Florida Teacher Certification Examinations

Test Information Guide

for

Middle Grades Integrated Curriculum 5–9

FLORIDA DEPARTMENT OF EDUCATION
www.fldoe.org

Second Edition

Developed, produced, and printed under the authority of the
Florida Department of Education

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Contents

1 Test and Test Information Guide Development

Teacher Certification Testing

Since 1980, Florida teacher certification candidates have been required to pass the Florida Teacher Certification Examinations (FTCE), which has consisted of tests in reading, writing, mathematics, and professional knowledge. The 1986 Florida Legislature modified the testing program by also requiring teacher candidates to pass a test in the subject area in which they wish to be certified. In addition, the Legislature substituted the Florida College-Level Academic Skills Test (CLAST) for the reading, writing, and mathematics portions of the FTCE. The 2000 Florida Legislature replaced the CLAST with the General Knowledge Test, effective July 1, 2002.

The subject area knowledge tested on the Middle Grades Integrated Curriculum 5–9 examination was identified and validated by committees of content specialists from within the state of Florida. Committee members included public school teachers, district supervisors, and college faculty with expertise in this field. Committee members were selected on the basis of recommendations by district superintendents, public school principals, deans of education, experts in the field, and other organizations. In developing the test, the committees used an extensive literature review, interviews with selected public school teachers, a large-scale survey of teachers, pilot tests, and their own professional judgment.

Role of the Test Information Guide

The purpose of this test information guide is to help candidates taking the subject area test in Middle Grades Integrated Curriculum 5–9 prepare effectively for the examination. The guide was designed to familiarize prospective test takers with various aspects of the examination, including the content that is covered and the way it is represented. The guide should enable candidates to direct their study and to focus on relevant material for review.

This test information guide is intended primarily for use by certification candidates, who may be students in a college or university teacher-preparation program, teachers with provisional certification, teachers seeking certification in an additional subject area, or persons making a career change to public school teaching. Candidates may have studied and worked in Florida or may be from out of state.

College or university faculty may also use the guide to prepare students for certification, and inservice trainers may find the guide useful for helping previously certified teachers prepare for recertification or multiple certification.

This test information guide is not intended as an all-inclusive source of subject area knowledge, nor is it a substitute for college course work in the subject area. The sample questions are representative of the content of the actual test; however, they are not actual test questions from an actual test form. Instead, the guide is intended to help candidates prepare for the subject area test by presenting an overview of the content and format of the examination.

2 Preparation for the Test

The following outline may help you to prepare for the examination. Adapt these suggestions to suit your own study habits and the time you have available for review.

Overview

- **Look over the organization of the test information guide.**

  Section 1 discusses the development of the test and test information guide.
  Section 2 (this section) outlines test preparation steps.
  Section 3 offers strategies for taking the test.
  Section 4 presents information about the content and structure of the test.
  Section 5 lists question formats and includes sample test questions.
  Section 6 provides an annotated bibliography of general references you may find useful in your review.
  Section 7 identifies a source of further information.

Self-Assessment

- **Decide which content areas you should review.**

  Section 4 includes the competencies and skills used to develop this subject area test and the approximate proportion of test questions from each competency area.

Review

- **Study according to your needs.**

  Review all of the competencies and concentrate on areas with which you are least familiar.

Practice

- **Acquaint yourself with the format of the examination.**

  Section 5 describes types of questions you may find on the examination.

- **Answer sample test questions.**

  Section 5 gives you an opportunity to test yourself with sample test questions and provides an answer key and information regarding the competency to which each question is linked.

Final preparation

- **Review test-taking advice.**

  Section 3 includes suggestions for improving your performance on the examination.

- **Refer to field-specific references.**

  Section 6 includes an annotated bibliography listing general references keyed to the competencies and skills used to develop this subject area test.

3 Test-Taking Advice

- Go into the examination prepared, alert, and well rested.
- Complete your travel arrangements prior to the examination date. Plan to arrive early so that you can locate the parking facilities and examination room without rushing.
- Dress comfortably and bring a sweater or jacket in case the room is too cool.
- Take the following with you to the test site:
  - — Admission ticket
  - — Proper identification as described in "Identification Policy"
  - — Watch
- There are many strategies for taking a test and different techniques for dealing with different types of questions. Nevertheless, you may find the following general suggestions useful.
  - — Read each question and all the response options carefully before selecting your answer. Pay attention to all of the details.
  - — Go through the entire test once and answer all the questions you are reasonably certain about. Then go back and tackle the questions that require more thought.
  - — When you are not certain of the right answer, eliminate as many options as you can and choose the response that seems best. It is to your advantage to answer all the questions on the test, even if you are uncertain about some of your choices.
  - — After completing the examination, go back and check every question. Verify that you have answered all of the questions and that your responses are correctly entered.

4 Competencies and Skills and Test Blueprint

The table on the following pages lists the competencies and skills used as the basis for the Middle Grades Integrated Curriculum 5–9 examination. These competencies and skills represent the knowledge that teams of teachers, subject area specialists, and district-level educators have determined to be important for beginning teachers. This table could serve as a checklist for assessing your familiarity with each of the areas covered by the test. The competencies and skills should help you organize your review. The test blueprint indicates the approximate percentage of test questions that will cover the specific competency on the exam.

