

Fulton County Schools · Where Students Come First

# LEARNING OBJECTIVES

# Grade 5

Dear Parents/Guardians:

As part of our commitment to you as our stakeholders, the Curriculum Department of the Fulton County School System has identified learning objectives for all content areas taught in our schools. These learning objectives specify what a learner should know and be able to do at each grade level.

The learning objectives are organized by grade and reflect the Georgia Performance Standards ( GPS ) from the State of Georgia as well as national standards. We hope this will be helpful to you as you support your child ' s success in school. Please let us know how this document can be improved to best meet your needs.

Sincerely,  
Amy Krause, Assistant Superintendent  
and the Curriculum Staff



# *English/ Language Arts*

## **Reading**

- Read and comprehend literary genres (drama, poetry, narratives, and informational texts)
- Identify imagery and figurative language when responding to literature
- Identify common structures and stylistic elements in traditional literature
- Identify and use knowledge of common textual features, organizational features, and common graphic features in informational text
- Understand, acquire, and use new vocabulary correctly in reading and writing
- Read aloud accurately, in the range of 95%, familiar material in a way that makes meaning clear to listeners

## **Writing**

- Select a focus and organizational structure based on audiences and purposes (narrative, persuasive, response to literature, informational) using the writing process
- Apply grammatical rules and conventions of language in the writing process
- Write narrative that establishes plot,

setting, conflict and/or significance of events

- Write a response to literature including literature about other cultures
- Write informational pieces that use and acknowledge various reference materials
- State and support a position in a persuasive writing
- Use various reference materials as aids in writing

## **Conventions**

- Apply knowledge of Standard English when writing and revising
- Use eight parts of speech
- Edit for capitalization, punctuation, spelling, and word choice

## **Listening, Speaking/Viewing**

- Respond appropriately to comments and questions
- Volunteer contributions and respond when solicited by teacher or leader
- Give reasons in support of opinions
- Present information to an audience using effective preparation
- Demonstrate an awareness of the presence of the media in the daily lives of most people
- Use technology or other memory aids to structure presentations

# *Mathematics*

Instruction and assessment will include the use of manipulatives and appropriate technology. Topics will be represented in multiple ways including concrete/pictorial, verbal/written, numeric/data based, graphical, and symbolic. Concepts will be introduced and used in the context of real world phenomena.

## **Numbers and Operations**

Students will further develop their understanding of the concept of whole numbers. They will also understand multiplication and division of decimals and use decimals and common fractions in computation, as well as in problem solving situations.

- Find multiples and factors
- Analyze and use divisibility rules
- Use  $<$ ,  $>$ , or  $=$  to compare decimals and justify the comparison
- Model multiplication and division of decimals
- Multiply and divide with decimals including decimals less than one and greater than one
- Use  $<$ ,  $>$ , or  $=$  to compare fractions and justify the comparison
- Find equivalent fractions and simplify fractions
- Estimate products and quotients
- Explore and model percents using

multiple representations and apply percents to circle graphs

## Geometry

Students will further develop their understanding of geometric figures.

- Understand congruence of geometric figures and the correspondence of their vertices, sides, and angles
- Understand the relationship of the circumference of a circle to its diameter is pi ( $\pi = 3.14$ )

## Measurement

Students will compute the area of geometric plane figures. They will also understand the concept of volume and compute the volume of simple geometric solids and measure capacity. Students will convert from one unit to another within one system of measurement.

- Understand and compute the volume of a simple geometric solid
- Derive the formula for the area of a parallelogram, triangle, and circle
- Find the areas of triangles, parallelograms and circles using formulae
- Derive the formula for the circumference of a circle and find the circumference of a circle using the formula and  $\pi \approx 3.14$
- Use milliliters, liters, fluid ounces, cups, pints, quarts, and gallons to measure capacity and compare one unit to another within a single system of measurement

## Algebra

Students will represent and investigate mathematical expressions algebraically by using variables.

- Use variables, such as  $n$  or  $x$ , for unknown quantities in algebraic expressions.
- Investigate simple algebraic expressions by substituting numbers for unknown

## Data Analysis and Probability

Students will gather, organize, and display data and interpret graphs.

