklore, gestures, work and leisure time, education, religion)

Skills — Comprehend spoken language within vocabulary and structural range; speak language with adequate pronunciation, intonation and comprehension, within vocabulary and structural range; read language both silently and aloud with adequate pronunciation intonation and comprehension, within vocabulary and structural range; write language with adequate sentence structure

Content (Knowledge, Formation and Use of Grammatical Concepts)

French

- Articles (definite, indefinite, partitive)
- Nouns (gender, number)
- Pronouns (subject, object, disjunctive, relative, demonstrative, interrogative; y and en)
- Adjective (number, gender, position, possessive, demonstrative, common irregular, descriptive, comparative, superlative)
- Numbers (cardinal, ordinal)
- Verbs (infinitives; simple and compound tenses of the indicative mood; present subjunctive, imperative mood; reflexive verbs)
- Adverbs of quantity(beaucomp, un peu, tres)
- Prepositions; idioms, negatives and negation
- Formation of questions(inversion, est-ce que)

German

- Word order (verb first, second and last positions)
- Nouns (number, gender, all cases)
- Determiners (definite and indefinite articles; *dieser*-words, *ein*-words; determiners of quantity
- Pronouns (personal, possessive, interrogative)
- Verbs (regular and irregular forms in present, future, conversational and narrative past tenses, indicative mood present conditional; reflexive verbs; separable prefix; modals)
- Adjectives (strong, weak and mixed declensions; comparison)
- Numbers (cardinal, ordinal)
- Negation (kein, nicht, doch)
- Prepositions governing accusative and/or dative
- Adverbs; conjunctions
- Command forms; questions and replies (*wo, wohin* and *woher)*
- Basic idiomatic expressions; *Da*-and *wo*-compounds

Spanish

- Articles (definite, indefinite)
- Nouns (gender, number)

- Pronouns (subject, object, reflexive, stressed, possessive, demonstrative, relative)
- Adjectives (agreement, placement; comparative and superlative, demonstrative, possessive)
- Numbers (cardinal, ordinal)
- Verbs (infinitives; simple and compound tenses of the indicative mood, present subjunctive, imperative mood; reflexive verbs)
- Adverbs (formation and use)
- Interrogative words; negation and negatives; preposition; idioms
- Word order, basic sentence patterns, contractions

Classical Language

Latin

- Pronunciation (vowels, diphthongs, consonants and consonant combinations)
- Nouns (nominative, genitive, dative, accusative, ablative, vocative, locative; formation and usage irregular nouns; declensions and gender indentification)
- Pronouns (formation, use, translation; demonstrative, personal, reflexive, intensive, relative, interrogative, indefinite)
- Prepositions (translation and function)
- Adjectives (formation, use, translation; regular and irregular comparative and superlative degree)
- Verbs (formation, use, translation; tenses; present, imperfect, future, perfect, pluperfect, future perfect in active and passive voice; active and passive periphrastic; deponent verbs; moods; indicative, subjunctive, imperative; verbals: infinitives, participles, gerunds, gerundives, supines; verb stems and principal parts)
- Adverbs (formation, use, translation for regular and irregular; comparative and superlative degree)
- Numerals (cardinals, ordinals, Roman numerals)
- Idioms/vocabulary; translation/reading comprehension
- Derivation/word study; Roman civilization/culture

**Foreign language objectives assume completion of two years of foreign language study. School systems are encouraged to offer foreign language instruction in the elementary and middle school grades. At least two years of one foreign language should be offered.*

Health and Safety Education

- Personal health habits
- Mental health
- Nutrition
- Alcohol, tobacco and drug use and abuse
- Disease recognition and prevention
- Consumer health
- Environmental health
- First aid and emergency assistance
- Safety (home, occupational, recreational, vehicular)
- Community health
- Health care services and resources
- Health care career opportunities
- Family life education (at the discretion of local school systems)
- Cardiopulmonary resuscitation CPR (at the discretion of local school systems)

Mathematics

The mathematics program in Georgia schools should provide opportunities for students in grades 9-12 in the following areas.