Competencies are broad areas of content knowledge.

Skills identify specific behaviors that demonstrate the competencies.

Percentages indicate the approximate proportion of test questions that represent the competencies on the test.

The following excerpt illustrates the components of the table.

Competency

Approximate percentage of total test questions (test blueprint)

Competency/Skill		**Approx. %**
1	**Knowledge of written and oral language**	**8%**
1	Determine a systematic process for the collection, processing, and presentation of information.	
2	Identify standard English usage, grammar, and punctuation.	
3	Select statements that best develop and support a thesis.	
4	Choose an organizational strategy for a specific purpose (e.g., chronological, spatial, causal, sequential).	
5	Identify appropriate modes (e.g., expository, narrative, persuasive) to create effective discourse.	

Skills (1-5)

Table of Competencies, Skills, and Approximate Percentages of Questions

Competency/Skill		**Approx. %**
English		
1	**Knowledge of written and oral language**	**8%**
	1 Determine a systematic process for the collection, processing, and presentation of information.	
	2 Identify standard English usage, grammar, and punctuation.	
	3 Select statements that best develop and support a thesis.	
	4 Choose an organizational strategy for a specific purpose (e.g., chronological, spatial, causal, sequential).	
	5 Identify appropriate modes (e.g., expository, narrative, persuasive) to create effective discourse.	
2	**Knowledge of reading**	**10%**
	1 Determine the author's purpose of a written text.	
	2 Make inferences and draw conclusions based on information conveyed in a written text.	
	3 Determine the main idea of a written text.	
	4 Distinguish between fact and opinion.	
	5 Assess the relevance, importance, and sufficiency of facts, examples, and reasons provided in support of an argument.	
	6 Identify cause-and-effect relationships in a written text.	
	7 Compare and contrast elements (e.g., setting, plot, character, theme) in a written text.	
	8 Determine meanings of words using context clues.	
3	**Knowledge of literature**	**5%**
	1 Identify selections from literature, including folklore and mythology, for a variety of student interests and needs.	
	2 Interpret fictional and nonfictional texts representative of diverse cultures and historical periods.	
	3 Identify common literary elements and techniques (e.g., theme, figurative language, mood, tone, foreshadowing, point of view).	

Competency/Skill		**Approx. %**
4	**Knowledge of teaching middle grades English**	**2%**
	1 Apply interdisciplinary techniques within middle grades English classrooms. 2 Select appropriate strategies and resources, including technological resources, for language arts (e.g., written and oral language, literature) and reading instruction.	
General Science		
5	**Knowledge of the nature of science**	**5%**
	1 Apply knowledge of science skills (e.g., observing, inferring, communicating, classifying, predicting, metric or SI measuring, graphing) to real-world situations. 2 Apply knowledge of the science processes (e.g., forming hypotheses, manipulating variables, collecting data, analyzing results, reaching conclusions) to real-world situations. 3 Apply knowledge of scientific inquiry in designing and performing investigations. 4 Identify procedures for the appropriate and safe use, care, handling, storage, and disposal of chemicals, equipment, organisms, and other laboratory materials.	
6	**Knowledge of living things and their environment**	**6%**
	1 Distinguish relationships between structure and function (e.g., reproduction, maintenance, growth, regulation) in organelles, cells, and organisms. 2 Apply the principles of genetics, including mitosis and meiosis, Mendelian genetics, molecular biology (e.g., DNA, RNA, replication, protein synthesis), and patterns of inheritance, to genetic problem solving. 3 Identify the major steps of plant and animal physiological processes (e.g., photosynthesis, transpiration, reproduction, respiration, digestion, circulation). 4 Differentiate structures and functions of organs and organ systems of living things. 5 Identify patterns of animal behavior (e.g., territorial, social, learned, instinctive, communicative). 6 Identify current issues and effective methods of conservation of natural resources. 7 Identify interactions between biotic and abiotic factors in the environment (e.g., population density, pollution, succession, adaptation).	

Competency/Skill		**Approx. %**
8	Identify the major characteristics of world biomes and communities and the interrelationships of the organisms within them.	
7	**Knowledge of the forces of Earth and space**	**6%**
1	Identify the characteristics of geologic structures (e.g., mountains, canyons, rivers, glaciers) and the mechanisms (e.g., plate tectonics, volcanic activity, erosion) by which they were formed.	
2	Identify how fossils are formed, the methods for determining geologic age, and how this information is used to interpret the past.	
3	Analyze data to interpret and forecast weather.	
4	Analyze the chemical, physical, and geological characteristics of the ocean (e.g., salinity, currents, tides, shorelines).	
5	Identify the characteristics of rocks, minerals, and soils and the mechanisms by which they were formed.	
6	Identify the ways in which earth, air, and water interact (e.g., runoff, percolation, erosion, hydrologic cycle, wind patterns, storms).	
7	Identify components and pathways of the nitrogen, carbon, and oxygen cycles.	
8	Identify components of Earth's solar system, their individual characteristics, and how they interact.	
9	Identify structures in the universe (e.g., stars, black holes, galaxies, other solar systems, quasars), their characteristics, and scientific theories of their origins.	
10	Demonstrate knowledge of space travel and exploration and identify examples of their impact on society.	
8	**Knowledge of matter and energy**	**6%**
1	Identify the physical and chemical properties of matter (e.g., mass, volume, density, chemical reactivity, temperature, pressure, state).	
2	Apply knowledge of the periodic table to identify the characteristics of atoms, the chemical and physical combinations of atoms, and associated representations (e.g., symbols, formulas, equations).	
3	Identify the features and characteristics of different ranges of wavelengths across the electromagnetic spectrum.	
4	Apply knowledge of energy forms (e.g., potential, kinetic), energy types (e.g., solar; electrical; magnetic; mechanical; chemical; nuclear, including fission and fusion), and energy transfer (e.g., convection, conduction, radiation) to solve problems.	

