

The Praxis® Study Companion

# Elementary Education: Instructional Practice and Applications

5019



# Welcome to *The Praxis*® Study Companion

## Prepare to Show What You Know

You have been working to acquire the knowledge and skills you need for your teaching career. Now you are ready to demonstrate your abilities by taking a *Praxis*® test.

Using the *Praxis*® Study Companion is a smart way to prepare for the test so you can do your best on test day. This guide can help keep you on track and make the most efficient use of your study time.

The Study Companion contains practical information and helpful tools, including:

- An overview of the *Praxis* tests
- Specific information on the *Praxis* test you are taking
- A template study plan
- Study topics
- Practice questions and explanations of correct answers
- Test-taking tips and strategies
- Frequently asked questions
- Links to more detailed information

So where should you start? Begin by reviewing this guide in its entirety and note those sections that you need to revisit. Then you can create your own personalized study plan and schedule based on your individual needs and how much time you have before test day.

Keep in mind that study habits are individual. There are many different ways to successfully prepare for your test. Some people study better on their own, while others prefer a group dynamic. You may have more energy early in the day, but another test taker may concentrate better in the evening. So use this guide to develop the approach that works best for you.

Your teaching career begins with preparation. Good luck!

## Know What to Expect

### Which tests should I take?

Each state or agency that uses the *Praxis* tests sets its own requirements for which test or tests you must take for the teaching area you wish to pursue.

Before you register for a test, confirm your state or agency's testing requirements at [www.ets.org/praxis/states](http://www.ets.org/praxis/states).

### How are the *Praxis* tests given?

*Praxis* tests are given on computer. Other formats are available for test takers approved for accommodations (see page 52).

### **What should I expect when taking the test on computer?**

When taking the test on computer, you can expect to be asked to provide proper identification at the test center. Once admitted, you will be given the opportunity to learn how the computer interface works (how to answer questions, how to skip questions, how to go back to questions you skipped, etc.) before the testing time begins. Watch the [What to Expect on Test Day](#) video to see what the experience is like.

### **Where and when are the *Praxis* tests offered?**

You can select the test center that is most convenient for you. The *Praxis* tests are administered through an international network of test centers, which includes Prometric® Testing Centers, some universities, and other locations throughout the world.

Testing schedules may differ, so see the *Praxis* web site for more detailed test registration information at [www.ets.org/praxis/register](http://www.ets.org/praxis/register).

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# 1. Learn About Your Test

*Learn about the specific test you will be taking*

## Elementary Education: Instructional Practice and Applications (5019)

Test at a Glance			
<b>Test Name</b>	Elementary Education: Instructional Practice and Applications		
<b>Test Code</b>	5019		
<b>Time</b>	2 hours 50 minutes		
<b>Number of Questions</b>	124		
<b>Format</b>	120 selected-response and 4 constructed-response questions		
<b>Test Delivery</b>	Computer delivered		
	<b>Content Categories</b>	<b>Approximate Number of Questions</b>	<b>Approximate Percentage of Examination</b>
	I. Reading and Language Arts	37	23%
	II. Mathematics	31	19%
	III. Science	20	12%
	IV. Social Studies	17	11%
	V. Art, Music, and Physical Education	15	10%
	VI. Applications (short content essays)	4	25%

### About This Test

The Elementary Education: Instructional Practice and Applications test is designed for prospective teachers of students in the elementary grades. Examinees typically have completed a bachelor's degree program in elementary or middle school education or have prepared themselves through an alternative certification program.

The test questions cover the breadth of material a new teacher needs to know and are aligned with state curriculum standards and national standards such as those of the National Council of Teachers of Mathematics, the National Council for the Social Studies, the National Council of Teachers of English, and the National Science Teachers Association.

The test assesses knowledge of content as well as pedagogical principles and processes. The questions cover basic understanding of curriculum planning, instructional design, and assessment of student learning; they also pose particular problems that teachers routinely face in the classroom and may be based on authentic examples of student work. Some of the questions concern general issues, but the majority are set in the contexts of the subjects most commonly taught in elementary school: reading and language arts, mathematics, science, social studies, art, music, and physical education.

The four short constructed-response questions are designed to measure how well prospective teachers of students in the elementary grades can respond to tasks that require thoughtfully written responses. The questions pose problems for the test taker to analyze and solve, thereby assessing whether the examinee has

acquired the level of understanding necessary for safe and effective practice in elementary education. At least one of the questions will ask the test taker to show an understanding of interdisciplinary instruction. In allocating time on this assessment, it is expected that about 130 minutes will be spent on the selected-response section and about 40 minutes will be spent on the constructed-response section; the sections are not separately timed.

This test may contain some questions that will not count toward your score.

## Test Specifications

Test specifications in this chapter describe the knowledge and skills measured by the test. Study topics to help you prepare to answer test questions can be found on page 36.

### I. Reading and Language Arts

- A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for foundational skills, literature and informational texts, writing, language, and speaking and listening.
1. Knows how to sequence lessons within a curriculum
  2. Knows how to plan for strategies to advance student understanding and to address common student misconceptions
  3. Knows how to make connections within reading and language arts topics, across other disciplines, and in real-world contexts
- B. Instruction:** A beginning teacher understands how to design instruction that differentiates for diverse needs and how to implement developmentally appropriate instructional methods/strategies/approaches/resources to support learning in the following areas.
1. Reading foundational skills
    - a. Knows how to develop students' understanding of concepts of print
    - b. Knows strategies to develop students' phonological awareness skills (e.g., finger spelling, clapping syllables, picture sorting)
    - c. Knows strategies to develop phonic and word-analysis skills to support decoding (e.g., morphology, syllabication, word building, word/letter sorts, high-frequency words)
    - d. Knows strategies to develop students' fluency to support comprehension (e.g., selecting appropriate texts, modeling fluent reading, choral reading, repeated reading)
  2. Reading literature and informational texts
    - a. Knows how to develop students' ability to comprehend literature and informational text
    - b. Knows strategies for teaching students to ask and answer questions about texts
    - c. Knows strategies and tools for teaching students to find and organize key details and main ideas and themes in a text (e.g., plays, think-alouds, graphic organizers)
    - d. Knows how to develop students' understanding of features and structures of text across genres
    - e. Knows how to develop students' understanding of point of view and how it influences the meaning of texts
    - f. Knows how to develop students' ability to distinguish among fact, opinion, and reasoned judgment
    - g. Knows how to help students integrate and compare written, visual, and oral information within and among texts and multimedia sources
    - h. Knows strategies (e.g., think-alouds, examples) to help students understand how meaning is relayed through the use of print, graphics, and digital media
    - i. Knows strategies and tools to help students compare and contrast texts and/or integrate information from multiple texts on the same topic
    - j. Explains how signal words can be used to clarify connections between key ideas in texts
    - k. Knows strategies to help students select appropriate texts for their reading level, purpose, and interests
    - l. Knows scaffolding strategies to support students' progress toward independent proficient reading at the high end of their text-complexity band (e.g., providing access to grade-level texts, purposeful grouping, close reading)

## 13. Writing

- a. Knows how to develop students' writing skills by using effective approaches to writing instruction and appropriate strategies and tools
- b. Knows how to develop students' knowledge of opinion/argument, informative/explanatory, and narrative writing and their purposes
- c. Knows how to help students develop research-based writing skills, cite relevant textual evidence, frame research questions, and use digital tools in the writing process
- d. Knows strategies to help students distinguish between primary and secondary sources, reliable and unreliable sources, and paraphrasing and plagiarizing

## 4. Language

- a. Knows strategies to develop students' understanding of standard English conventions
- b. Knows strategies to develop students' ability to determine word meanings and develop vocabularies
- c. Knows resources to develop students' ability to use and interpret figurative language

## 5. Speaking and listening

- a. Knows strategies to develop students' active listening, critical thinking, and use of reasons and evidence to support claims when speaking
- b. Knows strategies to develop students' oral presentation skills and to develop students' skill in providing constructive feedback
- c. Knows strategies to promote students' use of multimedia for presentations

**C. Assessment:** A beginning teacher knows appropriate assessments for evaluating the effectiveness of reading and language arts instruction and student progress.

1. Knows how to design and use formative assessments to adjust instruction
2. Knows how to design, use, and interpret summative assessments
3. Knows how to recognize when misconceptions occur and strategies for reteaching
4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

## II. Mathematics

**A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for numbers and operations, algebraic thinking, geometry and measurement, and data, statistics, and probability.

1. Knows how to sequence examples within a lesson to support understanding of concepts
2. Knows how to sequence lessons within a curriculum
3. Knows how to plan for strategies to address common student misconceptions
4. Knows how to make connections within math topics, across other disciplines, and in real-world contexts

**B. Instruction:** A beginning teacher understands how to design instruction, purposefully incorporate standards for mathematical practices to meet diverse needs, and select developmentally appropriate instructional methods/strategies/manipulatives/models to support learning in the following areas.

1. Numbers and operations: natural numbers, whole numbers, integers, and rational numbers
  - a. Knows algorithms, strategies, models, and problem situations for adding, subtracting, multiplying, and dividing numbers
  - b. Knows strategies for understanding properties of operations
  - c. Knows strategies for mental math, estimation, and rounding and knows how and when to use the strategies
  - d. Knows strategies for comparing numbers
  - e. Knows strategies for counting numbers
  - f. Knows strategies for modeling relationships between decimals and whole numbers, fractions, and percents
  - g. Knows strategies for relating a fraction to division and that  $\frac{a}{b}$  means  $a$  copies of  $\frac{1}{b}$
2. Numbers and operations: proportional relationships
  - a. Knows strategies for understanding ratios, rates, and unit rates
  - b. Knows strategies for understanding proportionality

3. Numbers and operations: number theory
    - a. Knows strategies for understanding prime numbers, composite numbers, factors, and multiples
  4. Algebraic thinking: expressions, equations, and formulas
    - a. Knows strategies for writing expressions, equations, and formulas from a context
    - b. Knows strategies for evaluating and symbolically manipulating expressions, equations, and formulas
  5. Algebraic thinking: linear equations and inequalities
    - a. Knows strategies for writing an equation to represent a pattern
    - b. Knows strategies for writing and solving linear equations and inequalities
  6. Geometry and measurement: one-, two-, and three-dimensional figures
    - a. Knows strategies for using standard and nonstandard tools and appropriate units to measure the length, area, perimeter, surface area, and volume of figures
    - b. Knows strategies for classifying figures and for comparing and contrasting figures
    - c. Knows strategies for understanding the vocabulary and definitions for figures
    - d. Knows strategies for using nets to represent three-dimensional figures
    - e. Knows strategies for representing figures and for modeling them with shapes and solids
    - f. Knows strategies for modeling and solving real-world problems involving two- and three-dimensional figures
    - g. Knows strategies for composing, decomposing, and manipulating figures
  7. Geometry and measurement: coordinate plane
    - a. Knows strategies for plotting points
  8. Geometry and measurement: measurement
    - a. Knows strategies for converting measurements
    - b. Knows strategies for representing time and elapsed time
  9. Data, statistics, and probability: measures of center
    - a. Knows strategies for finding measures of center and for determining which measure is best to use in a given situation
  10. Data, statistics, and probability: data
    - a. Knows strategies for collecting and displaying data to answer a statistical question
  11. Data, statistics, and probability: probability
    - a. Knows strategies for linking probability to the likelihood that an event will occur
- C. Assessment:** A beginning teacher knows appropriate assessments to evaluate mathematical instructional effectiveness and student progress.
1. Knows how to design and use formative assessment to adjust instruction
  2. Knows how to design, use, and interpret summative assessments
  3. Knows how to recognize when misconceptions occur and strategies for reteaching
  4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

### III. Science

- A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for science topics.
1. Knows the broad purposes of teaching science and the relationship of concepts within science
  2. Knows the relationship of science with concepts across other content areas and the instructional implications of those relationships
- B. Instruction:** A beginning teacher understands how to design instruction to meet diverse needs and how to select developmentally appropriate instructional methods/strategies/ approaches/ resources to support learning in the following areas.
1. Science concepts, inquiry, and processes
    - a. Knows how to develop students' understanding of unifying concepts and processes in science and provides connections between traditional scientific disciplines, systems, subsystems, models, and conservation; personal and social perspective of science; history and nature of science

- b. Knows how to develop students' understanding of the process of scientific inquiry and the purpose of constructing ideas and explanations, asking questions and using appropriate questioning techniques, and developing testable questions and hypotheses
  - c. Knows how to develop students' understanding of how to plan, conduct, and observe simple investigations, construct explanations, communicate results, and solve problems
  - d. Knows how to develop students' understanding of how to choose the appropriate tools of science to gather data, organize and analyze information, communicate investigation results, and construct reasonable explanations
  - e. Knows how to develop students' understanding of how to select developmentally appropriate materials, equipment, texts, and technology for model building and forecasting
2. Life science
- a. Knows how to develop students' understanding of the characteristics of organisms
  - b. Knows how to develop students' understanding of the life cycles of organisms
  - c. Knows how to develop students' understanding of organisms and their environment
3. Earth and space science
- a. Knows how to develop students' understanding of the interrelationships in Earth systems and space systems, including astronomy
  - b. Knows how to develop students' knowledge of Earth patterns, cycles, and change
  - c. Knows how to develop students' understanding of geology, hydrology, meteorology, oceanography, and soil science
4. Physical science
- a. Knows how to develop students' understanding of physical and chemical changes, temperature and heat, sound, light, electricity, and magnetism

- b. Knows how to develop students' understanding of force, motion, energy, and matter
5. Health
- a. Knows how to develop students' knowledge of healthy living, growth, nutrition, safety, and well-being
  - b. Knows how to develop students' knowledge of communicable diseases, substance abuse, and common diseases

**C. Assessment:** A beginning teacher knows appropriate assessments to evaluate the effectiveness of science instruction and student progress.