General Mathematics I

- Basic computation — add, subtract, multiply and divide whole numbers, fractions, decimals and percents
- Ratio and proportion
- Amounts of money
- Probability and statistics
- Data collection, organization and interpretation (using tables, charts and graphs)
- Informal geometry (shape identification and properties)
- Estimation and calculation of measurement (length, area, time, temperature and volume), including customary and metric systems
- Estimation of computational problems

General Mathematics II

- Integers
- Scale drawings
- Applications of basic arithmetic to problem situations
- Common formulas — techniques of substitutions

- Budgeting
- Wise shopping
- Banking

Elementary Algebra (Algebra I)

- The arithmetic of polynomials
- Evaluation of variable expressions by substitutions
- Translation of variable expressions by substitutions (nouns — variable, verbs — operations and relational symbols, sentences — equations)
- Formal properties of the real number system
- Signed number operations with variable expressions
- Solving and graphing linear equations
- Solving linear inequalities and graphing solutions (including absolute value inequalities)
- Factorization of composite whole numbers
- Multiplication of polynomials using the distributive property (product of a monomial and a polynomial, product of two binomials)
- Factorization of polynomials (common monomial factors, products of binomials, special cases)
- Irrational numbers
- Numbers with square root icals (finding equivalent forms, arithmetic operations, rationalizing denominators, simple equations)
- Radicals and polynomials
- Quadratic equations (factoring)
- Algebraic fractions
- Equations with algebraic fractions
- Pythagorean Theorem
- Applications in problem situations

Geometry

- Defined versus undefined terms
- Points (coplanar, noncoplanar)
- Lines (parallel, intersecting, concurrent, skew, perpendicular)
- Planes (parallel, intersecting)
- Space (sphere, cone, cylinder)
- Angles (acute, right, obtuse, supplementary, complementary, vertical)
- Triangles (equilateral, isosceles, scalene, acute, obtuse, right, 30-60-90, 45-45-90)
- Quadrilaterals (trapezoid, kite, parallelogram, rectangle, rhombus, square)
- Constructions (copy circles, copy segments, copy angles, copy triangles, bisect angles, perpendicular bisectors, perpendicular from point to a line, parallel lines, proportional segments)
- Circles (center, radius, diameter, arc, chord, tangent, secant, central angle, inscribed angle)
- Polygon (convex, similar, congruent)
- Transformations (reflections, rotations, translations, dilations)
- Perimeter (triangle, quadrilaterals, polygons)
- Area (triangle, quadrilaterals, regular polygons, sphere, cube)
- Volume (cube, tetrahedron, right prisms, cylinders, cones, sphere)
- Nature of proofs (direct and indirect)
- Similarities (similarity transformations, ratio and proportion)
- Coordinate systems (distance formula, slope, midpoints of segments, perpendicular and parallel lines, proofs using coordinates)
- Inequalities

Intermediate Algebra (Algebra II)

- The absolute value function
- Matrices
- Rules of exponents (rational exponents)
- Logarithms
- Analytic geometry (lines, parabolas, circles, hyperbolas, ellipse)
- Inequalities in the plane (half-planes, inequality regions, interiors of circles, introduction to linear programming)
- Roots of polynomials (factoring, synthetic division quadratic equations, complex numbers)
- Systems of equations (linear systems, determinants and Cramer's Rule, systems of lines and parabolas, systems of lines and circles)
- Functions (definitions, graphs, absolute value, greatest integer, exponential with base 2, logarithmic, algebra of functions)
- Applications in problem situations

Advanced Algebra Trigonometry

- Trigonometric functions
- Radian measure, circular functions, angular measure
- Graphs of trigonometric functions
- Properties of trigonometric functions
- Triangles and vectors
- Inverse trigonometric functions and trigonometric equations
- Complex numbers
- Transformations
- Infinite series
- Logarithms
- Polar coordinates and polar graphs
- Area of triangles
- The sine and cosine functions, graphing sine and cosine functions, amplitude and period, tangent and cotangent functions and their graphs, secant and cosecant functions and their graphs, identities, angles and their measure)
- Statements involving circular functions (sum, difference and reduction formulas, double and half-angle identities, inverse values, inverse circular functions)
- Solving triangles (the right triangle, Law of Cosines, Law of Sines, polar coordinates, polar graphs, powers and roots of complex numbers, complex numbers in polar forms, multiplication of complex numbers, DeMoivre's Theorem)
- Permutations, combinations, probability, the Binomial Theorem
- Applications in problem situations

If a school system offers analysis and/or calculus, suggested course content should include the following.

Analysis

- Probability theory
- Sets and symbolic logic (sets, union and intersection, subsets, truth tables, methods of proof, validity of arguments)
- Sequences and series (finite sequences and series, limits, infinite sequences and series, writing series-sigma notation, mathematical induction)
- Algebra of vectors (number pairs and geometry, algebra of number pairs, parallel and perpendicular vectors, application of vectors)
- Analytic geometry (using numbers to describe points, algebric properties of lines, quadratic equations and their graphs, intersection of graphs, conic sections and their application)
- Functions (relations, linear relation, functions, the arithmetic of functions, polynomial functions, the arithmetic of polynomials, the factor theorem, rational roots, Descartes Rule—bounds, irrational roots of polynomials)
- The field of complex numbers (defining and representing complex numbers, addition of complex numbers, multiplication of complex numbers, Fundamental Theorem of Algebra, relationships among roots and coefficients, polynomials with real coefficients)
- Graphs of polynomial functions (curve sketching, limits of functions, continuity, tangents to a curve, derivatives of polynomials, using derivatives in graphing, applications of maxima and minima)
- Exponential and logarithmic functions (exponential functions with rational exponents, exponential functions with real exponents, the exponential function $[x,y]; y=e^x$, linear interpolation, composition of functions,inverse of functions, logarithmic functions, additional theorems and application, tangents to the graph of a $\log_b$ and $\exp_b$)