- Analyze, compare and contrast multiple graphic representations (circle graphs, line graphs, line plot graphs, pictographs, Venn diagrams, and bar graphs)
- Collect, organize, and display data using the most appropriate graph
- Determine and justify the mean, range, mode, and median of a set of data

## Process Standards

Each topic studied in this course should be developed with careful thought toward helping every student achieve the following process standards.

- Solve problems (using appropriate technology)
- Reason and evaluate mathematical arguments
- Communicate mathematically
- Make connections among mathematical ideas and to other disciplines

- Represent mathematics in multiple ways

## Science

### Characteristics of Science (*Habits of Mind and The Nature of Science*)

- Measure, keep records, and offer reasons for scientific findings
- Distinguish observations from ideas and speculations
- Understand the importance of safety
- Use computational skills to analyze scientific data correctly
- Use the relevant tools of science, including computers, to explore science
- Understand and communicate scientific ideas clearly
- Be familiar with both old and new scientific knowledge

### Physical Science

- Demonstrate that the mass of an object is equal to the sum of its parts to include atoms and subatomic particles
- Investigate physical change (separating mixtures, phases of water) and chemical change (burning and rusting)
- Investigate static and current electricity and determine the necessary components of an electric circuit
- Investigate common materials to determine if they are insulators or

conductors

- Compare a bar magnet to an electromagnet

## Earth Science

- Identify the surface features of the earth caused by constructive (deposition, volcanoes, earthquakes, etc.) and destructive (erosion, weathering, volcanoes, earthquakes, etc.) processes

## Life Science

- Demonstrate how animals and plants are sorted into groups
- Compare and contrast characteristics of learned behaviors and inherited traits
- Diagram and identify parts of various cells using microscopes
- Relate how microorganisms benefit and harm larger organisms

## \*Science Glossary

*Acceleration* is a change in motion caused by unbalanced forces or a change in velocity.

*Atom* is the smallest unit of an element that has all the properties of the element.

*Compound* is a substance made of the atoms of two or more elements.

*Condensation* is the change of state from a gas to a liquid. (Drops of water form on the outside of a very cold glass because of the condensation of water vapor that is in the air.)

*Conductors* are materials that allow

electricity to pass through them easily (ex., copper).

*Constructing hypotheses* includes formulating generalizations that include all objects or events of the same class. Questions, inferences, and predictions can lead to the formation of a hypothesis. The hypothesis must be tested if its credibility is to be established.

*Drawing conclusions* includes interpreting data acquired through experimentation to determine whether a hypothesis is supported.

*Deposition* is the process of dropping or depositing sediment in a new location.

*Electron* is a subatomic particle with a negative charge.

*Erosion* is the process of moving sediment from one place to another.

*Experimenting* includes the design and implementation of procedures to obtain reliable information about interrelationships among objects and events. Investigating includes formulating and solving a problem and experimenting and drawing conclusions.

*Formulating models* includes describing or constructing physical, verbal, mental, or mathematical explanations of systems and interrelated phenomena that cannot be observed directly. Models may be used in predicting outcomes of planned experiments.

*Identifying variables* includes finding the variables of a system and selecting those to be held constant.

*Insulators* are materials that do not allow electricity to move easily through them (plastics, rubber, wood, paper, cloth, ceramics).

*Interpreting data* includes the identification of trends or patterns in sets of data. Patterns in data may be used to establish generalizations, make predictions, and formulate hypotheses.

*Invertebrates* are animals without a backbone.

*Manipulating variables* includes changing one thing in an experiment to determine how the results will change.

*Molecule* is a grouping of two or more atoms bonded together.

*Neutron* is a subatomic particle with no charge.

*Nucleus* of an atom is found in the center of the atom and contains protons and neutrons.

*Plate tectonics* is the moving of irregularly shaped slabs (plates) that make up the Earth's lithosphere (topmost solid part of the Earth, which is composed of the crust and some of the mantle).

*Proton* is a subatomic particle with a positive charge.

*Speed* is a measure of the distance an object moves in a given amount of time.

*Velocity* is an object's speed in a particular direction.

*Vertebrates* are animals with a backbone.