1. Knows how to design and use formative assessment to adjust instruction
2. Knows how to design, use, and interpret summative assessments
3. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning
4. Knows how to analyze student work to guide science instruction

#### IV. Social Studies

**A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for the social studies topics.

1. Knows the broad purposes of teaching social studies and the relationship of concepts within social studies
2. Knows the relationship of social studies concepts across other content areas and the instructional implications of those relationships

**B. Instruction:** A beginning teacher understands how to design instruction to meet diverse needs and how to select developmentally appropriate instructional methods/strategies/ approaches/ resources to support learning in the following areas.

1. Information processing skills
  - a. Knows how to help students locate, analyze, and synthesize information related to social studies topics and how to apply that information to solve problems and make decisions
  - b. Knows how to help students select and use appropriate materials, equipment, texts, and technology in social studies (e.g., physical,

topographic, political, and weather maps, globes, aerial imagery, satellite images, graphs, tables, diagrams, graphic organizers, pictures, real-world resources, trade books)

2. Geography

- a. Knows how to develop students' understanding of the uses of geography and the interrelationships between human and physical systems, the environment, and society
- b. Knows how to help students develop an understanding of states, regions, the United States, and the world

3. History

- a. Knows how to develop students' understanding of the relationships between past and present
- b. Knows how to develop students' understanding of United States history from founding to the twenty-first century as well as twentieth-century developments and transformations in the United States
- c. Knows how to develop students' knowledge of chronological thinking, historical analysis, and interpretation
- d. Knows how to develop students' understanding of the causes and effects of events, how to compare and contrast events, and how to hypothesize how the past influenced the present
- e. Knows how to help students understand Classical civilizations (e.g., Egypt, Greece, Rome, China)

4. Government, civics, and economics

- a. Knows how to develop students' understanding of basic economic concepts (e.g., market economy) and how to make economic decisions as consumers, employers, and workers
- b. Knows how to develop students' understanding of the government's role in economics and the impact of economics on government
- c. Knows how to develop students' understanding of democracy and politics at the federal, state, and local levels
- d. Knows how to develop students' understanding of the structure of government and the Constitution of the United States

- e. Knows how to develop students' understanding of citizenship
- f. Knows how to develop students' understanding of the global marketplace and industrialization

5. Anthropology and sociology

- a. Knows how to develop students' understanding of the impact of conditions and events on groups and individuals
- b. Knows how to develop students' understanding of how people of different cultural backgrounds interact with their environment, self, family, neighborhoods, and communities
- c. Knows how to develop students' understanding of interactions between different communities and the effects of human behavior in society
- d. Knows how to develop students' understanding of the roles of communication, transportation, technology, and social organization

**C. Assessment:** A beginning teacher knows how to assess the effectiveness of social studies instruction and student progress.

- 1. Knows how to design and use formative assessment to adjust instruction
- 2. Knows how to design, use, and interpret summative assessments
- 3. Knows how to recognize when misconceptions occur and strategies for reteaching
- 4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

**V. Art, Music, and Physical Education**

**A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning, strategies, and sequencing for art, music, and physical education.

- 1. Knows the fundamental purposes for teaching art, music, and physical education
- 2. Knows how to make connections within and between art, music, and physical education across other disciplines and in real-world contexts

- B. Instruction:** A beginning teacher understands how to design instruction to meet diverse needs and to how to implement developmentally appropriate instructional methods, techniques, strategies, approaches, and resources to support learning in the following areas.
1. Knows how to develop students' understanding of art and design media, techniques, and concepts, including but not limited to the elements and principles of art, visual communication and production, art history, art criticism, and aesthetics
  2. Knows how to develop students' understanding of the elements of music (e.g., texture, harmony, melody, rhythm) and has a fundamental knowledge of music notation, terminology, and music making
  3. Knows how to develop students' understanding of physical education concepts (e.g., exercise, physical fitness, game and sport skills, safety, locomotor patterns, body management, social discipline, healthy lifestyles)
  4. Knows how to select and use manipulatives and developmentally appropriate materials, equipment, texts, and technology (e.g., art materials, musical instruments, physical education equipment, information from reliable sources)
- C. Assessment:** A beginning teacher understands how to assess the effectiveness of art, music, and physical education instruction and student learning.
1. Knows how to design and use formative assessment to adjust instruction
  2. Knows how to design, use, and interpret summative assessments
  3. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

**VI. Applications:** A beginning teacher knows how to apply developmentally appropriate pedagogical practices for planning curriculum, designing instruction, and evaluating student progress in the following content areas.

- A. Reading and language arts**
- B. Mathematics**
- C. Science**
- D. Social Studies**

## 2. Familiarize Yourself with Test Questions

*Become comfortable with the types of questions you'll find on the Praxis tests*

The *Praxis* assessments include a variety of question types: constructed response (for which you write a response of your own); selected response, for which you select one or more answers from a list of choices or make another kind of selection (e.g., by clicking on a sentence in a text or by clicking on part of a graphic); and numeric entry, for which you enter a numeric value in an answer field. You may be familiar with these question formats from taking other standardized tests. If not, familiarize yourself with them so you don't spend time during the test figuring out how to answer them.

### Understanding Computer-Delivered Questions

Questions on computer-delivered tests are interactive in the sense that you answer by selecting an option or entering text on the screen. If you see a format you are not familiar with, read the directions carefully. The directions always give clear instructions on how you are expected to respond.

For most questions, you respond by clicking an oval to select a single answer from a list of answer choices.

However, interactive question types may also ask you to respond by:

- **Clicking more than one oval** to select answers from a list of choices.
- **Typing in an entry box.** When the answer is a number, you may be asked to enter a numerical answer. Some questions may have more than one place to enter a response.
- **Clicking check boxes.** You may be asked to click check boxes instead of an oval when more than one choice within a set of answers can be selected.
- **Clicking parts of a graphic.** In some questions, you will select your answers by clicking on a location (or locations) on a graphic such as a map or chart, as opposed to choosing your answer from a list.
- **Clicking on sentences.** In questions with reading passages, you may be asked to choose your answers by clicking on a sentence (or sentences) within the reading passage.
- **Dragging and dropping answer choices into targets on the screen.** You may be asked to select answers from a list of choices and drag your answers to the appropriate location in a table, paragraph of text or graphic.
- **Selecting answer choices from a drop-down menu.** You may be asked to choose answers by selecting choices from a drop-down menu (e.g., to complete a sentence).

Remember that with every question you will get clear instructions.

Perhaps the best way to understand computer-delivered questions is to view the [Computer-delivered Testing Demonstration](#) on the Praxis web site to learn how a computer-delivered test works and see examples of some types of questions you may encounter.

## Understanding Selected-Response Questions

Many selected-response questions begin with the phrase “which of the following.” Take a look at this example:

**Which of the following is a flavor made from beans?**

- (A) Strawberry
- (B) Cherry
- (C) Vanilla
- (D) Mint

### How would you answer this question?

All of the answer choices are flavors. Your job is to decide which of the flavors is the one made from beans.

Try following these steps to select the correct answer.

- 1) **Limit your answer to the choices given.** You may know that chocolate and coffee are also flavors made from beans, but they are not listed. Rather than thinking of other possible answers, focus only on the choices given (“which of the following”).
- 2) **Eliminate incorrect answers.** You may know that strawberry and cherry flavors are made from fruit and that mint flavor is made from a plant. That leaves vanilla as the only possible answer.
- 3) **Verify your answer.** You can substitute “vanilla” for the phrase “which of the following” and turn the question into this statement: “Vanilla is a flavor made from beans.” This will help you be sure that your answer is correct. If you’re still uncertain, try substituting the other choices to see if they make sense. You may want to use this technique as you answer selected-response questions on the practice tests.

### Try a more challenging example

The vanilla bean question is pretty straightforward, but you’ll find that more challenging questions have a similar structure. For example:

**Entries in outlines are generally arranged according to which of the following relationships of ideas?**

- (A) Literal and inferential
- (B) Concrete and abstract
- (C) Linear and recursive
- (D) Main and subordinate

You’ll notice that this example also contains the phrase “which of the following.” This phrase helps you determine that your answer will be a “relationship of ideas” from the choices provided. You are supposed to find the choice that describes how entries, or ideas, in outlines are related.

Sometimes it helps to put the question in your own words. Here, you could paraphrase the question in this way: “How are outlines usually organized?” Since the ideas in outlines usually appear as main ideas and subordinate ideas, the answer is (D).

**QUICK TIP:** Don't be intimidated by words you may not understand. It might be easy to be thrown by words like "recursive" or "inferential." Read carefully to understand the question and look for an answer that fits. An outline is something you are probably familiar with and expect to teach to your students. So slow down, and use what you know.

### Watch out for selected-response questions containing "NOT," "LEAST," and "EXCEPT"

This type of question asks you to select the choice that does not fit. You must be very careful because it is easy to forget that you are selecting the negative. This question type is used in situations in which there are several good solutions or ways to approach something, but also a clearly wrong way.

### How to approach questions about graphs, tables, or reading passages

When answering questions about graphs, tables, or reading passages, provide only the information that the questions ask for. In the case of a map or graph, you might want to read the questions first, and then look at the map or graph. In the case of a long reading passage, you might want to go ahead and read the passage first, noting places you think are important, and then answer the questions. Again, the important thing is to be sure you answer the questions as they refer to the material presented. So read the questions carefully.

### How to approach unfamiliar formats

New question formats are developed from time to time to find new ways of assessing knowledge. Tests may include audio and video components, such as a movie clip or animation, instead of a map or reading passage. Other tests may allow you to zoom in on details in a graphic or picture.

Tests may also include interactive questions. These questions take advantage of technology to assess knowledge and skills in ways that standard selected-response questions cannot. If you see a format you are not familiar with, **read the directions carefully**. The directions always give clear instructions on how you are expected to respond.

**QUICK TIP:** Don't make the questions more difficult than they are. Don't read for hidden meanings or tricks. There are no trick questions on *Praxis* tests. They are intended to be serious, straightforward tests of your knowledge.

## Understanding Constructed-Response Questions

Constructed-response questions require you to demonstrate your knowledge in a subject area by creating your own response to particular topics. Essays and short-answer questions are types of constructed-response questions.

For example, an essay question might present you with a topic and ask you to discuss the extent to which you agree or disagree with the opinion stated. You must support your position with specific reasons and examples from your own experience, observations, or reading.

Take a look at a few sample essay topics:

- "Celebrities have a tremendous influence on the young, and for that reason, they have a responsibility to act as role models."
- "We are constantly bombarded by advertisements—on television and radio, in newspapers and magazines, on highway signs, and the sides of buses. They have become too pervasive. It's time to put limits on advertising."
- "Advances in computer technology have made the classroom unnecessary, since students and teachers are able to communicate with one another from computer terminals at home or at work."

### Keep these things in mind when you respond to a constructed-response question

- 1) **Answer the question accurately.** Analyze what each part of the question is asking you to do. If the question asks you to describe or discuss, you should provide more than just a list.
- 2) **Answer the question completely.** If a question asks you to do three distinct things in your response, you should cover all three things for the best score. Otherwise, no matter how well you write, you will not be awarded full credit.
- 3) **Answer the question that is asked.** Do not change the question or challenge the basis of the question. You will receive no credit or a low score if you answer another question or if you state, for example, that there is no possible answer.
- 4) **Give a thorough and detailed response.** You must demonstrate that you have a thorough understanding of the subject matter. However, your response should be straightforward and not filled with unnecessary information.
- 5) **Reread your response.** Check that you have written what you thought you wrote. Be sure not to leave sentences unfinished or omit clarifying information.

**QUICK TIP:** You may find that it helps to take notes on scratch paper so that you don't miss any details. Then you'll be sure to have all the information you need to answer the question.

## 3. Practice with Sample Test Questions

*Answer practice questions and find explanations for correct answers*

### Computer Delivery

This test is available on computer. The following sample question provides a preview of the actual screen used in a computer-delivered test. For the purposes of this Study Companion, the sample questions in this chapter are shown as they would appear in a paper-delivered test.



The screenshot displays the ETS PRAXIS interface. At the top, there is a navigation bar with buttons for Volume, Mark, Review, Help, Back, and Next. Below this, a status bar indicates "Reading & Language Arts CKT | Question 1 of 63" and a timer showing "01:29:56" with a "Hide Time" option. The main content area contains the following text:

During a writing activity a teacher writes two sentences from a sample of a student's writing on the whiteboard. The teacher shows the students how to use appropriate proofreading marks and asks the students to proofread the first paragraph of their individual writing samples.

Which of the following traits is the teacher's focus?

- Ideas
- Voice
- Conventions
- Organization

At the bottom of the question area, a grey box contains the instruction: "Answer the question above by clicking on the correct response."

## Sample Test Questions

The sample questions that follow illustrate the kinds of questions on the test. They are not, however, representative of the entire scope of the test in either content or difficulty. Answers with explanations follow the questions.

**Directions:** Each of the questions or statements below is followed by four suggested answers or completions. Select the one that is best in each case.

### I. Reading and Language Arts

A teacher notices that a group of students cannot sequence the events in their assigned readings across a variety of fiction genres. Which of the following is the best graphic organizer for helping students develop sequencing skills?