Calculus

- Analytic geometry
- Limits and continuity and applied functions
- The derivative (formulas of differentiation, graphic applications of derivatives, trigonometric functions, inverse trigonometric functions, exponential and logarithmic functions, differentiation using limits, power rule, product rule, quotient rule and chain rule, finding slope, maximum and minimum)
- The integral-antiderivative (definite integrals, applications, Fundamental Theorem of Calculus, computation of areas in a plane, tables of formulas, integration by parts and trigonometric substitution)
- Sigma notation
- Riemann sums
- Trapezoidal rule

If advanced placement is to be awarded for Calculus, content and specific objectives developed by the College Board should be used.

Physical Education

The physical education program in Georgia schools should provide opportunities for students in grades 9-12 to develop skills, knowledges and attitudes necessary for a lifetime of physical fitness and activity. Instructional emphasis for the required physical education unit should focus on physical fitness for life. Study in physical education includes the following.

Lifetime Fitness Concepts

- Importance of exercise
- Physical fitness for everyone
- Understanding of fitness concepts
- Cardiovascular (heart/lung) endurance
- Muscular strength
- Muscular endurance
- Flexibility
- Exercise, diet and fat control
- Assessment of personal fitness
- Planning a personal fitness program
- Injury prevention
- Skill-related fitness components
- Motivation for lifetime participation
- Stress, tension and relaxation
- Fitness fads and fallacies

Examples of fitness activities are jogging, weight training, aerobics, bicycling, lap swimming, circuit training, rope skipping and pace walking.

Individual/Dual Sports Concepts

- Lifetime activity
- Self-testing
- Sport appreciation

Examples of individual and dual sports are archery, badminton, fencing, golf, gymnastics, tumbling, handball, racquetball, tennis, track and field, wrestling, self-defense and martial arts.

Team Sports Concepts

- Teamwork
- Cooperative/competition
- Leadership

Examples of team sports are basketball, field hockey, soccer, softball and volleyball.

Outdoor Activities Concepts

- Outdoor appreciation
- Wise use of environment

Examples of outdoor education activities are backpacking, hiking, orienteering, canoeing, drownproofing and kayaking.

Dance Concepts

- Expression through creative movement
- Aesthetic awareness
- Cultural appreciation

Examples of dance courses are folk, square, social, modern, ballet, jazz, tap, ethnic, choreography, improvisation and rhythmic analysis.

Science

The science program in Georgia schools should provide opportunities for students in grades 9-12 in the following areas.

Physical Science

- Demonstrate a knowledge of the basic principles and concepts of physics, chemistry, geology and astronomy
- Draw and interpret graphs, charts and tables
- Demonstrate an understanding of several science related careers
- Conduct activities and experiments using laboratory materials and equipment in the appropriate manner
- Describe the common and special properties of matter
- Explain the relationship between matter and energy
- Compare the structures of atoms and molecules
- Relate science concepts to everyday life
- Demonstrate an understanding of the methods of science, and the use of measurement in science and in everyday life
- Design, set up and carry out experiments using the scientific methodology
- Develop an understanding of the difference between weight and mass, speed and

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velocity and the relationships between force and motion
- Discuss the nature of matter
- Explain how matter changes through solution formation and chemical combining

Biology

- Demonstrate the proper use of the microscope and related laboratory equipment
- Identify basic cell structures and functions
- Recognize the diversity among living things
- Explain methods of reproduction among organisms
- Compare and contrast photosynthesis and respiration
- Explain the general molecular basis of biology
- Explore careers related to biology
- Compare and contrast the anatomy and physiology of various living organisms
- Explain the interrelationships between living things and their environment

Chemistry

- Describe the atomic structure of matter
- Identify fundamental laws of chemistry and their practical applications
- Use the science methodology to solve chemical problems
- Use chemicals and equipment in a scientific and safe manner
- Describe the major concepts of chemistry such as atomic structure, bonding equilibrium, acids and bases and the periodic table
- Use laboratory techniques to handle, measure and observe chemical reactions
- Plot data and interpret the results in chemical experimentation and independent projects
- Apply mathematics concepts in quantitative solution of chemical problems
- Explore careers related to chemistry