Competency/Skill		**Approx. %**
5	Apply knowledge of laws of force, motion, and energy (e.g., Newton's laws, the ideal gas law, simple or compound machines) to solve problems.	
6	Apply knowledge of currents, circuits, conductors, insulators, and resistors in real-world situations.	
7	Identify properties and behaviors of sound and light waves (e.g., wavelength, frequency, amplitude, Doppler effect, refraction, reflection, diffraction, interference).	
9	**Knowledge of teaching middle grades general science**	**2%**
1	Apply interdisciplinary techniques within middle grades general science classrooms.	
2	Select appropriate strategies and resources, including technological resources, for general science instruction (e.g., the nature of science, life and environmental science, Earth and space science, physical science).	
Mathematics		
10	**Knowledge of number sense, concepts, and operations**	**5%**
1	Apply ratio and proportion to solve real-world problems.	
2	Solve real-world problems that involve percents, decimals, fractions, and numbers expressed in scientific and exponential notation.	
3	Apply number concepts, including primes, factors, and multiples, to analyze number sequences and solve problems.	
4	Categorize numbers by their membership in the various subsets of the real number system (e.g., rational, irrational, integer).	
5	Identify the use of the field properties of the real number system (e.g., associative, commutative, distributive) in real-world situations.	
6	Determine the greatest common factor or least common multiple in a given set of numbers, and apply them in real-world situations.	
7	Compare the relative values of fractions, decimals, percents, and other real numbers expressed in a variety of symbolic notations (e.g., square roots, scientific notation, exponents) used in a real-world context.	
11	**Knowledge of data analysis and probability**	**4%**
1	Determine whether mean, median, or mode is the most appropriate measure of central tendency in a given situation.	
2	Interpret information from graphical representations (e.g., stem and leaf plots, box and whiskers plots, scatter plots, pictographs, circle graphs, bar graphs, histograms, line graphs).	

Competency/Skill		**Approx. %**
3	Apply experimental or theoretical probabilities to make conjectures based on data.	
4	Determine the probability of occurrence or nonoccurrence of an event in a real-world context.	
12	**Knowledge of algebra**	**6%**
1	Analyze and interpret relationships represented by tables, graphs, and rules.	
2	Analyze functional relationships expressed as ordered pairs, rules, graphs, and mappings.	
3	Determine the solution set of a pair of linear equations or linear inequalities.	
4	Solve real-world problems using graphs, equations, or inequalities.	
5	Apply equations or inequalities to solve real-world and mathematics problems.	
6	Determine the slope, x-intercept, or y-intercept of a line given its graph, its equation, or two points on the line.	
7	Convert between graphical representations and algebraic equations or inequalities.	
8	Interpret or solve problems with algebraic expressions, equations, inequalities, or graphs.	
13	**Knowledge of geometry**	**4%**
1	Apply the Pythagorean theorem to solve real-world problems.	
2	Apply geometric properties and relationships to solve real-world and mathematics problems.	
3	Apply concepts and properties of transformational geometry (e.g., dilation, translation, rotation, reflection).	
4	Apply properties of lines, angles, triangles, quadrilaterals, and circles in solving problems.	
5	Identify convex, concave, regular, and irregular polygons, and determine the measure of their interior and exterior angles.	
14	**Knowledge of measurement**	**4%**
1	Solve problems involving units of measure and convert answers to a larger or smaller unit within either the metric or customary system.	
2	Solve simple or more complex real-world and mathematics problems involving length, area, perimeter, circumference, weight or mass, capacity or volume, time, temperature, and angles.	

Competency/Skill		**Approx. %**
3	Solve real-world problems by determining how a change in dimension (e.g., length, width, height, radius) affects other measurements (e.g., perimeter, area, surface area, volume).	
4	Interpret scale drawings (e.g., number lines, blueprints, maps) to solve real-world problems.	
5	Relate concepts of measurement, similarity, congruence, and proportionality in a real-world context.	
6	Determine the value of a fractional part of a given geometrical figure.	
15	**Knowledge of teaching middle grades mathematics**	**2%**
1	Apply interdisciplinary techniques within middle grades mathematics classrooms.	
2	Select appropriate strategies and resources, including technological resources, for mathematics instruction (e.g., algebra, financial literacy, geometry, probability, statistics).	
Social Science		
16	**Knowledge of history**	**8%**
1	Identify major themes and historical events that are related by cause and effect (e.g., exploration, settlement, growth, conflict).	
2	Evaluate examples of primary source documents to show historical perspective.	
3	Identify the cultural contributions and technological developments of Eastern and Western civilizations.	
4	Identify significant individuals, events, and ideas that have influenced Eastern and Western civilizations.	
5	Identify significant individuals, events, and ideas that have influenced economic, social, and political institutions in the United States.	
6	Identify significant individuals, events, and ideas that have influenced economic, social, and political institutions in Florida.	
17	**Knowledge of geography**	**7%**
1	Identify the five themes of geography (i.e., location, place, region, movement, human–environment interaction).	
2	Interpret and use maps and other graphic representations, tools, and technologies to acquire, process, and report information from a spatial perspective.	
3	Determine the factors that influence the selection of a location for a specific activity.	