1. A teacher notices that a group of students cannot sequence the events in their assigned readings across a variety of fiction genres. Which of the following is the best graphic organizer for helping students develop sequencing skills?
  - (A) A fact pyramid
  - (B) A story map
  - (C) A character analysis grid
  - (D) A semantic-features analysis matrix
2. Which of the following words is the best example to use when demonstrating structural analysis for vocabulary development?
  - (A) Help
  - (B) Abnormal
  - (C) Maintain
  - (D) Detail
3. Which of the following strategies is most beneficial for students during the revising stage of the writing process?
  - (A) Using a graphic organizer
  - (B) Brainstorming ideas as a class
  - (C) Holding peer conferences
  - (D) Typing their work on a computer
4. Which of the following is the primary purpose of having a student retell a story?
  - (A) Measuring the student's level of comprehension
  - (B) Measuring the student's vocabulary development
  - (C) Determining the student's fluency rate
  - (D) Determining the student's oral reading progress
5. Which of the following concepts involves understanding that spoken words consist of a sequence of individual sounds?
  - (A) Morphology
  - (B) Phonemic awareness
  - (C) Graphophonic analysis
  - (D) Syntax
6. After students read a storybook, the teacher asks questions that require students to make judgments and decisions beyond what is stated in the text. The teacher is most likely using which of the following types of questions?
  - (A) Inferential
  - (B) Literal
  - (C) Evaluative
  - (D) Interpretive
7. A fourth-grade teacher has students keep all their writing samples for each marking period in a portfolio. The portfolio will best help the teacher determine which of the following?
  - (A) Students' understanding of a specific writing assignment
  - (B) Students' probable stanine on a standardized writing test
  - (C) Students' general development in writing skills over the time period
  - (D) Students' likelihood of turning in writing assignments on time in the future

8. Which of the following is a primary benefit of having teachers assign students oral book reports?
- (A) Requiring students to make text-to-text connections
  - (B) Providing students with opportunities to make formal presentations
  - (C) Requiring students to analyze every book they have read
  - (D) Providing students with opportunities to share their reading experiences
9. Each day during calendar time, Ms. Nelson sings songs with her kindergarten students. Using a chart containing the words to the songs, Ms. Nelson taps a pointer on each word as the students sing. Ms. Nelson is primarily demonstrating which of the following?
- (A) Concepts of print
  - (B) Decoding
  - (C) Thinking aloud
  - (D) The alphabetic principle
11. Which of the following word problems is most appropriate to use when first introducing the relationship between fractions and division?
- (A) Three children are sharing 2 pizzas. In order for each child to get the same amount, how much pizza can each one have?
  - (B) Mario has  $1\frac{3}{4}$  hours to finish his 3 homework assignments. If he divides his time evenly, how much time can he spend on each?
  - (C) Samuel paid \$3.20 for  $\frac{1}{4}$  pound of fudge. What is the cost per pound of the fudge?
  - (D) Jacklyn has 2 bags of dog food. Each bag holds  $30\frac{1}{2}$  pounds of food. How many pounds of food does Jacklyn have altogether?
12. A math teacher is using two fair number cubes, labeled 1 through 6, to discuss probability. The teacher proposes an experiment in which both cubes are tossed and the sum of the numbers shown faceup is the outcome of the experiment. Which of the following must be known to determine the likelihood of an outcome of 7 ?
- (A) All the factors of the number 7
  - (B) The weight, in ounces, of each number cube
  - (C) Each of the possible outcomes of the experiment
  - (D) The total number of possible outcomes of the experiment

## II. Mathematics

10. A teacher wants to teach a lesson on writing equations to solve word problems. Which of the following should the students have learned before the lesson?
- (A) How to use variables to represent unknown quantities
  - (B) How to graph linear equations
  - (C) How to solve systems of equations in two variables
  - (D) How to add and subtract polynomials

13. Ben is having trouble multiplying  $11 \times 13$ . Which of the following processes should be retaught to Ben to best help him evaluate the product?
- (A) Finding the least common multiple of two numbers
  - (B) Finding the greatest common factor of two numbers
  - (C) Rewriting one factor of the product as a sum and applying the distributive property
  - (D) Rounding each term to the nearest ten and then multiplying the two terms together

14. A fifth-grade teacher has provided each student with centimeter grid paper and scissors to explore how some two-dimensional shapes can be folded into three-dimensional figures. Which of the following concepts are the students most likely exploring?
- (A) Rotations
  - (B) Reflections
  - (C) Nets
  - (D) Tessellations

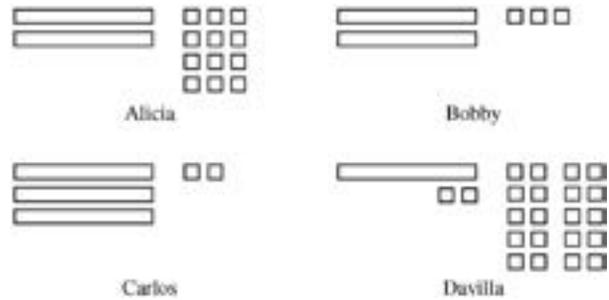
15. A teacher gives students the following mathematics problem.

Riding on a school bus are 20 students in first grade, 10 in second grade, 9 in third grade, and 7 in fourth grade. Approximately what percent of the students on the bus are in first grade?

Which of the following student responses best answers the question?

- (A) Student A: 26%
- (B) Student B: 43%
- (C) Student C: 46%
- (D) Student D: 73%

16.



The illustrations above show how four students—Alicia, Bobby, Carlos, and Davilla—used base ten blocks to represent the number 32. Which of the students used the blocks to represent the number 32 in a way that does not indicate an understanding of the underlying concepts of the base ten numeration system?

- (A) Alicia
- (B) Bobby
- (C) Carlos
- (D) Davilla

17.

$$\begin{array}{r} 4 \\ 16 \\ - \frac{1}{8} \\ \hline \frac{3}{8} \end{array} \qquad \begin{array}{r} 5 \\ 9 \\ - \frac{1}{2} \\ \hline \frac{4}{7} \end{array} \qquad \begin{array}{r} 7 \\ 16 \\ - \frac{1}{5} \\ \hline \frac{6}{11} \end{array}$$

The examples shown are representative of a student's work. If the error pattern indicated in these examples continues, which of the following will most likely be the student's

answer to the problem  $\frac{9}{11} - \frac{1}{7}$  ?

- (A)  $\frac{9}{18}$
- (B)  $\frac{8}{7}$
- (C)  $\frac{8}{4}$
- (D)  $\frac{10}{4}$

**III. Science**

18. Which of the following activities will be most effective in introducing kindergartners to the concept of how plants transport water?
- (A) Demonstrating that a celery stalk can be peeled lengthwise but not crosswise
  - (B) Placing celery stalks in water colored with a dye and observing the results
  - (C) Collecting rainwater in a rain gauge and comparing the amount of rainfall to the plant's growth rate
  - (D) Planting bean seeds in paper cups, placing them on the windowsill, and watering daily
19. The sorting of rocks into different groups on the basis of hardness, texture, and other observable characteristics best illustrates which of the following skills?
- (A) Predicting
  - (B) Explaining
  - (C) Classifying
  - (D) Experimenting
20. In an activity for a fifth-grade science class, a teacher opens three sealed containers one at a time. Each container holds one of the following substances.
1. Perfume
  2. Orange peels
  3. Vinegar

The teacher asks the students to raise their hands as soon as they are able to smell the contents of each container. The teacher then leads a class discussion about why the students closest to the open containers typically smell the substances first.

The activity is best used as part of a unit on which of the following topics?

- (A) Waves and the transfer of energy
- (B) Particle motion in solids, liquids, and gases
- (C) Chemical changes and conservation of matter
- (D) Separation of mixtures using differences in physical properties

21. Which of the following items is best for a second-grade teacher to use to demonstrate a lever?
- (A) A playground slide
  - (B) A horseshoe magnet
  - (C) A wheelbarrow
  - (D) A sandbox
22. Repeatability is an important feature in experimental design. Doing which of the following best ensures that others can repeat an experiment?
- (A) Using procedures that do not require specialized equipment
  - (B) Writing clear, detailed procedures
  - (C) Using abbreviations in the procedures as often as possible to save space
  - (D) Allowing the experimenter to modify procedures as needed

**IV. Social Studies**

23. A social studies class has learned about the system of checks and balances within the three branches of the United States government. The teacher asks students to find examples in the Constitution of how the executive branch can limit the power of the legislative branch.

Based on Bloom's taxonomy of educational objectives, which of the following is the highest level of thinking required for the assignment?

- (A) Analysis
- (B) Synthesis
- (C) Application
- (D) Knowledge

24. The National Curriculum Standards for Social Studies outlines ten themes. The second theme addresses time, continuity, and change. Which of the following questions for an upper elementary class falls within this theme?
- (A) What are the locations of two major oil fields in the United States?
  - (B) In what kinds of places has oil been located?
  - (C) Why is drilling for oil so costly?
  - (D) Why did the demand for oil increase with the mass production of the automobile?
25. A third-grade teacher is planning a lesson on the impact of human actions on the physical environment. Which of the following is the best example to use for showing the most direct impact of human activities on the environment?
- (A) El Niño
  - (B) A drought
  - (C) An earthquake
  - (D) An oil spill
26. A fifth-grade teacher shares a graph with the class that shows how the price of home heating oil rises during winter months. The teacher is most likely using the activity to demonstrate which of the following economic principles?
- (A) Recession
  - (B) Costs and benefits
  - (C) Supply and demand
  - (D) Price controls
- V. Art, Music, and Physical Education**
27. Before learning about meter in music, elementary students should be able to demonstrate their understanding of
- (A) weak and strong beats
  - (B) syncopation
  - (C) subdivision of beats
  - (D) tempo markings
28. During a unit on softball, an elementary student practices hitting the ball while the physical education teacher observes. Which of the following comments from the teacher provides the student with the most effective feedback?
- (A) "Great job! That's the way to do it! That's the best hit you've made all week!"
  - (B) "The bat you are using is too heavy for you. Try using a lighter one to help you in the swing."
  - (C) "When you made that hit, you kept your head down and your eye on the ball. Good job!"
  - (D) "You just need more practice time to get your swing action down right."
29. During physical education class, students throw a ball against the wall and try to catch it as it bounces back. Which of the following components of skill-related fitness does this activity most closely address?
- (A) Agility
  - (B) Power
  - (C) Speed
  - (D) Coordination
30. The emergence of theater in ancient Greece was most influenced by which of the following?
- (A) Social tensions
  - (B) Religious ceremonies
  - (C) Political concerns
  - (D) Economic necessity

## Answers to Sample Questions

### Reading and Language Arts

1. The correct answer is (B). The question tests your knowledge of how to identify and evaluate different types of texts. A story map is used to help students identify and organize the key elements of a story by charting characters, setting, problems, and solutions.
2. The correct answer is (B). The question tests your knowledge of the strategies to determine the meaning of unknown words. Structural analysis involves using prefixes, suffixes, or root words to determine the meaning of an unfamiliar word. The word “abnormal” is the only word that has both a prefix and a root word, so it would be most useful in teaching structural analysis.
3. The correct answer is (C). The question tests your knowledge of how to help students produce clear and coherent writing. During the revising stage, the writer consults with peers or the teacher to improve the writing piece.
4. The correct answer is (A). The question tests your knowledge of ways to promote students’ comprehension of a text. Asking a student to retell a story is an informal way to assess reading comprehension.
5. The correct answer is (B). The question tests your knowledge of the role of phonemic awareness in literacy development. Phonemic awareness is the understanding that spoken words consist of a sequence of individual sounds.
6. The correct answer is (A). The question tests your knowledge of using questioning to promote students’ comprehension of texts. Inferential questions require students to use their background knowledge and clues within the story to answer questions beyond what is explicitly stated in the text.
7. The correct answer is (C). The question tests your knowledge of the purpose of different assessment tools. A portfolio can be described as a collection of student work that exhibits the student’s efforts, progress, and achievements in one or more than one area. A student portfolio can be assessed based on the student’s selection of contents and evidence of personal reflection.
8. The correct answer is (D). The question tests your knowledge of strategies to foster students’ participation in collaborative conversations. Oral book reports provide students with opportunities to engage in discussion with peers by sharing their reading experiences with others.

9. The correct answer is (A). The question tests your knowledge of key ideas relevant to the foundations of literacy and reading development. Concept of print is defined as an awareness of print in the everyday environment with an emerging understanding of how printed language works. In the scenario, the teacher points at the words that match each word she sings.

### Mathematics

10. The correct answer is (A). The question tests your knowledge of how to sequence lessons within a curriculum. The first step in writing an equation to solve a word problem is to identify any unknown quantities and then represent them with variables. Once the unknown quantities are represented with variables, then equations can be written using those variables.

11. The correct answer is (A). The question tests your knowledge of strategies for relating a fraction to division. The numbers used in the problem described are whole numbers, so the problem builds on students’ previous experience working with whole numbers. The amount that each child would get can be expressed as  $2 \div 3$ . Dividing each pizza into 3 pieces allows a sharing interpretation for division to be used to show

that each child will get  $\frac{1}{3}$  of each of 2 pizzas, or  $\frac{2}{3}$  of a whole pizza. This shows that  $\frac{2}{3}$  and  $2 \div 3$  both represent 2 divided by 3.

12. The correct answer is (D). The question tests your knowledge of strategies for linking probability to the likelihood that an event will occur. Since probability is the number of desired outcomes out of (divided by) the total number of outcomes possible, it is necessary for the students to understand how to determine the total number of possible outcomes so that the probability can be calculated.

13. The correct answer is (C). The question tests your knowledge of strategies for understanding properties of operations. The factor 11 can be written as the sum of 10 and 1, and then the product of 11 and 13 can be found by distributing the 13 over the sum of 10 and 1. This approach takes advantage of place value and results in an easier multiplication by ten and an easier multiplication by the identity element. The two partial products can then be summed to produce the product of 11 and 13, and since one of the addends is a multiple of 10, the student can use mental math to find the sum. Thus the distributive property allows the student to use place value to find a product more easily.