Physics

- Interpret mathematics of vectors
- Describe and interpret wave phenomena
- Examine the interrelationship among the various forms of energy and their influence on matter
- Describe and measure force, motion, energy, work, power, mass, inertia
- Practice graphical and algebraic methods for solving problems
- Describe and interpret states of matter
- Plot data and interpret the results of experimentation and/or individual researches
- Explain the major concepts of physics to include kinematics, statics, mechanic, optics and light, sound, electricity and magnetism and nuclear phenomena
- Explore careers related to physics

If advanced placement credit is to be awarded for biology, physics or chemistry, content and specific objectives developed by the College Board should be used.

Social Studies

The social studies program in Georgia schools for students in grades 9-12 should provide opportunities in the following areas of study. These topics can be organized in a number of patterns; these are not suggested as discrete courses.

The social studies skills and concepts to be incorporated into these courses may be found in *Social Studies for Georgia Schools — Secondary Program*, Georgia Department of Education.

United States Studies

United States History*/Government

- American Culture
- American People
- An Expanding America
- Reform Movements
- American Government
- American Economic Life
- United States in World Affairs
- Georgia Studies

Principles of Economics/Business/ Free Enterprise

- Economic Concepts
- Private Enterprise
- Product and Resource Markets
- Function of Government
- Economic Systems

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Citizenship Education

- Structure of American Government
- Structure of Georgia Government
- Branches of Government
- Political Process
- Foundation of Law
- Citizen Participation
- Principles of Constitutional Government
- Principles of Democracy
- Decision Making Skills

World Studies

World History*

- Early Civilizations
- Development of Western Civilization
- Development of Eastern Civilization
- Development of Latin American History
- Modern World History
- Cultural Expressions of Various Civilizations (art, music, literature, etc.)
- Economic Issues
- Political Issues
- Interdependence

World Geography

- The Nature of Geography
- Cultural Area Studies
  - Latin America
  - Middle East
  - North America
  - Europe
  - Africa
  - Asia
  - Australia
- World Geographic Patterns
- Urban Analysis
- Interdependence

**If advanced placement credit is to be awarded for world history or American history, content and specific objectives developed by the College Board should be used.*

Behavioral Sciences

When the behavioral sciences are developed as discrete courses, they are generally offered as electives. The following topics are not suggested as discrete course titles but topics which can be organized in a number of patterns.

Anthropology

- Nature of Anthropology
- Anthropological Theories of Cultures
- Social Groups, Organizations and Institutions
- Linguistic Patterns as Reflections of a Culture

Psychology

- Nature of Psychology
- Stages of Human Growth and Development
- Creative Thinking Process
  - Learning and Language Development
  - Personality Theories
- Individual Development
  - Development of Self-concept
  - Understanding Relationships—Individual and Groups

Sociology

- Nature of Sociology
- Culture, Socialization, Groups and Institutions
- Communications
- Cultural and Social Change
- Cultural Contact and Diffusion

Technology

General education courses should be offered to every student and not restricted to students who are in advanced science and mathematics programs. Courses should include the following.

Introduction to Computer Operation

Perform proper operation of the computer

History and Theory of Computers

Be aware of the significant events in the evolution of computers

Machine Operation

Recognize that a structured, sequential procedure is necessary for computer operation

Machine Commands

Be aware that each computer has its own built-in commands and functions and how to use these commands

Social Impact of Computers

Be aware of how computers are changing life at home and on the job

Employment Opportunities

Be aware of computer related jobs and the education background required for employment

School systems are encouraged to offer technology educational experiences in the elementary and middle school grades. Refer to the state Educational Technology guide for further information.

Traffic Safety Education

Drive education and motorcycle safety education can be offered only at the discretion and expense of local school systems.

Vocational Education

Vocational education in high school includes a wide variety of programs, both occupational and nonoccupational. To satisfy the state graduation requirement of an elective in vocational education, students may choose from the following programs.

School systems are encouraged to offer preparatory experiences (i.e., home economics, computer literacy, industrial arts) in the middle grades program.

Trade and Industrial Education Concepts

- Development of job entry skills required to enter the occupation
- Development of employability skills which are required to enable a student to get along with supervisors, co-workers and the public
- Identify proper use and care of tools and equipment
- Demonstrate safe working practices
- Development of leadership skills through involvement with vocational student organizations

Examples of trade and industry courses are body and fender repair, construction, cosmetology, diversified cooperative training, drafting, electrical/electronics, electromechanical, graphic arts, health, metalworking and quantity food.