Competency/Skill		**Approx. %**
4	Interpret data (e.g., graph, table, survey, chart) that show human and physical characteristics of various places.	
5	Infer how a given historical event has affected current human characteristics (e.g., wealth and poverty, land tenure, exploitation, colonialism, independence) of places.	
6	Assess ways in which people adapt to an environment through the production and use of clothing, food, and shelter.	
7	Analyze the physical, cultural, economic, and political reasons for the movement of people in the world, nation, or state.	
8	Identify physical and cultural characteristics that define and differentiate the major regions of the world.	
18	**Knowledge of government, economics, and other social sciences**	**8%**
1	Identify purposes and methods for establishing and maintaining governments in various ancient and modern societies.	
2	Demonstrate knowledge of the rights and responsibilities of a citizen in the world, nation, state, and community.	
3	Identify major concepts of the U.S. Constitution.	
4	Compare and contrast the various political systems in the world (e.g., democracy, constitutional monarchy, socialism, communism).	
5	Differentiate the structures and functions of U.S. federal, state, and local governments.	
6	Predict how limited resources affect the choices made by governments and individuals.	
7	Compare and contrast the characteristics of various economic systems.	
8	Identify the role of markets from production to distribution to consumption.	
19	**Knowledge of teaching middle grades social science**	**2%**
1	Apply interdisciplinary techniques within middle grades social science classrooms.	
2	Select appropriate strategies and resources, including technological resources, for social science instruction (e.g., history, geography, civics and government, economics, other social sciences).	

5 Test Format and Sample Questions

The Middle Grades Integrated Curriculum 5–9 subject area test consists of approximately 120 multiple-choice questions. You will have two and one-half hours to complete the test.

Each question will contain four response options, and you will indicate your answer by selecting **A**, **B**, **C**, or **D**.

The table below presents types of questions on the examination and refers you to a sample question of each type.

Type of Question	Sample Question
Scenario Examine a situation, problem, or case study. Then answer a question, make a diagnosis, or recommend a course of action by selecting the best response option.	Question 1, page17
Direct question Choose the response option that best answers the question.	Question 7, page 18
Command Select the best response option.	Question 15, page 20
Data Analysis Examine and analyze data from an experiment or study. Then answer a question by selecting the best response option.	Question 17, page 20
Graphics Examine a question involving a number line, a geometric figure, graphs of lines or curves, a table, or a chart, and select the best response option.	Question 19, page 21
Word Problem Apply mathematical principles to solve a real-world problem and choose the best response option.	Question 22, page 22
Sentence completion Select the response option that best completes the sentence.	Question 24, page 23

Sample Questions

The following questions represent both the form and content of questions on the examination. These questions will acquaint you with the general format of the examination; however, these sample questions do not cover all of the competencies and skills that are tested and will only approximate the degree of examination difficulty.

An answer key follows at the end of the sample questions. The answer key includes information regarding the competency to which each question is linked.

DIRECTIONS: Read each question and select the best response.

1. A student is planning a speech to persuade teachers and students to recycle. The student will first ask who in the audience is already recycling and then provide facts about the amount of waste deposited in landfills each year. The most logical next step is to
   A. read a short story about the importance of recycling.
   B. require the audience to sign a pledge to recycle.
   C. ask the audience to join in schoolwide recycling.
   D. predict that Earth will be buried in garbage within 150 years.

2. Choose the sentence that contains an error in punctuation.
   A. "Okay," said Fran, "I'll meet you at 4:00, unless the bus is late."
   B. "Will you be able to join us tomorrow?" asked Joe.
   C. "We have to make hard decisions, Maria explained. We're the leaders."
   D. Harold exclaimed, "We are the world champions!"

3. Which work of literature would be most appropriate to include in a thematic unit on racial segregation in the United States?
   A. *Number the Stars* by Lois Lowry
   B. *Hatchet* by Gary Paulsen
   C. *Roll of Thunder, Hear My Cry* by Mildred D. Taylor
   D. *A Year Down Yonder* by Richard Peck

4. Which of the following types of books, if added to a classroom library, would most likely encourage students to read independently?
   A. trade books
   B. reference books
   C. literary anthologies
   D. content area textbooks

5. Calibrated thermometers were placed at distances of 20 cm, 40 cm, 60 cm, and 80 cm from an infrared bulb. The thermometers were positioned in such a way that rays from the bulb struck each at the same angle. Temperatures were recorded at 5 minute intervals. Which hypothesis does this experiment test?
   A. The amount of heat energy varies with different light sources.
   B. The amount of heat energy varies with the angle at which the light rays strike the thermometers.
   C. The amount of heat energy varies with the time it takes for the light rays to strike the bulb.
   D. The amount of heat energy varies with the distance from the source.