## **Social Studies** *(The United States Through Modern Times)*

### History

- Explain the causes, major events,

and consequences of the Civil War

- Analyze the effects of Reconstruction on American life
- Describe how life changed in America at the turn of the century
- Describe U.S. involvement in World War I and post-World War I America
- Explain how the Great Depression and New Deal affected the lives of millions of Americans
- Explain the reasons for America's involvement in World War II
- Discuss the origins and consequences of the Cold War
- Describe the importance of key people, events, and developments between 1950-1975
- Trace important developments in America since 1975

## **Geography**

- Locate important places in the United States
- Explain the reasons for the spatial patterns of economic activities

## **Civics and Government**

- Explain how a citizen's rights are protected under the U.S. Constitution
- Explain the process by which amendments to the U.S. Constitution are made
- Explain how amendments to the U.S. Constitution have maintained a representative democracy

## **Economics**

- Use the basic economic concepts

of trade, opportunity cost, specialization, voluntary exchange, productivity, and price incentives to illustrate historical events

- Describe the functions of the four major sectors in the United States economy
- Describe how consumers and businesses interact in the United States economy across time
- Identify the elements of a personal budget and explain why personal spending and saving decisions are important

## **Health Education**

### **Safety and Injury**

- Describe ways to get help for emergency situations and demonstrate skill in basic first aid procedures (calling 911, using fire alarm button)
- Choose behaviors to reduce risk of violence and protect self (do not touch guns, travel with a friend/adult)

### **Nutrition**

- Follow dietary guidelines, eat for healthful reasons, and maintain desirable weight
- Read food labels

### **Personal Health**

- Explain the relationship between positive health behaviors and the prevention of injury, illness,

disease, and premature death

- Identify ways to reduce risks related to health problems of adolescence
- Identify suicide prevention skills (talking with an adult)
- Spend money and time wisely (homework before television)

## **Family Living/ Growth and Development**

- Develop relationship skills:
    - a) avoid discrimination (racial, gender, religious, ethnic)
    - b) recognize harmful relationships (peer pressure)
    - c) practice conflict resolution (listening skills, getting help when needed)
  - Describe how the human body systems are interrelated (seeing that what one eats affects how one feels)
  - Recognize how the body changes as it grows and identify changes of puberty (height, weight, facial hair, menstruation)
  - Achieve developmental tasks for own age level (begin to seek independence)
- ## **Communicable and Chronic Disease**
- Choose behaviors to reduce the risk of infection with HIV/STDs (not sharing personal items like razors or toothbrushes, not touching body fluids from

another person)

## **Alcohol, Tobacco, and Other Drugs**

- Identify school and community resources for intervention (school clinic assistant, school counselor, local health department)
- Recognize the harmful effects of alcohol and remain safe and drug free
- Demonstrate the ability to influence and support others in making positive health choices, using resistance skills when pressured to use drugs
- Identify responsible ways to use over the counter and prescription drugs (not sharing prescription drugs, taking as directed)
- Reduce the risk of HIV infection by refraining from the use of injecting drugs or drugs that dull decision making skills

## **Environmental Health**

- Increase awareness of community environmental issues (air, water, noise) by proposing solutions
- Understand the costs/benefits of recycling, overcrowding

# **Physical Education**

## **Fitness**

- Participate in and demonstrate progress toward developing health related fitness and skill-related fitness (flexibility, speed)

- Participate in the Georgia fitness assessment program (Fitnessgram)
- Identifies heart rate during exercise

## **Motor Skills**

- Demonstrate competencies in adapting and varying basic movement skills (walking, skipping, throwing) and transfer these skills to games, sports, dance, and gymnastics
- Participate alone and with others in lead-up or modified sports (striking foam tennis ball with partner in small space) activities
- Adapt and vary sequential stunts, tumbling, and balancing patterns and demonstrate these skills in apparatus activities (beam, floor, and bars)

## **Cognitive**

### ***(Knowledge Gained)***

- Demonstrate understanding of the difference between health-related and skill-related fitness and the resulting benefits of each
- Count exercise heart rate and adjust activity level appropriately
- Demonstrate a basic understanding of strategy, rules, and concepts (taking turns, alternating serves, offense and defense)

## **Affective/Social**

### ***(Relating to Emotions/Feelings, Group Learning)***

- Demonstrate basic understanding of cooperation, competition, fair play, and leadership
- Demonstrate how to compete,

succeed, deal with frustration, lead, follow (being a good winner or loser, following rules); become responsible, expressive, creative, and skilled

## **Art**

### **Meaning and Creative Thinking**

- Engages in the creative process to generate and visualize ideas.
- Formulates personal responses to visual imagery.
- Selects and uses subject matter, symbols, and/or ideas to communicate meaning.