Agricultural

- Awareness of plans related to and the economic use of facilities land, water, machinery, chemicals, finance and labor in the production of plant and animal products
- Learn to sell supplies for agricultural production, provide agricultural services and purchase, grade, store, market and transport agricultural products
- Learn to select, operate, maintain, service, sell and use agricultural/agribusiness-power units, machinery, equipment, structures and utilities
- Learn to process food and nonfood projects and to inspect those products preparatory to marketing
- Learn to produce, process and market plants, shrubs and trees
- Learn the conservation and/or improvement of natural resources
- Learn to produce, protect and manage timber and specialty forest crops and to use the forest for multiple purposes such as game preserves and recreation

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Examples of agriculture courses are production agriculture, agricultural supplies/services, agricultural mechanics, agricultural products processing and marketing, horticulture, renewable natural resources and science and forestry

Marketing and Distributive Education

- Learn economics and marketing concepts (i.e. national economy, economic fundamentals, marketing fundamentals, products and process goods/services and organized labor)
- Develop marketing communication verbal and written process, marketing
- Develop selling, merchandising, advertising and display techniques
- Learn management and operations skills
- Learn to organize a business

Marketing and distributive education programs are offered at the 10th, 11th and 12th grades. Students have opportunities to explore careers and learn entry level job skills related to careers in the marketing field. Students enrolled usually work in part-time marketing jobs during the 11th and 12th grades. The job training is related to classroom discussions centered around selling, marketing, management, sales promotion, buying, research and other marketing related areas.

Business Education

- Develop skills in typewriting, accounting and general office technology
- Develop skills in data processing, accounting and management
  - — Develop basic language skills through oral communication
  - — Learn to process information in a business using identified procedures
  - — Understand aspects of input/output procedure in information processing
  - — Learn the major components of data processing systems
  - — Demonstrate the use of computer equipment and job control language

Examples of courses are divided into two clusters: Office Systems and Procedures Cluster and Business Information Systems/Management Clusters. Three specialized programs are an integral part of the two clusters: Vocational Office Training, Intensive Office Procedures and Data Processing.

Industrial Arts Education

- Develop an awareness of careers in industry
- Reinforce life role skills
- Learn the importance of beginning and completing a task
- Plan career activities, i.e. develop a career plan
- Develop consumer education skills
- Develop an understanding of the communications industry, power and transportation industry, manufacturing industry and the construction industries in our technical society
- Develop an understanding of the impact of the high tech on our free enterprise economy and lifestyle
- Apply the principles of math, science and social studies to the solving of technical problems
- Develop human relations skills of working alone with small groups and large groups
- Develop computer and automation literacy as it applies to industry and technology

Industrial Arts courses are divided into three levels: Exploratory Level I — 7th and 8th grades, Prevocational Level II — 9th and 10th grades and Pretechnical Level III — 11th and 12th grades.

Home Economics Education

- Prepare students for the occupation of homemaking
- Prepare students for paid employment in home economics related occupations

Home Economics for Homemaking includes laboratory experiences and instruction in child development, foods and nutrition, clothing and textiles, housing, furnishings and home management, personal finance/consumer education

Home Economics related occupations include preparation for employment in Care and Guidance of Children, Clothing, Apparel and Textiles Management and Food Services.

Prevocational Home Economics (grades 7-8) includes an introduction to both of the above programs.

Special Needs Vocational Program

- Demonstrate a knowledge of the necessity for establishing and maintaining positive working relationships, good attitude and general job employability skills necessary to gain and keep jobs
- Demonstrate an understanding of the world of work, vocational education opportunities, career exploration and job preparation in relationship to the educational needs of each student
- Demonstrate an ability to evaluate career options as they reflect personal interest and abilities
- Demonstrate an ability to complete a sequential vocational offering skills being able to function at job entry level or at an optional exit point in the field for which the vocational training occurs

The special needs vocational programs are divided into two programs designed to offer special support services or assistance to handicapped (Related Vocational Instruction Program-RVIP) and disadvantaged (Coordinated Vocational Academic Education-CVAE).

Program of Education and Career Exploration (PECE)

- Describe personal needs and unique characteristics considered in making career choices
- Understand present and future characteristics of broad areas of work
- Demonstrate knowledge of education/training options for career preparation
- Understand how to use an organized decision-making process to select realistic occupational goals
- Demonstrate the ability to locate, apply for and maintain employment

As a basis for future career choices and career planning, the PECE program provides an opportunity for students to relate self to broad areas of work through exploratory experiences at community worksites and related classroom activities.