6. An experiment was set up to determine whether the color of a pan containing water affects the temperature of the water when the pan is placed in the sun. Water was added to four pans, each painted a different color. The pans were covered with clear plastic lids and placed in the sun at the same time, in the same location, for 15 minutes. The temperature of the water in each pan was then measured using a calibrated thermometer.

   In this experiment, the additional factor that is most important to control is the
   A. volume of humidity in the air.
   B. temperature of the air.
   C. size and shape of the pans.
   D. amount of cloud cover in the sky.

7. Which region of the brain functions as a center for sensations of thirst and hunger and also regulates hormone secretions?
   A. hypothalamus
   B. medulla
   C. cerebrum
   D. pons

8. In a beehive, the youngest hive bees serve as nurse bees, workers produce wax to build and maintain wax cells, and older workers bring nectar and pollen. This is an example of
   A. learned behavior.
   B. instinctive behavior.
   C. redirected behavior.
   D. altruistic behavior.

9. Which of the following water samples is most likely to have the greatest density?
   A. cold saltwater
   B. cold freshwater
   C. warm saltwater
   D. warm freshwater

10. Which U.S. space program was designed for a two-astronaut crew?
   A. Apollo
   B. Gemini
   C. Mercury
   D. Shuttle

11. Which of the following is the most common agent of erosion in coastal Florida?
   A. streams
   B. sedimentation
   C. winds
   D. waves

12. A machine is used to lift a 600 lb weight by applying a 100 lb force. What is the machine's mechanical advantage?
   A. 0.17
   B. 6
   C. 60
   D. 600

13. Which of the following examples best illustrates that for every action, there is an equal and opposite reaction?
   A. A package slides to a stop after being pushed along a countertop.
   B. A cannon is fired and the cannon rolls backward.
   C. A large appliance is moved with difficulty from a resting position.
   D. A bicycle slows as it travels along a gravel road.

14. Which of the following is a best practice for a middle school science teacher managing a laboratory?
   A. accepting laboratory supplies donated from the high school or local industries
   B. keeping a checklist of all chemicals that go in and out of the laboratory
   C. disposing of laboratory consumable materials at the end of each grading period
   D. storing all previous years' files and worksheets in the laboratory storeroom

15. Find the least common multiple of 12, 15, and 110.
    A. 110
    B. 330
    C. 660
    D. 990

16. What is the missing number in the sequence?

    1, 2, 6, __, 120

    A. 12
    B. 24
    C. 60
    D. 84

17. Using the following table, choose the largest planet.

Planet Diameters

Planet	Diameter in kilometers
1	4.88×10^3
2	1.21×10^4
3	1.23×10^4
4	6.79×10^3
5	1.43×10^5
6	1.20×10^5
7	5.18×10^4
8	4.95×10^4
9	6.00×10^3

    A. 4
    B. 5
    C. 6
    D. 9

18. What is the probability that a student who is guessing at answers gets the first three questions on a true-false test correct?

A. $\frac{1}{3}$

B. $\frac{1}{6}$

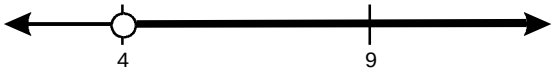
C. $\frac{1}{8}$

D. $\frac{1}{9}$

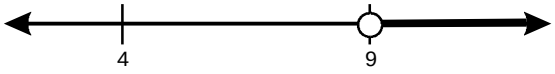
19. Which graph represents the solution set of this inequality?

$2x - 5 > 13$

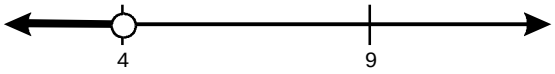
A.



B.



C.

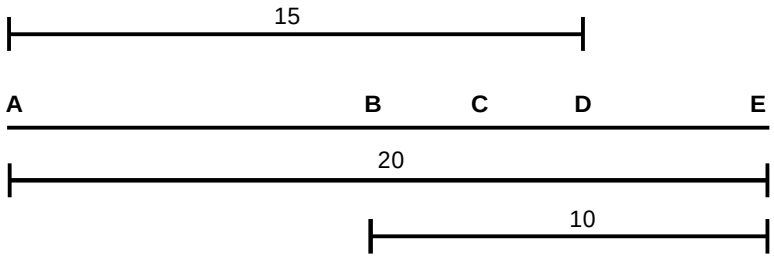


D.

20. P (6, –2) is reflected over the y-axis. What are the coordinates of the reflected image?

A. (–6, –2)
B. (–6, 2)
C. (–2, –6)
D. (–2, 6)

21. Points A, B, C, D, and E are located on a straight line in order. The distance from A to E is 20 cm. The distance from A to D is 15 cm. The distance from B to E is 10 cm. C is halfway between B and D. What is the distance from B to C?



A. 2.5 cm
B. 5.0 cm
C. 7.5 cm
D. 10.0 cm

22. On a family car trip, one of the children is estimating how much time it will take to reach their destination. The map has a scale of $\frac{1}{2}$ inch = 75 miles. The car is averaging 60 miles per hour, and their destination is $2\frac{1}{2}$ inches from their present location on the map. Approximately how many hours will it take to complete the trip?