14. The correct answer is (C). The question tests your knowledge of strategies for using nets to represent three-dimensional figures. A net is a closed plane figure that can be folded into a closed three-dimensional figure.

15. The correct answer is (B). The question tests your knowledge of how to recognize when misconceptions occur and which strategies to use for reteaching. Percent refers to how many out of one hundred or, in decimal form, how many hundredths. To find a percent, divide the number of students in first grade (20) by the total number of students (46), and round the decimal to the hundredths place (0.43). This is 43 hundredths, or  $\frac{43}{100}$ , or 43%.

16. The correct answer is (B). The question tests your knowledge of how to recognize when misconceptions occur and which strategies to use for reteaching. Bobby has not shown a correct representation of the number 32. He used two tens blocks and three ones blocks, which is a correct representation of the number 23.

17. The correct answer is (C). The question tests your knowledge of how to recognize when misconceptions occur and which strategies to use for reteaching. The student's error pattern is to subtract both the numerator and the denominator.

### Science

18. The correct answer is (B). The question tests your knowledge of the characteristics of plants. Since the water colored with a dye will be taken up by the celery, this activity concretely illustrates the pathway of plant water transportation up the celery stalk.

19. The correct answer is (C). The question tests your knowledge of the skills necessary for scientific investigation. The activity describes classification, which requires students to arrange or organize items according to class or category.

20. The correct answer is (B). The question tests your knowledge of particle motion in solids, liquids, and gases. The activity described demonstrates the connection between the movement of particles through the air and the time it takes for the students to detect the particles as odors.

21. The correct answer is (C). The question tests your knowledge of an important physical science concept. A lever is a rigid bar that pivots on a support called the fulcrum. A wheelbarrow is often used as a lever to lift heavy loads with minimal effort. The wheelbarrow's handles act as rigid bars that are supported by and pivot on the wheelbarrow's wheel, which acts as the fulcrum.

22. The correct answer is (B). The question tests your knowledge of experimental design. If procedures are too vague, there is a greater chance that the experiment will not be carried out in the same way.

### Social Studies

23. The correct answer is (A). The question tests your knowledge of helping students locate, analyze, and synthesize information. The assignment involves analyzing evidence and, possibly, recognizing assumptions, which are tasks classified at the analysis level of Bloom's taxonomy.

24. The correct answer is (D). The question tests your knowledge of the concepts of chronology and change. Learning how to read and to reconstruct the past allows students to develop a historical perspective and to answer the following questions: Who am I? What happened in the past? How has the world changed, and how might it change in the future? Why did particular events take place? How have past events shaped the world?

25. The correct answer is (D). The question tests your knowledge of the conditions and events that affect the environment. An oil spill is the only event listed that can be directly attributed to human actions. The other events are not typically associated with or caused by human actions.

26. The correct answer is (C). The question tests your knowledge of basic economic concepts. During winter, the demand for home heating oil is higher than during other seasons. In winter, the supply or availability of oil may not necessarily increase, so the price of heating oil may increase as a result.

### Art, Music, and Physical Education

27. The correct answer is (A). The question tests your knowledge of fundamental concepts, principles, skills, and terminology related to music. Meter, the grouping of beats into repeated sets of two, three, or more beats, depends on the differentiation between weak and strong beats; therefore, students must understand such differentiation before learning about meter.

28. The correct answer is (C). The question tests your knowledge of how to identify and evaluate different types of feedback. The feedback provided by the teacher focuses on the actions of the learner and specifically describes and highlights the behaviors that should be repeated.

29. The correct answer is (D). The question tests your knowledge of key ideas related to physical fitness. Agility, balance, power, speed, coordination, and reaction time are all components of skill-related fitness. The wall-ball activity most closely addresses students' eye-hand coordination.

30. The correct answer is (B). The question tests your knowledge of ancient Greek theater. Drama in ancient Greece evolved from religious rituals such as the choral performances known as dithyrambs. In Athens during the sixth and fifth centuries B.C.E., annual theater festivals were held specifically in honor of the god Dionysus, and performances of classical tragedy, comedy, and satyr plays were held alongside the older dithyrambic choruses.

## Sample Constructed-Response Questions

*This section presents two sample constructed-response questions and sample responses at each of the score points, along with the standards used in scoring the responses. When you read the sample responses, keep in mind that they are less polished than they would be if they had been developed at home, edited, and carefully presented. The examinees do not know what questions they will be asked and must decide, on the spot, how to respond. The scorers of the questions take these circumstances into account when evaluating the responses. Scorers will assign scores based on the following general scoring guide:*

### General Scoring Guide

#### Score of 3

**The response demonstrates a strong, thorough understanding of the content, pedagogy, and student development relevant to the question.**

A response in this category

- Answers all parts of the question clearly and specifically
- Shows strong knowledge of content and content-specific pedagogy
- Provides strong explanations that are well supported by examples or details

#### Score of 2

**The response demonstrates a basic, adequate understanding of the content, pedagogy, and student development relevant to the question.**

A response in this category

- Answers all parts of the question adequately
- Shows adequate knowledge of content and content-specific pedagogy
- Provides adequate explanations that are somewhat supported by examples or details

#### Score of 1

**The response demonstrates a weak, limited understanding of the content, pedagogy, and student development relevant to the question.**

A response in this category

- Answers the question in a limited way
- Demonstrates one or more of the following weaknesses
  - Failure to answer most parts of the question
  - Limited knowledge of content and pedagogy
  - Weak explanations inadequately supported by examples or details

#### Score of 0

**The response demonstrates minimal or no understanding of the content, pedagogy, and student development relevant to the question.**

A response in this category

- Fails to respond appropriately to any part of the question
- Shows virtually no knowledge of content or content-specific pedagogy
- Provides incoherent or no explanations or supporting examples

Also receiving a score of 0 would be responses that are blank or almost blank, completely off topic, or not written in English.

## Reading and Language Arts Question

A third-grade class is exploring the theme of friendship in language arts. One of the stories the class will be reading is *Angelina and Alice* by Katharine Holabird. The book is about two friends who help each other learn gymnastic tricks to perform at the town fair. The friends learn that by working together and helping each other, they not only improve their performance but also become closer friends.

- a) Describe **ONE** instructional technique or strategy that you would use during the reading of the story to enhance the students' comprehension of the theme.
- b) Explain what you would do to determine that the strategy was successful in helping the students understand the theme.

### Sample Response That Received a Score of 3

*a) I would have the students read the story independently and list events in the story related to the theme of friendship. Then I would assign them to groups of four. Each group will combine their events into one list. A presenter will be chosen by the group to share their list with the class. During the presentations, I will organize the events on the board, and then we will discuss how the events relate to the theme of friendship. I will make sure each student in the class has a chance to say something related to the theme or to add to the organizer I have on the board. The independent reading activity is appropriate because it is not totally teacher directed; the small-group work provides an opportunity for students to share their ideas and work together, and the whole-group work provides an opportunity to think critically about the events in the story that tell us about friendship. Students will use their oral language, visual, and listening skills, as the list is compiled and analyzed.*

*b) I would know the strategy was successful by having each student write a short story that tells us more about the friendship between Angelina and Alice. This extends the story, connects reading and writing, and provides a chance to practice the steps of process writing.*

### Commentary on Response That Received a Score of 3

The response was scored a 3 because it shows strong and convincing understanding of principles of reading instruction that is developmentally appropriate for third graders. It contains a description of an instructional strategy and an explanation of how the strategy might enhance student comprehension of the theme. A group of students in third grade can be reading at many different levels. By reading independently, the students can pace themselves and are more apt to speak within their small group about what they have read. The activity also describes the teacher assessing comprehension individually and in small- and whole-group settings. The follow-up writing activity is an ideal way to find out that the students understand how to depict the theme of friendship in their own writing.

**Note:** For this test, a *description* is more than a list. It is a picture in words that helps a reader get an image of what something is like. It requires that the writer provide details to help the reader get the picture. An *explanation* makes something clear and gives the reasons for doing it. It helps the reader (in this case, a trained rater) understand why you would do something.

### Sample Response That Received a Score of 2

*a) As I read the story aloud, modeling how to read with expression, I would stop periodically and ask the class questions about what is happening in the story. I would also have them predict what is going to happen at the end of the story.*

*b) We would discuss their predictions and whether they were right or wrong. We would also review the sequence of events so I could see if they understood what happened in the story from the beginning to the middle and to the end. This would help me check for understanding*

### Commentary on Response That Received a Score of 2

The response was scored a 2 because it describes the instructional strategy of modeling fluent reading—checking for understanding, asking questions, predicting, and discussing. The instructional strategy is appropriate; however, the explanation of how the teacher would check for understanding is not strong or detailed. In addition, there is very little explicit tie-in to the theme of friendship.

### Sample Response That Received a Score of 1

*a) I would begin by reading part of the story to the class myself, modeling fluent reading. Then I would choose someone else to read a page or two. The taking turns would continue until the reading of the story was complete and everyone had a chance to read.*

*b) I can tell if a student understands what she is reading if the reading is smooth and fluent.*

### Commentary on Response That Received a Score of 1

The response was scored a 1 because the activity reflects a limited understanding of principles of reading instruction for third-grade students. Modeling fluent reading is a good overall strategy, but round-robin reading is not. Students do not have to pay attention once they have had a turn reading, and there is no way to check for understanding of the story or theme when someone else is reading. The assessment suggested in part (b) is insufficient and subjective. It gives no explanation why understanding of the theme can be assessed that way.

### Sample Response That Received a Score of 0

*a) The instructional strategy I would use is to put the students into pairs to read the story. After reading the story, each group would make up a friendship game.*

*b) The students could pretend to be Alice and Angelina and decide which group's game they would like to play. If they have fun playing the game, I will know they are learning about getting along and being friends.*

### Commentary on Response That Received a Score of 0

The response was scored a 0 because it shows minimal understanding of reading-instruction strategies. Pairing students is a grouping strategy to prepare for instruction, but no instruction is discussed in the response. There is also no mention of how to assess student comprehension of friendship as a theme in a story.

## Mathematics Question

Students in a second-grade class are beginning to learn about addition of two- and three-digit numbers with regrouping. However, the teacher observes that some students do not understand place value.

- a) Describe **ONE** activity that will help students understand place value. Be sure to include details of what the students will do during the activity.
- b) Explain **ONE** way you would assess students' understanding of place value after they have practiced with the activity.

### Sample Response That Received a Score of 3

a) *The students could play a game using a place value chart and play coins. They practice trading ones for tens and tens for hundreds. To play: A student, Chris, rolls a 6 on a number cube, counts out 6 pennies, and places them in the ones section of the place value chart. On the next turn, Chris rolls a 5, places 5 pennies on the chart, trades 10 of the pennies for a dime, and places the dime in the tens column, keeping a penny in the ones column. Chris will then see that she has represented the number 11. When Chris has 10 dimes, Chris trades them for 1 silver dollar. At each stage of the game, Chris needs to say what she is doing and why she is doing it.*

b) *The teacher needs to make informal observations by sitting in on the games and taking notes on each student, perhaps using a prepared checklist. As a follow-up assessment, the students could be given a blank place value chart and two numbers on cards, such as 54 and 77. The student needs to represent the numbers on the place value chart, model the sum, and write the sum in numerals on the chart. The teacher can assess the student's understanding of place value by asking her to explain her thinking and saying the number in the sum she has modeled. Then the student could be given 3 numbers to model, add, and explain. Next step is to learn the addition algorithm.*

### Commentary on Response That Received a Score of 3

The response was scored a 3 because it is a strong response with an appropriate activity, clear examples of what the students would be doing, and an explanation of how the students would be assessed after completing the activity. The students will be using pennies and dimes to count with. The place value chart allows them to manipulate the money into the ones and tens columns. This hands-on approach will make an abstract idea more concrete for the students and, therefore, easier to understand. Also, by using a game format, students will feel more comfortable participating and seeking help from their classmates during the game if they are confused. The teacher is able to informally and formally assess individual student understanding by sitting in on each game and then by giving a follow-up assignment on place value. Having more than one assessment for a difficult and challenging concept like place value is extremely important.

### Sample Response That Received a Score of 2

a) *The students would play a game using a place value chart. For example, a student rolls a 6 with a number cube. They count out 6 pennies and place them in the ones section of their place value chart. On their next turn they roll a 5 and have to trade 10 pennies for a dime and place the dime in the tens column, keeping a penny in the ones column, for a total of 11. And so on.*

b) *The teacher could assess the students' understanding by watching what the students do as they observe each round of the game.*

### Commentary on Response That Received a Score of 2

The response was scored a 2 because it provided an adequate response containing an activity of having students play a place value game. The response also provides examples of what the students will be doing by rolling the number cube and trading pennies for a dime. Although the teacher will be informally assessing the students, that is not enough of an assessment to truly know if the students understand place value. The students need to be able to explain their thinking and apply their knowledge to a new situation or type of problem.

### Sample Response That Received a Score of 1

*a) The students would play a game using a place value chart. They would use pennies and dimes in the ones and tens columns to show they understand place value. They would exchange dimes for dollars as well.*

*b) Students play the game until they feel they understand place value and are ready to learn an algorithm for adding numbers with regrouping.*

### Commentary on Response That Received a Score of 1

The response was scored a 1 because the activity reflects a limited understanding of place value and lacks examples of what the students will be doing during the activity. There is also no explanation of how students' understanding of place value would be assessed. A student may say he or she understands something, but this is not sufficient as an assessment tool.