Appendix
Media Skills Continuum

This material has been developed to help local educators plan for improved student skills in acquiring and processing information. This is not a minimum listing. It represents skills that the average student should develop. With gifted students, additions will need to be made. For special education students, the sequence should be followed, but the timing of that sequence (i.e. grade level) will need to be delayed so that new skills are not introduced until previous skills have been attained.

During the 1984-85 school year, a comprehensive draft of this document was field-tested by several hundred participants in the regional media workshops and was reviewed by members of the area media committees. This revision reflects changes made as a result of the field test. Even though this continuum is not at minimum level, additional skills may be needed to make it comprehensive.

Media Skills and Instruction

Media Skills Defined

Media skills encompass traditional library skills, thinking skills, study skills, research skills and production/presentation skills. These skills involve the processes of finding, evaluating and using information.

The skills used in information processing provide an opportunity to relate content of different disciplines and to help students establish relationships among them. Such is the case, for example, when students develop an understanding of using a classification system such as the Dewey Decimal System. When this system of organizing information is taught in isolation in the media center, there is little opportunity to relate the grouping of similar materials in the media center to the grouping of animals or plants in science or the classifying of words according to parts of speech in language arts. Therefore, the most effective approach to instruction in these skills involves cooperative planning by teachers and media specialists in all subject areas at every grade level.

Cooperative Planning Defined

When the media specialist plans jointly with all teachers, it is possible to incorporate the appropriate sequence of media skills into classroom instruction and to insure coverage of the complete scope of these skills across grade levels. In addition, the media specialist can secure, adapt or produce materials needed for instruction and can reinforce skill development begun in the classroom when students seek information through the media center.

The study of a foreign country may be used as an example of cooperative planning. In this example, instructional and information processing skills are identified by the classroom teacher and the media specialist. Together, they plan learning activities which provide opportunities for students to acquire process skills while gaining mastery of the course content. Perhaps the teacher will want to schedule several small group activities in the media center so that students can prepare special presentations on the country's music, art, and architecture. The media specialist will be prepared to guide students in locating the information that they need, will identify community resources or resource persons to supply additional information or experiences, will guide small group or individual research in the media center and will facilitate the development and preparation of illustrations, papers, productions or recordings by students.

Cooperative planning also involves cooperative evaluation; therefore the teacher and media specialist must jointly plan ways to measure student gains in both content and

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process skills. Usually evaluation will take place in the classroom.

Continuum Organization

Following is a continuum of information processing objectives which are arranged by grade levels and which have been keyed to the Georgia Criterion-Referenced Tests as indicated by asterisks (*). Four goals provide a framework for the objectives. The goals for each grade grouping are similar except for grades six through eight, where emphasis is placed on skill in research as an important part of information processing. There is significant, intentional duplication between this list and the objectives found in the body of the *Basic Curriculum Content* in order to provide a scope and sequence for information processing skills that can serve as the base for planning between teachers and media specialist.

Objectives are stated only once. However, two basic assumptions are made: 1. that educators will introduce, develop, and reinforce these skills in stages of instruction which will usually span many grade levels; 2. that remediation will often be needed. The objectives that are printed in regular type should be introduced by the teacher in the classroom. Those in italics should be the responsibility of the media specialist.

Kindergarten

Goal I - Understands how to identify and locate information sources

- Demonstrates an interest in reading*
- Demonstrates left to right and top to bottom progression*
- *Follows directions to a specific media center area*
- Demonstrates interest in a variety of written material*
- *Follows rules for use of media center*
- Demonstrates proper care of materials and equipment
- *Moves independently to appropriate media center area according to type of material or equipment needed*

Goal II - Understands how to retrieve content from information sources in all formats

- Uses primary encyclopedias and picture dictionaries for pleasure
- Uses picture books as information sources
- Uses audio equipment to develop listening skills
- Identifies and experiences activities using the five senses
- Identifies objects in artworks

Goal III - Develops the mental skills necessary for comprehending, comparing, analyzing or applying information

- Recognizes the relationships between oral and written language*
- Analyzes and interprets pictures using expressive language*
- Recognizes common sounds*
- Listens for sounds of voices and certain musical instruments
- Sorts objects by similarities
- Make judgments*

Goal IV - Develops the techniques and skills necessary for restructuring and sharing information, including skills needed to organize, plan, produce or present information in any format

- Tells a story in sequence*
- Uses creative arts to interpret literature
- Acts out song stories and dramatizations

Grades One - Three

Goal I - Understands how to identify and locate information sources

- Recognizes literature forms: nursery rhymes, picture books, poetry, fairy tales, folk tales and fantasy

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At the end of the skills list is a grid that should be used during media specialist/teacher planning to map curriculum content and grade level coverage. Copies of it should be maintained by the media specialist for use in selection of materials; by the lead teacher, department chairperson, etc. for curriculum development, and by the principal to support instructional supervision. Regular review and revision of the grid should be scheduled.