A. 6 to $6\frac{1}{2}$ h
B. $6\frac{1}{2}$ to 7 h
C. 7 to $7\frac{1}{2}$ h
D. $7\frac{1}{2}$ to 8 h

23. Given plane M perpendicular to plane P and parallel to plane Q, which of the following statements is true?
A. Lines formed by planes M and Q intersecting plane P are perpendicular.
B. Plane P intersects each of planes M and Q in exactly two points.
C. Lines formed by planes Q and M intersecting plane P are skew.
D. Planes Q and P are perpendicular.

24. The Louisiana Purchase affected the growth of the United States by
    A. allowing the United States to gain control of the Mississippi River.
    B. expanding territory from the Atlantic to the Pacific Ocean.
    C. removing all Spanish influence west of the Appalachian Mountains.
    D. providing Native Americans with sufficient land for westward migration.

25. During the late 20th century, the leading industry in Florida was
    A. tourism.
    B. manufacturing.
    C. agriculture.
    D. fishing.

26. Which statement best illustrates the geographic theme of location?
    A. Railroads facilitate the transportation of people and goods through the United States.
    B. The United States benefits economically from its proximity to two oceans.
    C. New technologies have improved the material welfare of people in the United States.
    D. Migrations have helped make the United States an ethnically diverse country.

27. Families abandoning their homes in the Dust Bowl during the 1930s were representative of the geographical theme of
    A. immigration.
    B. colonization.
    C. transportation.
    D. migration.

28. Bantu-speaking societies are primarily located in
    A. Asia.
    B. South America.
    C. Australia.
    D. Africa.

29. In a government controlled by a junta, a small council makes all the major political decisions. This form of government is an example of a(an)
    A. representative democracy.
    B. theocracy.
    C. constitutional monarchy.
    D. oligarchy.

30. Students in a 5th-grade class are completing an alphabet book of U.S. geography in which geographic information represents each letter of the alphabet. Which of the following activities would best enhance students' comprehension and team-building skills?
    A. watching a video on major landforms and waterways of the United States
    B. creating cooperative learning groups to collaborate with other students
    C. interviewing guest speakers who speak on the national parks
    D. utilizing graphic organizers on the various regions of the United States

Answer Key

Question Number	Correct Response	Competency
1.	C	1
2.	C	1
3.	C	3
4.	A	4
5.	D	5
6.	C	5
7.	A	6
8.	B	6
9.	A	7
10.	B	7
11.	D	7
12.	B	8
13.	B	8
14.	B	9
15.	C	10
16.	B	10
17.	B	10
18.	C	11
19.	B	12
20.	A	13
21.	A	13
22.	A	14
23.	D	13
24.	A	16
25.	A	16
26.	B	17
27.	D	17
28.	D	17
29.	D	18
30.	B	19

6 Annotated Bibliography

The annotated bibliography that follows includes basic references that you may find useful in preparing for the exam. Each resource is keyed to the competencies and skills found in Section 4 of this guide.

This bibliography is representative of the most important and most comprehensive texts as reflected in the competencies and skills. The Florida Department of Education does not endorse these references as the only appropriate sources for review; many comparable texts currently used in teacher preparation programs also cover the competencies and skills that are tested on the exam.

1. Allen, J. (2008). *More tools for teaching content literacy*. Portland, ME: Stenhouse Publishers.

Serves as a ready reference of research-based instruction for content reading and writing instruction, providing information on a variety of literacy tools. Useful for review of competencies 2 and 4.

2. Arny, T. T. (2008). *Explorations: An introduction to astronomy* (5th ed.). Boston: McGraw-Hill Higher Education.

Emphasizes accuracy and current information. Uses analogies and everyday examples to present information about astronomy in a way students can understand. Useful for review of competency 7.

3. Baerwald, T. J., & Fraser, C. (2009). *World geography: Building a global perspective.* Upper Saddle River, NJ: Pearson Prentice Hall.

Keeps geography relevant and current through country-by-country coverage and online updates. Presents a standards-based program to help students understand how geography affects their lives. Useful for review of competency 17.

4. Bailer, J., Ramig, J. E., & Ramsey, J. M. (2006). *Teaching science process skills.* Grand Rapids, MI: Frank Schaffer/School Specialty Publishing.

Provides high-interest, inquiry-based experiments to develop important science process skills such as observing, hypothesizing, predicting, inferring, and investigating. Includes teacher notes for every activity as well as forms and guidelines for independent student lab work. Useful for review of competencies 5 and 9.

5. Bardes, B. A., Shelley, M. C., & Schmidt, S. W. (2006). *American government and politics today: The essentials 2006–2007 edition* (12th ed.). Belmont, CA: Wadsworth Cengage Learning.

Provides comprehensive and up-to-date coverage of constitutional, governmental, political, social, and economic structures and processes. Useful for review of competency 18.

6. Bennett, A. N., & Nelson, T. (2007). *Mathematics for elementary teachers: A conceptual approach* (7th ed.). Boston: McGraw-Hill Higher Education.

Focuses on learning via specific, realistic examples and the extensive use of visual aids, hands-on activities, problem-solving strategies, and active classroom participation. Useful for review of competencies 10–14.

7. Biggs, A. (2000). *Science voyages: Exploring the life, Earth, and physical sciences.* New York: Glencoe McGraw-Hill.

Middle-grades textbook series co-authored by the National Geographic Association. Useful for review of competencies 5–8.