### Sample Response That Received a Score of 0

*a) The students would play a game using a place value chart, number cubes, play coins, calculators, and work sheets. b) The students will make up games using number cubes and calculators, perhaps trying to predict outcomes in multiple tosses of the cubes.*

### Commentary on Response That Received a Score of 0

The response was scored a 0 because it shows minimal understanding of place value. Having the students play a game is an acceptable activity, but there are no details given about the game in the response. There is also no assessment of the students' understanding of place value.

## 4. Determine Your Strategy for Success

*Set clear goals and deadlines so your test preparation is focused and efficient*

Effective *Praxis* test preparation doesn't just happen. You'll want to set clear goals and deadlines for yourself along the way. Otherwise, you may not feel ready and confident on test day.

### 1) Learn what the test covers.

You may have heard that there are several different versions of the same test. It's true. You may take one version of the test and your friend may take a different version a few months later. Each test has different questions covering the same subject area, but both versions of the test measure the same skills and content knowledge.

You'll find specific information on the test you're taking on page 5, which outlines the content categories that the test measures and what percentage of the test covers each topic. Visit [www.ets.org/praxis/testprep](http://www.ets.org/praxis/testprep) for information on other *Praxis* tests.

### 2) Assess how well you know the content.

Research shows that test takers tend to overestimate their preparedness—this is why some test takers assume they did well and then find out they did not pass.

The *Praxis* tests are demanding enough to require serious review of likely content, and the longer you've been away from the content, the more preparation you will most likely need. If it has been longer than a few months since you've studied your content area, make a concerted effort to prepare.

### 3) Collect study materials.

Gathering and organizing your materials for review are critical steps in preparing for the *Praxis* tests. Consider the following reference sources as you plan your study:

- Did you take a course in which the content area was covered? If yes, do you still have your books or your notes?
- Does your local library have a high school-level textbook in this area? Does your college library have a good introductory college-level textbook in this area?

Practice materials are available for purchase for many *Praxis* tests at [www.ets.org/praxis/testprep](http://www.ets.org/praxis/testprep). Test preparation materials include sample questions and answers with explanations.

### 4) Plan and organize your time.

You can begin to plan and organize your time while you are still collecting materials. Allow yourself plenty of review time to avoid cramming new material at the end. Here are a few tips:

- Choose a test date far enough in the future to leave you plenty of preparation time. Test dates can be found at [www.ets.org/praxis/register/dates\\_centers](http://www.ets.org/praxis/register/dates_centers).
- Work backward from that date to figure out how much time you will need for review.
- Set a realistic schedule—and stick to it.

### 5) Practice explaining the key concepts.

*Praxis* tests with constructed-response questions assess your ability to explain material effectively. As a teacher, you'll need to be able to explain concepts and processes to students in a clear, understandable way. What are the major concepts you will be required to teach? Can you explain them in your own words accurately, completely, and clearly? Practice explaining these concepts to test your ability to effectively explain what you know.

### 6) Understand how questions will be scored.

Scoring information can be found on page 55.

### 7) Develop a study plan.

A study plan provides a road map to prepare for the *Praxis* tests. It can help you understand what skills and knowledge are covered on the test and where to focus your attention. Use the study plan template on page 35 to organize your efforts.

And most important—get started!

## Would a Study Group Work for You?

### Using this guide as part of a study group

People who have a lot of studying to do sometimes find it helpful to form a study group with others who are working toward the same goal. Study groups give members opportunities to ask questions and get detailed answers. In a group, some members usually have a better understanding of certain topics, while others in the group may be better at other topics. As members take turns explaining concepts to one another, everyone builds self-confidence.

If the group encounters a question that none of the members can answer well, the group can go to a teacher or other expert and get answers efficiently. Because study groups schedule regular meetings, members study in a more disciplined fashion. They also gain emotional support. The group should be large enough so that multiple people can contribute different kinds of knowledge, but small enough so that it stays focused. Often, three to six members is a good size.

Here are some ways to use this guide as part of a study group:

- **Plan the group's study program.** Parts of the study plan template, beginning on page 35 can help to structure your group's study program. By filling out the first five columns and sharing the worksheets, everyone will learn more about your group's mix of abilities and about the resources, such as textbooks, that members can share with the group. In the sixth column ("Dates I will study the content"), you can create an overall schedule for your group's study program.
- **Plan individual group sessions.** At the end of each session, the group should decide what specific topics will be covered at the next meeting and who will present each topic. Use the topic headings and subheadings in the Test at a Glance table on page 5 to select topics, and then select practice questions, beginning on page 16.
- **Prepare your presentation for the group.** When it's your turn to present, prepare something that is more than a lecture. Write two or three original questions to pose to the group. Practicing writing actual questions can help you better understand the topics covered on the test as well as the types of questions you will encounter on the test. It will also give other members of the group extra practice at answering questions.

- **Take a practice test together.** The idea of a practice test is to simulate an actual administration of the test, so scheduling a test session with the group will add to the realism and may also help boost everyone's confidence. Remember, complete the practice test using only the time that will be allotted for that test on your administration day.
- **Learn from the results of the practice test.** Review the results of the practice test, including the number of questions answered correctly in each content category. For tests that contain constructed-response questions, look at the Sample Test Questions section, which also contain sample responses to those questions and shows how they were scored. Then try to follow the same guidelines that the test scorers use.
- **Be as critical as you can.** You're not doing your study partner(s) any favors by letting them get away with an answer that does not cover all parts of the question adequately.
- **Be specific.** Write comments that are as detailed as the comments about the sample responses. Indicate where and how your study partner(s) are doing an inadequate job of answering the question. Writing notes in the margins of the answer sheet may also help.
- **Be supportive.** Include comments that point out what your study partner(s) got right.

Then plan one or more study sessions based on aspects of the questions on which group members performed poorly. For example, each group member might be responsible for rewriting one paragraph of a response in which someone else did an inadequate job.

Whether you decide to study alone or with a group, remember that the best way to prepare is to have an organized plan. The plan should set goals based on specific topics and skills that you need to learn, and it should commit you to a realistic set of deadlines for meeting those goals. Then you need to discipline yourself to stick with your plan and accomplish your goals on schedule.

## 5. Develop Your Study Plan

*Develop a personalized study plan and schedule*

Planning your study time is important because it will help ensure that you review all content areas covered on the test. Use the sample study plan below as a guide. It shows a plan for the *Core Academic Skills for Educators: Reading* test. Following that is a study plan template that you can fill out to create your own plan. Use the "Learn about Your Test" and "Test Specifications" information beginning on page 5 to help complete it.

**Use this worksheet to:**

- 1. Define Content Areas:** List the most important content areas for your test as defined in chapter 1.
- 2. Determine Strengths and Weaknesses:** Identify your strengths and weaknesses in each content area.
- 3. Identify Resources:** Identify the books, courses, and other resources you plan to use for each content area.
- 4. Study:** Create and commit to a schedule that provides for regular study periods.

**Praxis Test Name (Test Code):** Core Academic Skills for Educators: Reading (5712)

**Test Date:** 9/15/15

Content covered	Description of content	How well do I know the content? (scale 1–5)	What resources do I have/need for the content?	Where can I find the resources I need?	Dates I will study the content	Date completed
<b>Key Ideas and Details</b>						
Close reading	Draw inferences and implications from the directly stated content of a reading selection	3	Middle school English textbook	College library, middle school teacher	7/15/15	7/15/15
Determining Ideas	Identify summaries or paraphrases of the main idea or primary purpose of a reading selection	3	Middle school English textbook	College library, middle school teacher	7/17/15	7/17/15
Determining Ideas	Identify summaries or paraphrases of the supporting ideas and specific details in a reading selection	3	Middle and high school English textbook	College library, middle and high school teachers	7/20/15	7/21/15
<b>Craft, Structure, and Language Skills</b>						
Interpreting tone	Determine the author's attitude toward material discussed in a reading selection	4	Middle and high school English textbook	College library, middle and high school teachers	7/25/15	7/26/15
Analysis of structure	Identify key transition words and phrases in a reading selection and how they are used	3	Middle and high school English textbook, dictionary	College library, middle and high school teachers	7/25/15	7/27/15
Analysis of structure	Identify how a reading selection is organized in terms of cause/effect, compare/contrast, problem/solution, etc.	5	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/1/15	8/1/15
Author's purpose	Determine the role that an idea, reference, or piece of information plays in an author's discussion or argument	5	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/1/15	8/1/15

(continued on next page)

Content covered	Description of content	How well do I know the content? (scale 1–5)	What resources do I have/need for the content?	Where can I find the resources I need?	Dates I will study the content	Date completed
Language in different contexts	Determine whether information presented in a reading selection is presented as fact or opinion	4	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/1/15	8/1/15
Contextual meaning	Identify the meanings of words as they are used in the context of a reading selection	2	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/1/15	8/1/15
Figurative Language	Understand figurative language and nuances in word meanings	2	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/8/15	8/8/15
Vocabulary range	Understand a range of words and phrases sufficient for reading at the college and career readiness level	2	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/15/15	8/17/15
<b>Integration of Knowledge and Ideas</b>						
Diverse media and formats	Analyze content presented in diverse media and formats, including visually and quantitatively, as well as in words	2	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/22/15	8/24/15
Evaluation of arguments	Identify the relationship among ideas presented in a reading selection	4	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/24/15	8/24/15
Evaluation of arguments	Determine whether evidence strengthens, weakens, or is relevant to the arguments in a reading selection	3	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/27/15	8/27/15
Evaluation of arguments	Determine the logical assumptions upon which an argument or conclusion is based	5	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/28/15	8/30/15
Evaluation of arguments	Draw conclusions from material presented in a reading selection	5	High school textbook, college course notes	College library, course notes, high school teacher, college professor	8/30/15	8/31/15
Comparison of texts	Recognize or predict ideas or situations that are extensions of or similar to what has been presented in a reading selection	4	High school textbook, college course notes	College library, course notes, high school teacher, college professor	9/3/15	9/4/15
Comparison of texts	Apply ideas presented in a reading selection to other situations	2	High school textbook, college course notes	College library, course notes, high school teacher, college professor	9/5/15	9/6/15

## My Study Plan

Use this worksheet to:

1. **Define Content Areas:** List the most important content areas for your test as defined in chapter 1.
2. **Determine Strengths and Weaknesses:** Identify your strengths and weaknesses in each content area.
3. **Identify Resources:** Identify the books, courses, and other resources you plan to use for each content area.
4. **Study:** Create and commit to a schedule that provides for regular study periods.

Praxis Test Name (Test Code): \_\_\_\_\_

Test Date: \_\_\_\_\_

Content covered	Description of content	How well do I know the content? (scale 1–5)	What resources do I have/need for this content?	Where can I find the resources I need?	Dates I will study this content	Date completed

(continued on next page)



## 6. Review Study Topics

*Detailed study topics with questions for discussion*

### Using the Study Topics That Follow

The Elementary Education: Instructional Practice and Applications test is designed to measure the knowledge and skills necessary for a beginning teacher.

This chapter is intended to help you organize your preparation for the test and to give you a clear indication of the depth and breadth of the knowledge required for success on the test.

Virtually all accredited programs address the topics covered by the test; however, you are not expected to be an expert on all aspects of the topics that follow.

You are likely to find that the topics that follow are covered by most introductory textbooks. Consult materials and resources, including lecture and laboratory notes, from all your coursework. You should be able to match up specific topics and subtopics with what you have covered in your courses.

Try not to be overwhelmed by the volume and scope of content knowledge in this guide. Although a specific term may not seem familiar as you see it here, you might find you can understand it when applied to a real-life situation. Many of the items on the actual test will provide you with a context to apply to these topics or terms.

### Discussion Areas

Interspersed throughout the study topics are discussion areas, presented as open-ended questions or statements. These discussion areas are intended to help test your knowledge of fundamental concepts and your ability to apply those concepts to situations in the classroom or the real world. Most of the areas require you to combine several pieces of knowledge to formulate an integrated understanding and response. If you spend time on these areas, you will gain increased understanding and facility with the subject matter covered on the test. You may want to discuss these areas and your answers with a teacher or mentor.

Note that this study companion *does not provide answers for the discussion area questions*, but thinking about the answers to them will help improve your understanding of fundamental concepts and will probably help you answer a broad range of questions on the test.

## Study Topics

An overview of the areas covered on the test, along with their subareas, follows.

### I. Reading and Language Arts

**A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for foundational skills, literature and informational texts, writing, language, and speaking and listening.

1. Knows how to sequence lessons within a curriculum
2. Knows how to plan for strategies to advance student understanding and to address common student misconceptions
3. Knows how to make connections within reading and language arts topics, across other disciplines, and in real-world contexts

**B. Instruction:** A beginning teacher understands how to design instruction that differentiates for diverse needs and how to implement developmentally appropriate instructional methods/strategies/approaches/resources to support learning in the following areas.