- Identifies materials format appropriate to equipment
- Reads for a variety of purposes in a variety of sources
- Follows directions, orally given (grades one and two) and written (grade three)
- *Demonstrates appropriate media center behavior*
- *Borrows materials from the media center related to instructional content and for enjoyment.*

Goal II - Understands how to retrieve content from information sources in all formats

- Uses book parts for information: title page, table of contents, index
- Uses the table of contents to locate general information in a book*
- Uses guide words to locate topics in dictionaries, encyclopedias and card catalog
- Uses alphabetical order to the first letter (grade one), second letter (grade two) and third letter (grade 3)*
- Uses abridged dictionaries to identify appropriate word meanings or proper spelling
- Sorts materials according to subject
- Looks at art of different cultures and times
- Interprets data on simple graphs
- Interprets information on simple maps
- Uses listening and viewing equipment to obtain information
- Uses magazines for information and enjoyment

Goal III - Develops the mental skills necessary for comprehending, comparing, analyzing or applying information

- Distinguishes between fantasy and realism
- Distinguishes fiction from nonfiction
- Makes predictions*
- Recognizes explicitly stated main ideas, details, sequence of events, cause-effect relationships*
- Uses context to identify and understand meanings of words
- Adjusts listening strategies according to purpose for listening
- Organizes elements of sets according to given characteristics*
- Identifies main characters in a story*

Goal IV - Develops the techniques and skills necessary for restructuring and sharing information, including skills needed to organize, plan, produce or present information in any format

- Draws illustrations related to content
- Retells information presented orally
- Produces simple puppets and presents puppet plays
- Writes creatively—stories and poems
- Summarizes material read silently
- Writes several sentences about one subject

Grades Four, Five

Goal I - Understands how to identify and locate information sources

- Recognizes literature forms: short story, autobiography, biography, bibliography
- Uses alphabetizing rules in the card catalog to locate desired entry
- *Uses the card catalog to locate call numbers for materials by title entry, subject heading and author's name*
- Recognizes that authors' surnames are used to identify materials
- *Decodes Dewey decimal numbers to locate materials*
- *Uses the community resource file to identify resource persons*
- *Uses the vertical file as a source of timely, brief items and illustrations*
- Identifies awards given for children's literature and illustration
- Uses the telephone book to identify resource persons and organizations

Goal II - Understands how to retrieve content from information sources in all formats

- Uses book parts for information: foreword, preface, glossary, appendix
- Skims materials to determine approximate value to subject under study
- Uses subject headings and cross references to locate information on a topic

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Italicized objectives are those for which the media specialist is responsible. For implementation of all other objectives, the media specialist and teacher must plan together.

- Uses mult'ple sources for information on a single topic
- Uses a book's index to identify specific topics*
- Uses general and special atlases and gazetteers*
- Uses an unabridged dictionary to locate correct spelling and definitions of words
- Uses general encyclopedias (one-, two- and multivolume) for general information and bibliographic leads to other sources*
- Uses biographical and geographical dictionaries to locate information about people and places
- Uses handbooks with miscellaneous information to locate interesting or unusual facts for reports
- Uses legends and keys as referents on maps and charts
- Uses all available material formats on appropriate viewing or listening equipment
- Uses periodicals for information or enjoyment
- Uses almanacs as ready reference sources to locate specific facts, figures and names*

Goal III - Develops the mental skills necessary for comprehending, comparing, analyzing or applying information

- Distinguishes between fact and opinion*
- Recognizes figurative meanings of words*
- Recognizes implied main ideas, details, relationships and cause-effect relationships*
- Recognizes the relevance of data*
- Interprets semantic and syntactic relationships*
- Recognizes bias and stereotypes in materials
- Makes generalizations and draws conclusions*

Goal IV - Develops the techniques and skills necessary for restructuring and sharing information, including skills needed to organize, plan, produce or present information in any format

- Takes accurate notes, paraphrases and outlines content accurately
- Writes stories, poetry, plays and songs
- Summarizes information from a variety of sources on one topic
- Develops organizational plan for presenting information to others
- Reads orally with expression and meaning
- *Creates simple products such as transparencies, audiotapes, mounted pictures, displays, mobiles and booklets to share information*

Grades Six - Eight

Goal I - Understands how to identify and locate information sources

- Distinguishes among literature forms: myths, fables, tall tales, parables, science fiction, novels, documentaries
- Identifies organizational strategies used for collections or reference sources: alphabetical, numerical, alphanumerical, decimal, geographical, chronological
- Identifies the purpose and order of classification systems
- Uses knowledge of classification system to browse for information on a specific topic
- *Contacts organizations for information*
- *Contacts museums, government agencies, public and regional libraries for information*