8. Blitzer, R. F. (2008). *Thinking mathematically* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Presents an introduction to topics such as measurement, geometry, sets, logic, counting principles, probability, and statistics. Useful for review of competencies 10–14.

9. Brinkley, A. (2007). *American history: A survey, volume 2* (12th ed.). Boston: McGraw-Hill Higher Education.

Explores various areas of history (e.g., social, cultural, urban, racial, ethnic), the history of the West and South, environmental history, the history of women and gender issues, and American history in a global context. Useful for review of competency 16.

10. Brummett, P. J., Edgar, R. R., Hackett, N. J., Jewsbury, G. F., & Molony, B. S. (2006). *Civilization past & present* (11th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Examines social, political, economic, religious, cultural, and geographic aspects of world history. Uses images and documents to trace connections across cultures and introduce various avenues of historical interpretation. Useful for review of competencies 16–18.

11. Charles, R. I., Branch-Boyd, J. C., Illingworth, M., Mills, P., & Reeves, A. (2007). *Prentice Hall mathematics: Course 2.* Lebanon, IN: Pearson Prentice Hall.

Provides a structured approach to a variety of topics such as ratios, percents, equations, inequalities, geometry, graphing, and probability. Useful for review of competencies 10–14.

12. Charles, R. I., Branch-Boyd, J.C., Illingworth, M., & Reeves, A. (2007). *Prentice Hall mathematics: Course 3.* Lebanon, IN: Pearson Prentice Hall.

Provides a solid foundation of integers, rational numbers, and real numbers, setting the stage for equations, inequalities, and functions. Additionally, the topics of polynomials, exponents, geometry, measurement, and data-analysis are addressed. Useful for review of competencies 10–14.

13. Charles, R. I., Illingworth, M., McNemar, B., Mills, D., & Ramirez, A. (2007). *Prentice Hall mathematics: Course 1.* Lebanon, IN: Pearson Prentice Hall.

Includes a combination of rational numbers, patterns, geometry, and integers in preparation for one- and two-step equations and inequalities. An emphasis on fractions solidifies understanding of rational number operations in order to apply these skills to algebraic equations. Useful for review of competencies 10–14.

14. Craig, A. M., Graham, W. A., Kagan, D. M., Ozment, S., & Turner, F. M. (2009). *Heritage of world civilizations, combined volume* (8th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Combines thorough coverage of the heritage of Asian, African, Islamic, Western, and American civilizations and highlights the role of the world's great religious and philosophical traditions. Useful for review of competency 16.

15. Davis, R. E., Metcalfe, H. C., Williams, J. E., & Castka, J. E. (2006). *Modern chemistry* (6th ed.). New York: Holt, Rinehart & Winston.

Emphasizes the fundamentals of chemistry and problem solving. Provides a bank of laboratory experiences to develop understanding of scientific inquiry, concepts, and experimentation. Useful for review of competency 8.

16. Donelson, K. L., Nilsen, A. P., & Warner, M. (2009). *Literature for today's young adults*. Boston: Allyn & Bacon.

Offers a comprehensive introduction to young-adult literature framed within a literary, historical, and social context. Provides teachers with criteria for evaluating books of all genres. Covers timely issues, such as pop culture and mass media; helps teachers connect with students' lives outside the classroom. Useful for review of competency 3.

17. Duplass, J. A. (2008). *Teaching elementary social studies: Strategies, standards, and Internet resources* (2nd ed.). Boston: Houghton Mifflin.

Combines features of a textbook and a workbook, with integrated print text and Web site. Useful for review of competency 19.

18. Dye, T. R., & Sparrow, B. H. (2009). *Politics in America* (8th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Examines the struggle for power that is American politics: the participants, the stakes, the processes, and the institutions. Explores timely issues, draws cross-cultural comparisons, promotes critical thinking, and provokes thoughtful opinions. Useful for review of competency 18.

19. Fellmann, J. D., Getis, A., & Getis, J. (2008). *Human geography* (10th ed.). Boston: McGraw-Hill Higher Education.

Introduces students to human geography and its relevance to their daily lives by conveying the breadth of human geography and providing insight into the nature and intellectual challenges of the field of geography. Provides special attention to gender issues. Useful for review of competency 17.

20. Gannon, M. (2003). *Florida: A short history (Rev. ed.).* Gainesville, FL: University Press of Florida.

Relates the history of Florida, from indigenous peoples to modern environmentalists, in a chronological narrative. Includes information from the 21st century, including “in-migration,” restoration of the Everglades, education, the workforce, and the role of Florida in the 2000 presidential election. Useful for review of competency 16.

21. George, P., Gordon, L., & Bushnell, D. (1998). *Handbook for middle school teaching* (2nd ed.). New York: Longman.

Bridges the gap between educational theory and classroom reality in many teacher education programs. Chapters contain activities and readings to facilitate the action and reflection process. Useful for review of competencies 4, 9, 15, and 19.

22. Goldsmith, E. B. (2009). *Consumer economics: Issues and behaviors* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Introduces the consumer movement and the intricacies of consumer behavior, addressing who buys what, how they buy it, when they buy it, and why. Examines the forces that affect consumer choice. Useful for review of competency 18.

23. Henretta, J. A., & Brody, D. (2006). *America: A concise history, combined version* (3rd ed.). Boston: Bedford/St. Martin's.