1. Reading foundational skills
  - a. Knows how to develop students' understanding of concepts of print
  - b. Knows strategies to develop students' phonological awareness skills (e.g., finger spelling, clapping syllables, picture sorting)
  - c. Knows strategies to develop phonic and word-analysis skills to support decoding (e.g., morphology, syllabication, word building, word/letter sorts, high-frequency words)
  - d. Knows strategies to develop students' fluency to support comprehension (e.g., selecting appropriate texts, modeling fluent reading, choral reading, repeated reading)
2. Reading literature and informational texts
  - a. Knows how to develop students' ability to comprehend literature and informational text
  - b. Knows strategies for teaching students to ask and answer questions about texts

- c. Knows strategies and tools for teaching students to find and organize key details and main ideas and themes in a text (e.g., plays, think-alouds, graphic organizers)
  - d. Knows how to develop students' understanding of features and structures of text across genres
  - e. Knows how to develop students' understanding of point of view and how it influences the meaning of texts
  - f. Knows how to develop students' ability to distinguish among fact, opinion, and reasoned judgment
  - g. Knows how to help students integrate and compare written, visual, and oral information within and among texts and multimedia sources
  - h. Knows strategies (e.g., think-alouds, examples) to help students understand how meaning is relayed through the use of print, graphics, and digital media
  - i. Knows strategies and tools to help students compare and contrast texts and/or integrate information from multiple texts on the same topic
  - j. Explains how signal words can be used to clarify connections between key ideas in texts
  - k. Knows strategies to help students select appropriate texts for their reading level, purpose, and interests
  - l. Knows scaffolding strategies to support students' progress toward independent proficient reading at the high end of their text-complexity band (e.g., providing access to grade-level texts, purposeful grouping, close reading)
3. Writing
    - a. Knows how to develop students' writing skills by using effective approaches to writing instruction and appropriate strategies and tools
    - b. Knows how to develop students' knowledge of opinion/argument, informative/explanatory, and narrative writing and their purposes
    - c. Knows how to help students develop research-based writing skills, cite relevant textual evidence, frame research questions, and use digital tools in the writing process

- d. Knows strategies to help students distinguish between primary and secondary sources, reliable and unreliable sources, and paraphrasing and plagiarizing
  - 4. Language
    - a. Knows strategies to develop students' understanding of standard English conventions
    - b. Knows strategies to develop students' ability to determine word meanings and develop vocabularies
    - c. Knows resources to develop students' ability to use and interpret figurative language
  - 5. Speaking and listening
    - a. Knows strategies to develop students' active listening, critical thinking, and use of reasons and evidence to support claims when speaking
    - b. Knows strategies to develop students' oral presentation skills and to develop students' skill in providing constructive feedback
    - c. Knows strategies to promote students' use of multimedia for presentations
- C. Assessment:** A beginning teacher knows appropriate assessments for evaluating the effectiveness of reading and language arts instruction and student progress.

1. Knows how to design and use formative assessments to adjust instruction
2. Knows how to design, use, and interpret summative assessments
3. Knows how to recognize when misconceptions occur and strategies for reteaching
4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

**Discussion areas: Curriculum**

- As a beginning teacher, you will probably be asked to teach an existing language arts curriculum. Choose a grade level that you think you want to teach and look over the state standards. Look over a language arts text or curriculum that you might use in that grade. What are its units? How are they broken into parts?

- How might students benefit from field trips, reading aloud, and pictures in the classroom as prereading activities? Think of some other instructional practices that could be used as prereading activities. Identify a benefit for each activity.
- What are some ways of using reading and language arts to strengthen mathematics instruction?
- What are “big books” and what is their purpose?
- Newspapers can be excellent teaching tools. Can you identify some ways in which you might use newspapers in the classroom?
- What type of curricular materials, media, and technology might be most appropriate for visual learners? Auditory learners? Sensory learners? Kinesthetic learners?

**Discussion areas: Instruction**

- Think of a unit that you might be starting in a language arts class (introducing a book, for example, or beginning to write creatively). What are three ways in which you could determine your students' prior knowledge, experiences, and skills before beginning the unit?
- What are synonyms? Antonyms? Homophones? Why is it important for a language arts teacher to know these terms?
- What is “phonics”?
- What is “phonemic awareness”?
- What is “decoding”?
- What activities might help students identify main ideas in nonfiction prose?
- Early elementary students often have difficulties learning to spell. How might you help students become more competent spellers?
- What is the relationship between different kinds of learning styles and teaching strategies?

- The students in any elementary school classroom have differing sets of skills in reading and language arts. There will be readers at grade level, for example, along with readers below and above grade level. If you were teaching, how would you facilitate learning for students at different stages of reading development?
- If you had a first-grade class with children spelling at grade level, and children below and above grade level, how would you structure your class's spelling program to best meet the needs of all learners?
- What is the difference between students being "on task" and students being "engaged" in an activity?
- How might you motivate students to read?
- What are some ways of fostering interest in the reading of fiction, in particular?
- What are some different ways in which oral book reports can be structured to appeal to all students in a class, ensuring that book reports contribute to students' motivation to read? What are some other ways in which students can share with each other about books they have read?
- What is "shared reading"? What is "individualized reading"? What is "guided reading"? Identify and explain the theories behind each of these teaching techniques and think of ways in which you might put them into practice.

### Discussion areas: Assessment

- Name three common points of confusion or misconceptions that new readers in first or second grade are likely to encounter.
- Name three common points of confusion or misconceptions that fourth- or fifth-grade writers are likely to encounter.
- What are some ways in which you can help students overcome common misunderstandings of grammar, syntax, and spelling?
- What does "standardized test" mean? Why do states give standardized tests? Which standardized tests does your state require?
- To whom should the results of standardized tests go? What might the results reveal? How might you use the information provided by standardized tests?
- What are IEPs? For what purpose are they used?
- How can a teacher help students evaluate their own work fairly and accurately?
- What kinds of data do you get from an in-class, timed writing sample?
- What kinds of data do you get from a process writing sample?
- What kinds of data do you get from an hour-long multiple-choice test?
- How might you use portfolios in assessing student progress in language arts?

## II. Mathematics

**A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for numbers and operations, algebraic thinking, geometry and measurement, and data, statistics, and probability.

1. Knows how to sequence examples within a lesson to support understanding of concepts
2. Knows how to sequence lessons within a curriculum
3. Knows how to plan for strategies to address common student misconceptions
4. Knows how to make connections within math topics, across other disciplines, and in real-world contexts

**B. Instruction:** A beginning teacher understands how to design instruction, purposefully incorporate standards for mathematical practices to meet diverse needs, and select developmentally appropriate instructional methods/strategies/manipulatives/models to support learning in the following areas.

1. Numbers and operations: natural numbers, whole numbers, integers, and rational numbers
  - a. Knows algorithms, strategies, models, and problem situations for adding, subtracting, multiplying, and dividing numbers
  - b. Knows strategies for understanding properties of operations
  - c. Knows strategies for mental math, estimation, and rounding and knows how and when to use the strategies
  - d. Knows strategies for comparing numbers
  - e. Knows strategies for counting numbers
  - f. Knows strategies for modeling relationships between decimals and whole numbers, fractions, and percents
  - g. Knows strategies for relating a fraction to division and that  $\frac{a}{b}$  means  $a$  copies of  $\frac{1}{b}$
2. Numbers and operations: proportional relationships
  - a. Knows strategies for understanding ratios, rates, and unit rates
  - b. Knows strategies for understanding proportionality

3. Numbers and operations: number theory
  - a. Knows strategies for understanding prime numbers, composite numbers, factors, and multiples
4. Algebraic thinking: expressions, equations, and formulas
  - a. Knows strategies for writing expressions, equations, and formulas from a context
  - b. Knows strategies for evaluating and symbolically manipulating expressions, equations, and formulas
5. Algebraic thinking: linear equations and inequalities
  - a. Knows strategies for writing an equation to represent a pattern
  - b. Knows strategies for writing and solving linear equations and inequalities
6. Geometry and measurement: one-, two-, and three-dimensional figures
  - a. Knows strategies for using standard and nonstandard tools and appropriate units to measure the length, area, perimeter, surface area, and volume of figures
  - b. Knows strategies for classifying figures and for comparing and contrasting figures
  - c. Knows strategies for understanding the vocabulary and definitions for figures
  - d. Knows strategies for using nets to represent three-dimensional figures
  - e. Knows strategies for representing figures and for modeling them with shapes and solids
  - f. Knows strategies for modeling and solving real-world problems involving two- and three-dimensional figures
  - g. Knows strategies for composing, decomposing, and manipulating figures
7. Geometry and measurement: coordinate plane
  - a. Knows strategies for plotting points
8. Geometry and measurement: measurement
  - a. Knows strategies for converting measurements
  - b. Knows strategies for representing time and elapsed time

9. Data, statistics, and probability: measures of center
  - a. Knows strategies for finding measures of center and for determining which measure is best to use in a given situation
10. Data, statistics, and probability: data
  - a. Knows strategies for collecting and displaying data to answer a statistical question
11. Data, statistics, and probability: probability
  - a. Knows strategies for linking probability to the likelihood that an event will occur

**C. Assessment:** A beginning teacher knows appropriate assessments to evaluate mathematical instructional effectiveness and student progress.

1. Knows how to design and use formative assessment to adjust instruction
2. Knows how to design, use, and interpret summative assessments
3. Knows how to recognize when misconceptions occur and strategies for reteaching
4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

#### Discussion areas: Curriculum

- Choose a general purpose and a grade level that interest you and describe the topics you would teach to children at that grade level to contribute to the general purpose of teaching mathematics. What must children already know and be able to do in order to learn these topics? Choose a different grade level and answer the questions again. If you chose an upper-elementary grade, choose a lower one this time, and vice versa.
- Do you know at least one mathematics resource in each of the following categories: CDs, computer software, and Internet resources? If not, how could you find out what resources exist for a given grade level?

#### Discussion areas: Instruction

- What are some of the activities you might use with students to teach the elements of subtraction? How would you choose the activities and how would you know if they were successful?
- Imagine that you had a class of second graders who were much stronger in language arts than in mathematics. What kinds of strategies might you use with your class to help them understand addition and subtraction of whole numbers?
- What is the connection between multiplication and addition?
- Why is it useful for students to understand rounding?
- What is the associative property of multiplication?
- Why does the multiplication algorithm work the way it does?
- What is mental mathematics?
- Imagine that you have students who do not understand the concept of dividing with remainders, students who have trouble applying what they know about dividing with remainders to “real-life” word problems, and students who appear to understand division and remainders completely. How might you adjust your instruction to meet the needs of all of your students?
- Imagine that you are beginning to teach your students the concept of fractions. How might you identify and assess your students’ prior knowledge and skills?
- One way to introduce fractions to students is to discuss money. How might you discover whether there are cultural differences among your students in their understanding of money?
- If issues of cultural diversity arise in a class, what are some ways in which you can work with those issues throughout a unit on measurement?
- Name three ways of helping elementary students understand “area” versus “perimeter.” On what theories are these approaches based?

- Many students fear and dislike mathematics. What are some ways of helping children develop interest in mathematics and feel successful?
- In your own words, briefly define these four instructional approaches: constructivist, coaching, behavioral, and modeling. Which approach would be most effective and appropriate for teaching a unit on sets? Why?

#### Discussion areas: Assessment

- What are some of the most common student misconceptions and mistakes that you are likely to find as a teacher of elementary mathematics?
- Of these, which do you feel you cannot teach well? Where do you need to “brush-up” before you begin teaching?
- A “buggy algorithm” is a flawed understanding of a process or concept. What specific “buggy algorithms” can you expect to encounter with elementary mathematics students? How can you assess whether your students have these problems?
- Explain the following terms in your own words: mode, mean, median, and maximum. The most important thing about all of these terms is knowing what they represent—and knowing that when people use data, they usually select one of these representations. For example, if a group of your students scored 46, 46, 46, 78, 80, 90, and 100 (on a test with 100 possible points), which method of reporting scores would make these look the best (besides “maximum”)? Which method would make them look the worst? Answer the same questions for this group of students’ scores: 0, 10, 22, 25, 45, 88, and 88.

### III. Science

- A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for science topics.
1. Knows the broad purposes of teaching science and the relationship of concepts within science
  2. Knows the relationship of science with concepts across other content areas and the instructional implications of those relationships
- B. Instruction:** A beginning teacher understands how to design instruction to meet diverse needs and how to select developmentally appropriate instructional methods/strategies/ approaches/ resources to support learning in the following areas.
1. Science concepts, inquiry, and processes
    - a. Knows how to develop students’ understanding of unifying concepts and processes in science and provides connections between traditional scientific disciplines, systems, subsystems, models, and conservation; personal and social perspective of science; history and nature of science
    - b. Knows how to develop students’ understanding of the process of scientific inquiry and the purpose of constructing ideas and explanations, asking questions and using appropriate questioning techniques, and developing testable questions and hypotheses
    - c. Knows how to develop students’ understanding of how to plan, conduct, and observe simple investigations, construct explanations, communicate results, and solve problems
    - d. Knows how to develop students’ understanding of how to choose the appropriate tools of science to gather data, organize and analyze information, communicate investigation results, and construct reasonable explanations
    - e. Knows how to develop students’ understanding of how to select developmentally appropriate materials, equipment, texts, and technology for model building and forecasting

2. Life science
  - a. Knows how to develop students' understanding of the characteristics of organisms
  - b. Knows how to develop students' understanding of the life cycles of organisms
  - c. Knows how to develop students' understanding of organisms and their environment
3. Earth and space science
  - a. Knows how to develop students' understanding of the interrelationships in Earth systems and space systems, including astronomy
  - b. Knows how to develop students' knowledge of Earth patterns, cycles, and change
  - c. Knows how to develop students' understanding of geology, hydrology, meteorology, oceanography, and soil science
4. Physical science
  - a. Knows how to develop students' understanding of physical and chemical changes, temperature and heat, sound, light, electricity, and magnetism
  - b. Knows how to develop students' understanding of force, motion, energy, and matter
5. Health
  - a. Knows how to develop students' knowledge of healthy living, growth, nutrition, safety, and well-being
  - b. Knows how to develop students' knowledge of communicable diseases, substance abuse, and common diseases

**C. Assessment:** A beginning teacher knows appropriate assessments to evaluate the effectiveness of science instruction and student progress.