Goal II - Understands how to retrieve content from information sources in all formats

- Identifies elements of literary works: setting, time, characterization, plot, theme, point of view
- Uses a variety of biographical resources to check facts about individuals
- Uses newspapers as information sources
- Uses rhyming, foreign language and abbreviation dictionaries
- Uses handbooks to locate quotations, historical events and literary analyses
- Uses a thesaurus to determine the most precise word meanings, antonyms or synonyms*
- Retrieves current information on topics by using periodical indexes

Goal III - Develops the mental skills necessary for comprehending, comparing, analyzing or applying information

- Recognizes and analyzes persuasion techniques*

- Uses evaluative criteria according to material format
- Interprets nonliteral meanings of words (i.e., similes, hyperboles, metaphors, idioms)*

Goal IV - Develops the techniques and skills necessary for systematic research or study of a topic

(Note: Goal IV is changed for this grade level.)

- Analyzes a question to determine the topic, subtopic, amount and currency of information needed
- Develops hypotheses
- Stipulates most likely source to locate information for a given purpose
- Identifies alternative information sources
- Selects and uses various reference guides and materials according to the information needed
- Distinguishes between essential and nonessential information related to a topic
- Identifies similarities and differences in content of materials
- Interpolates and extrapolates from content
- Provides evidence to support stated opinions
- Takes notes and develops outlines
- Organizes, summarizes and interprets information
- Outlines main ideas and supporting details from two or more sources on a given topic
- Develops charts, graphs and tables to convey information
- Edits and corrects written work
- Restates information using alternate and more precise words
- Writes bibliographic citations to document sources of information

Grades 9-12

Goal I - Understands the strategies and materials useful in identifying and locating information sources

- Uses bibliographies or computer databases (when available) for information needs
- Distinguishes among literary types: satires, sonnets, critical essays, ready reference sources, reviews, abstracts, tragedies, comedies
- Uses a variety of general and subject-specific sources for information
- ***Borrows materials not available in school collection from outside sources***
- Identifies information to support two opposing viewpoints
- Uses directories to identify human resources and information about them
- Interviews human resources for information
- Uses handbooks and yearbooks for statistical information, addresses or recent developments

Goal II - Understands the strategies and materials used in retrieving content from all formats

- Uses guides with tabular information as ready reference sources
- Uses subject dictionaries, encyclopedias, handbooks and manuals related to course content
- Uses dictionaries to determine word etymologies
- Uses a style manual in preparing reports and papers

Goal III - Develops the techniques and mental skills necessary for comprehending, comparing, analyzing or applying information

- Evaluates information according to relevance, appropriateness, accuracy and interest
- Establishes relationships between human events and examples in literature
- Identifies assumptions on which material is based
- Analyzes materials for consistency
- Analyzes arguments presented in material and determines pertinent points

Goal IV - Develops the techniques and skills necessary for restructuring and sharing information, including skills needed to organize, plan, produce or present information in any format

- Makes speeches to groups, formally and informally
- Condenses information on one topic from a variety of sources
- Develops charts, graphs and grids to appropriately transfer information

- Uses appropriate production skills to present information in a variety of formats
- Writes annotations describing content of materials

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Integration of Media Skills into Curriculum Content—K-8

Directions to Media Specialist: Duplicate this grid in sufficient quantities for use in planning with teachers. From the continuum, enter the numbers of the media skills objectives related to the grades in your school. Then meet with each teacher to plan instruction, indicating on the grid the subject areas in which each objective can be addressed. Upon completion, copies should be filed in the media center, in the appropriate instructional units and in the principal's office. Regular review and revision should be planned.

Grade Level _____

Media Skills Objective	Mathematics	Language Arts	Science	Social Studies	Art	Music	Health and Safety	Physical Education

Integration of Media Skills into Curriculum Content—9-12

Directions to Media Specialist: Duplicate this grid in sufficient quantities for use in planning with teachers. From the continuum, enter the numbers of the media skills objectives related to the grades in your school. Then meet with each teacher to plan instruction, indicating on the grid the subject areas in which each objective can be addressed. Upon completion, copies should be filed in the media center, in the appropriate instructional units and in the principal's office. Regular review and revision should be planned

Grade Level _____

Media Skills Objective	Technology	English Language Arts	Fine Arts	Foreign Language	Mathematics	Physical Education	Science	Social Studies	Health/Safety Education	Vocational Education

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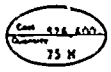

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