Highlights the crucial turning points in American history and explores the dynamic forces shaping each period, facilitating students' understanding of continuity and change. Useful for review of competency 16.

24. Hewitt, P. G., Suchocki, J., & Hewitt, L. A. (2008). *Conceptual physical science* (4th ed.). San Francisco: Pearson Addison Wesley.

Provides a conceptual overview of basic, essential topics in physics, chemistry, Earth science, and astronomy with optional quantitative analyses. Useful for review of competencies 7 and 8.

25. Irvin, J., Buehl, D., & Radcliffe, B. (2006). *Strategies to enhance literacy and learning in middle school content area classrooms* (3rd ed.). Boston: Allyn & Bacon.

Includes current student examples of strategies for middle grades students for use in the classroom. Explores issues and trends facing adolescent literacy, including policy and position statements and federal action. Focuses on classroom implementation of literacy integrated with content area instruction. Useful for review of competencies 4, 9, 15, and 19.

26. Irvin, J. L., Kunstrum, J. P., Lynch-Brown, C., & Shepard, M. F. (1995). *Enhancing social studies through literacy strategies*. Washington, DC: National Council for Social Studies.

Presents approaches and strategies for integrating literacy acquisition into social studies content and processes, for deepening student understanding of the social sciences, and for motivating students to read and write in the social studies class. Provides a teachers' reference tool for planning creative and challenging social studies classes. Useful for review of competency 19.

27. Kellough, R. D., & Kellough, N. G. (2008). *Teaching young adolescents: A guide to methods and resources for middle school teaching* (5th ed.). Boston: Pearson Allyn & Bacon.

Includes methods, guidelines, and resources for teaching middle grades students effectively. Introduces the best models in education and provides guidelines for deciding which approach to use at a particular time. Useful for review of competencies 4, 9, 15, and 19.

28. Magleby, D. B., O'Brien, D. M., Light, P. C., Peltason, J. W., & Cronin, T. E. (2008). *Government by the people* (basic) (22nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Introduces U.S. government and the discipline of political science. Aims to make students effective participants in U.S. political culture by making them informed consumers of that culture. Useful for review of competency 18.

29. McGraw-Hill. (2002). *Glencoe language arts grammar and composition handbook.* New York: Glencoe McGraw-Hill.

Provides full coverage of the writing process with practice exercises for grammar, usage, and mechanics. Useful for review of competency 1.

30. Miller, G. T., & Spoolman, S. (2009). *Living in the environment: Principles, connections, and solutions* (16th ed.). Belmont, CA: Thomson Brooks/Cole.

Emphasizes the concept of sustainability. Includes case studies and hands-on quantitative exercises. Useful for review of competency 6.

31. Padilla, M., Miaoulis, I., Cyr, M., Coolidge-Stolz, E., & Graff-Haight, D. (2000). *Human biology and health*. Needham, MA: Prentice Hall.

Balances content with a variety of inquiry activities. Includes integrated science sections in every chapter and interdisciplinary explorations for team teaching. Useful for review of competencies 6 and 9.

32. Rutherford, F. J., & Ahlgren, A. (1991). *Science for all Americans.* New York: Oxford University Press.

Explores what constitutes scientific literacy in a modern society. Recommendations for educational reform downplay traditional subject categories and instead highlight the connections between them. Emphasizes ideas and thinking skills over the memorization of specialized vocabulary. Useful for review of competencies 5 and 9.

33. Sadava, D., Heller, H. C., Orians, G. H., Purves, W. K., & Hillis, D. (2008). *Life: The science of biology* (8th ed.). Sunderland, MA: Sinauer Associates.

Covers major concepts, including science and the building blocks of life, cells and energy, heredity and the genome, molecular biology, evolution, diversity, flowering plants, animals, and ecology. Useful for review of competency 6.

34. Tarbuck, E. J., Lutgens, F. K., & Tasa, D. (2009). *Earth science* (12th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Offers an overview of the physical environment with balanced, current coverage of geology, oceanography, astronomy, and meteorology. Useful for review of competency 7.

35. Van de Walle, J. (2007). *Elementary and middle school mathematics: Teaching developmentally* (6th ed.). Boston: Pearson Allyn & Bacon.

Reflects the National Council of Teachers of Mathematics Principles and Standards and the benefits of constructivist, student-centered mathematics instruction. Contains 24 brief, compartmentalized chapters focused on content and teaching strategies. Useful for review of competencies 10–15.

36. Victor, E., Kellough, R. D., & Tai, R. H. (2008). *Science K–8: An integrated approach* (11th ed.). Boston: Pearson Allyn & Bacon.

Focuses on the four developmental components of both teaching and learning—*why, what, how,* and *how well*—based on the premise that integrated learning by inquiry is the cornerstone of effective science teaching. Useful for review of competency 9.

37. Wysession, M., Frank, D. V., & Yancopoulos, S. (2009). *Physical science: Concepts in action.* Upper Saddle River, NJ: Pearson Prentice Hall.

Helps students make connections between classroom science and real life. Includes explorations and activities to expand students' understanding of science. Useful for review of competencies 5, 7, 8, and 9.

7 Additional Information

Please visit the following Web site to review FTCE registration details and to find additional FTCE information, including test locations and passing scores.

http://www.fldoe.org/asp/ftce