### **Contextual Understanding**

- Investigates and discovers the personal relationship of artist to the community, the culture, and world through making and studying art.
- Views and discusses selected artworks, cultures, and artists (to include a minimum of six artists/cultures per year).

### **Production**

- Creates artworks based on personal experience and selected themes.
- Understands and applies media, techniques, and processes of two-dimensional art processes (drawing, painting, printmaking, mixed-media) using tools and materials in a safe and appropriate manner to develop skills.
- Understands and applies media, techniques, and processes of three-

dimensional works of art (ceramics, sculpture, crafts, and mixed-media) using tools and materials in a safe and appropriate manner to develop skills.

- Plans and participates in appropriate exhibition(s) of artworks.

### Assessment and Reflection

- Develops and maintains an individual portfolio of artworks.
- Uses a variety of approaches to understand and critique works of art.
- Explains how selected elements and principles of design are used in an artwork to convey meaning and how they affect personal responses to and evaluation of the artwork.

### Connections

- Applies information from other disciplines to enhance the understanding and production of artworks.
- Develops life skills through the study and production of art.

## Music

### Performing

- Sing with good breath control throughout the appropriate singing range/or perform on at least one instrument alone and in small and large ensembles

### Listening, Responding, and Creating

- Improvise simple harmonic accompaniments

- Describe specific music events in a selected passage of recorded music

### Historical and Cultural Context

- Describe distinguishing characteristics of representative musical forms from a variety of cultures (how rhythm is used in songs from different countries)

### Relationship to Other Subjects

- Connect musical selections to units covered in the Social Studies curriculum

## Technology Literacy

### Ethics

- Use paraphrasing (restatement of a passage of text in another form or other words) as an acceptable procedure
- Respect software licensing

### Communication

- Make digital movies with sound recordings
- Define and use terms: spreadsheet, cells, and mathematical operations (add, subtract, divide, and multiply numbers)
- Insert graphics

### Information Processing

- Recognize Boolean logic ( use of terms “and”, “or”, “not” to build or narrow information) and advance search engine strategies

### Productivity

- Identify/explain components of the computer (internal modem, remote server, network applications)
- Define and use terminology: hard drive, memory, folders

## Media Services: Information Literacy Standards

### Access Information

*(Inquire, think critically, and gain knowledge)*

Formulate and revise plans for accessing information for a range of needs and situations. (locate relevant information within a source quickly and effectively based on the format and organization of the source: (e.g.) textual, visual, media, or digital)

- Refine the question or problem
- Identify initial and secondary key words
- Read, view, and listen for information presented in any format (e.g., textual, visual, media, digital) in order to make inferences and gather meaning

### Evaluate Information

*(Critically and Competently)*

Construct strategies for locating information. (Use logic and informed judgment to accept, reject, or replace information: accuracy, validity, relevance, completeness, etc.)

Evaluate the process (strategies used) and the product (results) related to personal interest using multiple literacies, including digital, visual, textual, and technological as crucial skills.

- Identify types of information needed
- Consider and prioritize sources of information
- Identify subject headings and key words

### Use Information

Locate and access information:

- Use information to draw conclusions and develop new understandings
- Recognize a variety of formats for organizing information (i.e., posters, displays, skits, electronic presentations, wikis, blogs, podcasts, etc.)
- Use organizational features of print and electronic resources, with assistance
- Share knowledge and learning with others, both in face-to-face situations and through technology (e.g., blogs, wikis, podcasts, etc.)

### Appreciate Literature

Select, read and appreciate books from different types of genres and formats (fiction, nonfiction, science fiction, historical fiction, poetry, sports, music, art, etc.)