1. Knows how to design and use formative assessment to adjust instruction
2. Knows how to design, use, and interpret summative assessments
3. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning
4. Knows how to analyze student work to guide science instruction

#### **Discussion areas: Curriculum**

- The National Standards for Student Learning in Science require that students understand scientific inquiry. Why is this process so important for elementary students to learn?
- Why is it important for students to make tables and graphs as a science activity?
- Think of a unit you might be called upon to teach in science (e.g., a second-grade unit on ecological systems or on trash management) and describe what that unit would cover. What prior knowledge and skills must students have to learn this unit? How would you find out whether or not the students have the necessary knowledge and skills to begin the new unit?
- Design a variety of instructional activities that might be appropriate for teaching about traits in plants to lower-elementary students. Could your activities take place simultaneously, with individual students, or groups of students doing different things? Would your activities suit the range of learning styles common among lower-elementary students? What methods would be appropriate follow-up to the activities you developed?

#### **Discussion areas: Instruction**

- What are some ways of teaching the inquiry method to elementary students?
- Students are often confused about the differences between “proportion” and “percent.” What materials and activities might you use to teach sixth-grade students these concepts?

- What do you know about available software and Internet resources for teaching science at a grade level that interests you? If you do not know what resources are available, how would you find out?
- What materials might you use to introduce second graders to a unit on weather?
- When is demonstration useful for science instruction?
- When is cooperative learning useful for science instruction?
- What are some ways in which journals can help students learn science?
- What is the “inquiry method” as it relates to science?
- Suppose you wanted to introduce lower-elementary students to the inquiry method. What activities might you employ? What activities might you employ with upper-elementary students?
- What are the differences between “think-pair-share” and the “jigsaw method”? Is one better than the other for accomplishing specific goals? If so, which goals are likely to be met by each method?
- What would you do if your students did not seem to understand the point of an experiment they had just conducted? For example, you have completed an experiment on plants’ absorption of colored light, but your students do not seem to “get it.” What would you do?
- Many students are easily discouraged in learning about science. Some have heard that science is really important and have inferred that it is complex and difficult. Others have trouble learning to “think scientifically.” What kinds of things might you do as a teacher to encourage the success of your students who are studying science?
- What is the purpose of offering tokens and stickers as rewards?
- What is one way of *intrinsically* motivating students to understand the health consequences of smoking cigarettes? What is the danger of using only *extrinsic* motivation with students?
- Describe some activities that might help students with varying learning styles best learn key concepts about the human skeletal system.

**Discussion areas: Assessment**

- Explain how and why a teacher’s methods for assessing a student’s ability to *do* an experiment might differ from methods of assessing a student’s ability to *explain* the results of a science experiment.
- Research has shown that students’ misconceptions about science, unless discovered and corrected, persist into adulthood. What common misconceptions do you know that *early-elementary* learners are likely to have about science concepts and terms? What common misconceptions do you know that *upper-elementary* learners are likely to have?
- What techniques do you know for uncovering misconceptions in students’ understanding? What techniques do you know for reteaching to correct these misconceptions?
- Why is it often inappropriate for teachers simply to provide the correct answers for confused students?
- When a third-grade class is tested on being able to identify the continents of the world on an outline map, 75 percent of the class fail to identify at least two of the continents correctly. What activities might the teacher design to reteach the continents of the world?
- What kinds of standardized tests are students usually required to take in your state? When are they required to take them? What do the tests assess? If you have not seen samples of the test, how might you go about seeing them?

- What kinds of information does a teacher receive from a multiple-choice, end-of-unit test created by the publisher of a science textbook? What kinds of information does a teacher receive from a cumulative portfolio of a student's work in science over the course of a semester?
- How might you conduct a portfolio assessment in science?
- What are the two types of portfolio assessments? What is the purpose of each type?
- Each type of test—true-or-false, multiple-choice, essay, and small-group performance—has its place in assessing student learning. What are some ways in which you might use each type to assess learning in science? Give examples of each.

#### IV. Social Studies

**A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning for the social studies topics.

1. Knows the broad purposes of teaching social studies and the relationship of concepts within social studies
2. Knows the relationship of social studies concepts across other content areas and the instructional implications of those relationships

**B. Instruction:** A beginning teacher understands how to design instruction to meet diverse needs and how to select developmentally appropriate instructional methods/strategies/ approaches/ resources to support learning in the following areas.

1. Information processing skills
  - a. Knows how to help students locate, analyze, and synthesize information related to social studies topics and how to apply that information to solve problems and make decisions
  - b. Knows how to help students select and use appropriate materials, equipment, texts, and technology in social studies (e.g., physical, topographic, political, and weather maps, globes, aerial imagery, satellite images, graphs, tables, diagrams, graphic organizers, pictures, real-world resources, trade books)

#### 2. Geography

- a. Knows how to develop students' understanding of the uses of geography and the interrelationships between human and physical systems, the environment, and society
- b. Knows how to help students develop an understanding of states, regions, the United States, and the world

#### 3. History

- a. Knows how to develop students' understanding of the relationships between past and present
- b. Knows how to develop students' understanding of United States history from founding to the twenty-first century as well as twentieth-century developments and transformations in the United States
- c. Knows how to develop students' knowledge of chronological thinking, historical analysis, and interpretation
- d. Knows how to develop students' understanding of the causes and effects of events, how to compare and contrast events, and how to hypothesize how the past influenced the present
- e. Knows how to help students understand Classical civilizations (e.g., Egypt, Greece, Rome, China)

#### 4. Government, civics, and economics

- a. Knows how to develop students' understanding of basic economic concepts (e.g., market economy) and how to make economic decisions as consumers, employers, and workers
- b. Knows how to develop students' understanding of the government's role in economics and the impact of economics on government
- c. Knows how to develop students' understanding of democracy and politics at the federal, state, and local levels
- d. Knows how to develop students' understanding of the structure of government and the Constitution of the United States
- e. Knows how to develop students' understanding of citizenship

- f. Knows how to develop students' understanding of the global marketplace and industrialization
5. Anthropology and sociology
- a. Knows how to develop students' understanding of the impact of conditions and events on groups and individuals
  - b. Knows how to develop students' understanding of how people of different cultural backgrounds interact with their environment, self, family, neighborhoods, and communities
  - c. Knows how to develop students' understanding of interactions between different communities and the effects of human behavior in society
  - d. Knows how to develop students' understanding of the roles of communication, transportation, technology, and social organization

**C. Assessment:** A beginning teacher knows how to assess the effectiveness of social studies instruction and student progress.

1. Knows how to design and use formative assessment to adjust instruction
2. Knows how to design, use, and interpret summative assessments
3. Knows how to recognize when misconceptions occur and strategies for reteaching
4. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

#### Discussion areas: Curriculum

- One unit of the ten themes that form the National Social Studies Standards is "Individual Development and Identity." What is the goal behind this theme? Why is this theme important in teaching social studies?
- Choose a grade level that you think you might like to teach. What kinds of topics might you pursue under the general category of "Individual Development and Identity" at that grade level?

- Look at a commonly used social studies textbook at a grade level you are interested in teaching. Look at how the book divides the text into units and then look at the topics within the units. According to the textbook, what are some content area "wholes" (units)? What might their "parts" (topics) be?
- If you have an older social studies textbook and a new one, in what ways do their treatments of curriculum differ?
- Choose a broad topic "whole" that you will be expected to teach in elementary social studies and then break it down into its component parts.
- Social studies is a particularly rich field for applying skills and knowledge from other curriculum areas. Think about how you might integrate into social studies instruction the other content areas you are required to teach in elementary school: language arts, science, music, and physical education.
- It is important for teachers of social studies to help students become comfortable with interpreting and creating visual displays such as maps, charts, graphs, and tables. Where might you find materials that would help students build skills in this area?
- Think of a grade level you would like to teach, and then think of some specific resources, such as videotapes, computer software, and Internet resources, that would enhance your teaching of social studies. If you do not know about technological resources that you might use in teaching social studies, how might you find out about them?

#### Discussion areas: Instruction

- Cultural differences are a particularly relevant topic for social studies. At the very beginning of the school year, what are some ways in which you can become familiar with, and sensitive to, your students' cultural background?
- What is the concept of checks and balances in government? What social studies area or unit includes the study of this concept? What other concepts might you be likely to teach at the same time that you teach about checks and balances?

- What social studies unit would you expect to follow a unit on nineteenth-century and early twentieth-century immigration? Why?
- What are “critical-thinking skills”? In general, how can you structure assignments to enhance critical-thinking skills?
- What are some approaches to social studies instruction that have been shown to be effective in the early elementary grades? What are some specific examples of classroom instruction based on these approaches?
- What is “brainstorming”? When is brainstorming most useful? When is brainstorming least useful? What are some scenarios in which brainstorming would help a teacher become familiar with students’ cultural backgrounds and prior knowledge of an elementary social studies topic.
- When might you use a demonstration in teaching social studies?
- When might you use guided oral and silent work?
- How might journals be useful for students’ learning in social studies?
- What are some reasons that elementary students might not engage with social studies?
- What are some strategies that you think are effective in engaging students in learning about social studies topics?
- Imagine that you are planning to teach a social studies unit on life in the colonial, or pre-Revolutionary, period. Think of a grade level you might teach. Then think about ways of meeting the instructional needs of all learners. How would you teach developmental learners (those who are below grade level in reading skills, for example)? How would you teach learners who are at grade level? How would you teach learners with more background knowledge of this subject than the rest of the class? How would you teach learners whose primary language is not English and whose skills in English are limited?

### Discussion areas: Assessment

- What are some of the common problems or misconceptions that elementary school students are likely to have in social studies? How can you assess students to uncover common problems?
- What are some ways of making sure that students understand important terms and concepts in social studies?
- What standardized tests in social studies do elementary students in your state usually take?
- How can you make standardized testing a useful exercise for your students and for their parents?
- What kinds of behaviors might you observe in a social studies class? What might you assess when observing these behaviors?
- What kind of “performance samples” might you require in social studies? What would you look for and assess in these performance samples?
- What kind(s) of portfolios might be useful in social studies classes?

## V. Art, Music, and Physical Education

- A. Curriculum:** A beginning teacher understands developmentally appropriate curriculum planning, strategies, and sequencing for art, music, and physical education.
1. Knows the fundamental purposes for teaching art, music, and physical education
  2. Knows how to make connections within and between art, music, and physical education across other disciplines and in real-world contexts
- B. Instruction:** A beginning teacher understands how to design instruction to meet diverse needs and to how to implement developmentally appropriate instructional methods, techniques, strategies, approaches, and resources to support learning in the following areas.
1. Knows how to develop students’ understanding of art and design media, techniques, and concepts, including but not limited to the elements and principles of art, visual communication and production, art history, art criticism, and aesthetics

2. Knows how to develop students' understanding of the elements of music (e.g., texture, harmony, melody, rhythm) and has a fundamental knowledge of music notation, terminology, and music making
  3. Knows how to develop students' understanding of physical education concepts (e.g., exercise, physical fitness, game and sport skills, safety, locomotor patterns, body management, social discipline, healthy lifestyles)
  4. Knows how to select and use manipulatives and developmentally appropriate materials, equipment, texts, and technology (e.g., art materials, musical instruments, physical education equipment, information from reliable sources)
- C. Assessment:** A beginning teacher understands how to assess the effectiveness of art, music, and physical education instruction and student learning.

1. Knows how to design and use formative assessment to adjust instruction
2. Knows how to design, use, and interpret summative assessments
3. Knows how to select and use appropriate assessments (e.g., observations, traditional, standardized) to evaluate student learning

#### **Discussion areas: Curriculum**

- What kinds of curricular materials and technologies can a teacher use for teaching art, in addition to materials such as clay, paint, crayons, and so on?
- What kinds of media and technologies can a teacher use for teaching music, in addition to showing and playing instruments?
- What kinds of materials, media, and technologies can a teacher use for teaching physical education, in addition to balls, bats, goals, and so on?

#### **Discussion areas: Instruction**

- Imagine that you have been asked to teach soccer, softball (or tee-ball), kickball, and volleyball in elementary school. Think of four skills you would probably be required to teach for each sport. Determine the order in which the skills should be taught.
- To teach music in elementary school successfully, you will need to know “families” of musical instruments. List some of the families you know and some examples of instruments in each family.
- How might you teach a lesson on a stringed instrument if you cannot play it yourself?
- Imagine that just before the school year starts in the fall, the budget for art is eliminated at the school where you are to begin teaching—but the time for teaching art is left in the curriculum. Think of a grade level that you might be teaching. Now imagine how you might teach art without a budget. What are some art concepts you could teach without materials? What instructional techniques would you use in teaching these concepts?

#### **Discussion areas: Assessment**

- How is assessment in the arts different than other content areas?
- How might you use portfolios in assessing student progress in the arts?
- How might you grade students with different skill and ability levels that are in the same grade?

## 7. Review Smart Tips for Success

### *Follow test-taking tips developed by experts*

Learn from the experts. Take advantage of the following answers to questions you may have and practical tips to help you navigate the *Praxis* test and make the best use of your time.

#### Should I guess?

Yes. Your score is based on the number of questions you answer correctly, with no penalty or subtraction for an incorrect answer. When you don't know the answer to a question, try to eliminate any obviously wrong answers and then guess at the correct one. Try to pace yourself so that you have enough time to carefully consider every question.

#### Can I answer the questions in any order?

You can answer the questions in order or skip questions and come back to them later. If you skip a question, you can also mark it so that you can remember to return and answer it later. Remember that questions left unanswered are treated the same as questions answered incorrectly, so it is to your advantage to answer every question.

#### Are there trick questions on the test?

No. There are no hidden meanings or trick questions. All of the questions on the test ask about subject matter knowledge in a straightforward manner.