- Read widely, fluently, and independently to understand self, the world, and previous reading
- Use reading to pursue goals and interests

### Apply Principals of Information Literacy

- Self-assess performance according to given criteria (i.e., respond to feedback, reflect on how changes can be made, etc.)
- Self-assess the product according to established criteria or rubric (i.e., respond feedback, reflect on how changes can be made, etc.)
- Use creative and artistic formats to express personal learning

## *Talented & Gifted*

### Advanced Communication Skills

- Use written, spoken, and technological media to convey new learning or challenge existing ideas
- Produce written and/or oral work that is complex, purposeful, and organized, includes relevant supporting examples and manipulation of language
- Create products and/or presentations that synthesize information from diverse sources and communicate expertise to a variety of authentic audiences
- Use a variety of multi-media and innovative technology to create illustrations, models, charts, tables, and graphs as tools as communications
- Apply interviewing techniques for a variety of purposes

- Anticipate and address potential misunderstandings, biases, and expectations in communication with others
- Respond to contributions of others, considering all available information
- Participate in small group discussions to argue persuasively or reinforce others' good points
- Maintain a journal or log for self-reflection and/or self-evaluation
- Support and defend one's own opinions while respecting the opinions of others

### Advanced Research Skills

- Use a variety of print and non-print resources to investigate a topic of interest
- Formulate original and appropriate questions to test the limits of an existing body of knowledge
- Use concepts within and across disciplines to develop valid hypotheses, thesis statements, or alternative interpretations of data
- Select appropriate research tools and methodologies (e.g., historical, descriptive, developmental, case, field, correlational, action, survey, interview) to conduct scientific investigations
- Gather, organize, analyze, and synthesize data from multiple sources to support or disprove a hypothesis
- Develop and use systematic procedures for recording and organizing information
- Evaluate research methodologies and data to detect validity, bias,

reliability, and applicability to real-world problems and/or solutions

- Allow for and accept alternative interpretations of data
- Use APA or MLA style to document/ cite references, resources, quotations, notes, and bibliographies
- Defend research findings in a presentation or exhibit
- Apply ethical standards to research and analyses

### **Creative Thinking/Creative Problem Solving**

- Question accepted practices, rules, and existing principles to discover new knowledge
- Design, apply, evaluate, and adapt a variety of innovative strategies when problem solving (e.g., recognizes problems, defines problems, identifies possible solutions, selects optimal solution, implements solution and evaluates solution)
- Incorporate brainstorming and other idea-generating techniques (synectics, SCAMPER, etc.) to solve problems or create new products
- Demonstrate skills in fluency and flexibility to solve problems or create new products
- Develop original ideas, presentations, or products through synthesis and evaluation
- Clarify, illustrate, or elaborate on

an idea for product improvement

- Use analogies, metaphors, illustrations, and/or models to explain complex concepts
- Tolerate ambiguity when solving problems
- Recognize and assume risks as a necessary part of problem solving
- Monitor and reflect on the creative process of problem solving for future applications

### **Higher Order Critical Thinking Skills**

- Ask probing, insightful, and relevant questions
- Respond to questions with supporting information that reflects an in-depth knowledge of a topic
- Conduct comparisons using criteria
- Make and evaluate decisions using criteria
- Predict probable consequences of decisions
- Extrapolate verbal-linguistic (e.g., analogies) and visual-spatial patterns (e.g., tessellations) to determine relationships
- Examine an issue from more than one point of view
- Separate one's own point of view from that of others
- Identify stereotypes, biases, and prejudices in one's own reasoning and that of others

- Distinguish between assumptions inferences and conclusions
- Draw conclusions based upon relevant information while discarding irrelevant information
- Evaluate conclusions based upon relevance, depth, breadth, logic and fairness
- Trace the source of any large disparity in data and resolve the disparity
- Identify and illustrate basic principles and the foundational concepts that are central to understanding the essence of a field of study
- Recognize that the responsibility to examine and challenge existing ideas and theories is an ongoing process



We welcome your comments and suggestions. Please forward them to:  
Amy Krause, Ed.S., Assistant Superintendent, Curriculum and Support

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