#### Are there answer patterns on the test?

No. You might have heard this myth: the answers on tests follow patterns. Another myth is that there will never be more than two questions in a row with the correct answer in the same position among the choices. Neither myth is true. Select the answer you think is correct based on your knowledge of the subject.

#### Can I write on the scratch paper I am given?

Yes. You can work out problems on the scratch paper, make notes to yourself, or write anything at all. Your scratch paper will be destroyed after you are finished with it, so use it in any way that is helpful to you. But make sure to select or enter your answers on the computer.

### Smart Tips for Taking the Test

1. **Skip the questions you find extremely difficult.** Rather than trying to answer these on your first pass through the test, you may want to leave them blank and mark them so that you can return to them later. Pay attention to the time as you answer the rest of the questions on the test, and try to finish with 10 or 15 minutes remaining so that you can go back over the questions you left blank. Even if you don't know the answer the second time you read the questions, see if you can narrow down the possible answers, and then guess. Your score is based on the number of right answers, so it is to your advantage to answer every question.

2. **Keep track of the time.** The on-screen clock will tell you how much time you have left. You will probably have plenty of time to answer all of the questions, but if you find yourself becoming bogged down, you might decide to move on and come back to any unanswered questions later.
3. **Read all of the possible answers before selecting one.** For questions that require you to select more than one answer, or to make another kind of selection, consider the most likely answers given what the question is asking. Then reread the question to be sure the answer(s) you have given really answer the question. Remember, a question that contains a phrase such as “Which of the following does NOT . . .” is asking for the one answer that is NOT a correct statement or conclusion.
4. **Check your answers.** If you have extra time left over at the end of the test, look over each question and make sure that you have answered it as you intended. Many test takers make careless mistakes that they could have corrected if they had checked their answers.
5. **Don’t worry about your score when you are taking the test.** No one is expected to answer all of the questions correctly. Your score on this test is not analogous to your score on the *GRE*<sup>®</sup> or other tests. It doesn’t matter on the *Praxis* tests whether you score very high or barely pass. If you meet the minimum passing scores for your state and you meet the state’s other requirements for obtaining a teaching license, you will receive a license. In other words, what matters is meeting the minimum passing score. You can find passing scores for all states that use the *Praxis* tests at [http://www.ets.org/s/praxis/pdf/passing\\_scores.pdf](http://www.ets.org/s/praxis/pdf/passing_scores.pdf) or on the web site of the state for which you are seeking certification/licensure.
6. **Use your energy to take the test, not to get frustrated by it.** Getting frustrated only increases stress and decreases the likelihood that you will do your best. Highly qualified educators and test development professionals, all with backgrounds in teaching, worked diligently to make the test a fair and valid measure of your knowledge and skills. Your state painstakingly reviewed the test before adopting it as a licensure requirement. The best thing to do is concentrate on answering the questions.

## 8. Check on Testing Accommodations

*See if you qualify for accommodations to take the Praxis test*

### What if English is not my primary language?

*Praxis* tests are given only in English. If your primary language is not English (PLNE), you may be eligible for extended testing time. For more details, visit [www.ets.org/praxis/register/plne\\_accommodations](http://www.ets.org/praxis/register/plne_accommodations).

### What if I have a disability or other health-related need?

The following accommodations are available for *Praxis* test takers who meet the Americans with Disabilities Act (ADA) Amendments Act disability requirements:

- Extended testing time
- Additional rest breaks
- Separate testing room
- Writer/recorder of answers
- Test reader
- Sign language interpreter for spoken directions only
- Perkins Braille
- Braille slate and stylus
- Printed copy of spoken directions
- Oral interpreter
- Audio test
- Braille test
- Large print test book
- Large print answer sheet
- Listening section omitted

For more information on these accommodations, visit [www.ets.org/praxis/register/disabilities](http://www.ets.org/praxis/register/disabilities).

**Note:** Test takers who have health-related needs requiring them to bring equipment, beverages, or snacks into the testing room or to take extra or extended breaks must request these accommodations by following the procedures described in the *Bulletin Supplement for Test Takers with Disabilities or Health-Related Needs* (PDF), which can be found at [http://www.ets.org/s/disabilities/pdf/bulletin\\_supplement\\_test\\_takers\\_with\\_disabilities\\_health\\_needs.pdf](http://www.ets.org/s/disabilities/pdf/bulletin_supplement_test_takers_with_disabilities_health_needs.pdf).

You can find additional information on available resources for test takers with disabilities or health-related needs at [www.ets.org/disabilities](http://www.ets.org/disabilities).

## 9. Do Your Best on Test Day

*Get ready for test day so you will be calm and confident*

You followed your study plan. You prepared for the test. Now it's time to prepare for test day.

Plan to end your review a day or two before the actual test date so you avoid cramming. Take a dry run to the test center so you're sure of the route, traffic conditions, and parking. Most of all, you want to eliminate any unexpected factors that could distract you from your ultimate goal—passing the *Praxis* test!

On the day of the test, you should:

- be well rested
- wear comfortable clothes and dress in layers
- eat before you take the test
- bring an acceptable and valid photo identification with you
- bring an approved calculator only if one is specifically permitted for the test you are taking (see Calculator Use, at [http://www.ets.org/praxis/test\\_day/policies/calculators](http://www.ets.org/praxis/test_day/policies/calculators))
- be prepared to stand in line to check in or to wait while other test takers check in

You can't control the testing situation, but you can control yourself. Stay calm. The supervisors are well trained and make every effort to provide uniform testing conditions, but don't let it bother you if the test doesn't start exactly on time. You will have the allotted amount of time once it does start.

You can think of preparing for this test as training for an athletic event. Once you've trained, prepared, and rested, give it everything you've got.

### What items am I restricted from bringing into the test center?

You cannot bring into the test center personal items such as:

- handbags, knapsacks, or briefcases
- water bottles or canned or bottled beverages
- study materials, books, or notes
- pens, pencils, scrap paper, or calculators, unless specifically permitted for the test you are taking (see Calculator Use, at [http://www.ets.org/praxis/test\\_day/policies/calculators](http://www.ets.org/praxis/test_day/policies/calculators))
- any electronic, photographic, recording, or listening devices

Personal items are not allowed in the testing room and will not be available to you during the test or during breaks. You may also be asked to empty your pockets. At some centers, you will be assigned a space to store your belongings, such as handbags and study materials. Some centers do not have secure storage space available, so please plan accordingly.

Test centers assume no responsibility for your personal items.

If you have health-related needs requiring you to bring equipment, beverages or snacks into the testing room or to take extra or extended breaks, you need to request accommodations in advance. Procedures for requesting accommodations are described in the [Bulletin Supplement for Test Takers with Disabilities or Health-related Needs \(PDF\)](#).

**Note:** All cell phones, smart phones (e.g., Android® devices, iPhones®, etc.), and other electronic, photographic, recording, or listening devices are strictly prohibited from the test center. If you are seen with such a device, you will be dismissed from the test, your test scores will be canceled, and you will forfeit your test fees. If you are seen *using* such a device, the device will be confiscated and inspected. For more information on what you can bring to the test center, visit [www.ets.org/praxis/test\\_day/bring](http://www.ets.org/praxis/test_day/bring).

### Are You Ready?

Complete this checklist to determine whether you are ready to take your test.

- Do you know the testing requirements for the license or certification you are seeking in the state(s) where you plan to teach?
- Have you followed all of the test registration procedures?
- Do you know the topics that will be covered in each test you plan to take?
- Have you reviewed any textbooks, class notes, and course readings that relate to the topics covered?
- Do you know how long the test will take and the number of questions it contains?
- Have you considered how you will pace your work?
- Are you familiar with the types of questions for your test?
- Are you familiar with the recommended test-taking strategies?
- Have you practiced by working through the practice questions in this study companion or in a study guide or practice test?
- If constructed-response questions are part of your test, do you understand the scoring criteria for these questions?
- If you are repeating a *Praxis* test, have you analyzed your previous score report to determine areas where additional study and test preparation could be useful?

If you answered “yes” to the questions above, your preparation has paid off. Now take the *Praxis* test, do your best, pass it—and begin your teaching career!

# 10. Understand Your Scores

*Understand how tests are scored and how to interpret your test scores*

Of course, passing the *Praxis* test is important to you so you need to understand what your scores mean and what your state requirements are.

## What are the score requirements for my state?

States, institutions, and associations that require the tests set their own passing scores. Visit [www.ets.org/praxis/states](http://www.ets.org/praxis/states) for the most up-to-date information.

## If I move to another state, will my new state accept my scores?

The *Praxis* tests are part of a national testing program, meaning that they are required in many states for licensure. The advantage of a national program is that if you move to another state that also requires *Praxis* tests, you can transfer your scores. Each state has specific test requirements and passing scores, which you can find at [www.ets.org/praxis/states](http://www.ets.org/praxis/states).

## How do I know whether I passed the test?

Your score report will include information on passing scores for the states you identified as recipients of your test results. If you test in a state with automatic score reporting, you will also receive passing score information for that state.

A list of states and their passing scores for each test are available online at [www.ets.org/praxis/states](http://www.ets.org/praxis/states).

## What your *Praxis* scores mean

You received your score report. Now what does it mean? It's important to interpret your score report correctly and to know what to do if you have questions about your scores.

Visit [http://www.ets.org/s/praxis/pdf/sample\\_score\\_report.pdf](http://www.ets.org/s/praxis/pdf/sample_score_report.pdf) to see a sample score report.

To access *Understanding Your Praxis Scores*, a document that provides additional information on how to read your score report, visit [www.ets.org/praxis/scores/understand](http://www.ets.org/praxis/scores/understand).

## Put your scores in perspective

Your score report indicates:

- Your score and whether you passed
- The range of possible scores
- The raw points available in each content category
- The range of the middle 50 percent of scores on the test

If you have taken the same *Praxis* test or other *Praxis* tests over the last 10 years, your score report also lists the highest score you earned on each test taken.

### Content category scores and score interpretation

Questions on the *Praxis* tests are categorized by content. To help you in future study or in preparing to retake the test, your score report shows how many raw points you earned in each content category. Compare your “raw points earned” with the maximum points you could have earned (“raw points available”). The greater the difference, the greater the opportunity to improve your score by further study.

### Score scale changes

ETS updates *Praxis* tests on a regular basis to ensure they accurately measure the knowledge and skills that are required for licensure. When tests are updated, the meaning of the score scale may change, so requirements may vary between the new and previous versions. All scores for previous, discontinued tests are valid and reportable for 10 years, provided that your state or licensing agency still accepts them.

These resources may also help you interpret your scores:

- *Understanding Your Praxis Scores* (PDF), found at [www.ets.org/praxis/scores/understand](http://www.ets.org/praxis/scores/understand)
- *The Praxis Passing Scores* (PDF), found at [www.ets.org/praxis/scores/understand](http://www.ets.org/praxis/scores/understand)
- State requirements, found at [www.ets.org/praxis/states](http://www.ets.org/praxis/states)

# Appendix: Other Questions You May Have

Here is some supplemental information that can give you a better understanding of the *Praxis* tests.

## What do the *Praxis* tests measure?

The *Praxis* tests measure the specific knowledge and skills that beginning teachers need. The tests do not measure an individual's disposition toward teaching or potential for success, nor do they measure your actual teaching ability. The assessments are designed to be comprehensive and inclusive but are limited to what can be covered in a finite number of questions and question types. Teaching requires many complex skills that are typically measured in other ways, including classroom observation, video recordings, and portfolios.

Ranging from Agriculture to World Languages, there are more than 80 *Praxis* tests, which contain selected-response questions or constructed-response questions, or a combination of both.

## Who takes the tests and why?

Some colleges and universities use the *Praxis* Core Academic Skills for Educators tests (Reading, Writing, and Mathematics) to evaluate individuals for entry into teacher education programs. The assessments are generally taken early in your college career. Many states also require Core Academic Skills test scores as part of their teacher licensing process.

Individuals entering the teaching profession take the *Praxis* content and pedagogy tests as part of the teacher licensing and certification process required by many states. In addition, some professional associations and organizations require the *Praxis* Subject Assessments for professional licensing.

## Do all states require these tests?

The *Praxis* tests are currently required for teacher licensure in approximately 40 states and United States territories. These tests are also used by several professional licensing agencies and by several hundred colleges and universities. Teacher candidates can test in one state and submit their scores in any other state that requires *Praxis* testing for licensure. You can find details at [www.ets.org/praxis/states](http://www.ets.org/praxis/states).

## What is licensure/certification?

Licensure in any area—medicine, law, architecture, accounting, cosmetology—is an assurance to the public that the person holding the license possesses sufficient knowledge and skills to perform important occupational activities safely and effectively. In the case of teacher licensing, a license tells the public that the individual has met predefined competency standards for beginning teaching practice.

Because a license makes such a serious claim about its holder, licensure tests are usually quite demanding. In some fields, licensure tests have more than one part and last for more than one day. Candidates for licensure in all fields plan intensive study as part of their professional preparation. Some join study groups, others study alone. But preparing to take a licensure test is, in all cases, a professional activity. Because a licensure exam surveys a broad body of knowledge, preparing for a licensure exam takes planning, discipline, and sustained effort.

## Why does my state require the *Praxis* tests?

Your state chose the *Praxis* tests because they assess the breadth and depth of content—called the “domain”—that your state wants its teachers to possess before they begin to teach. The level of content knowledge, reflected in the passing score, is based on recommendations of panels of teachers and teacher educators in

each subject area. The state licensing agency and, in some states, the state legislature ratify the passing scores that have been recommended by panels of teachers.

### How were the tests developed?

ETS consulted with practicing teachers and teacher educators around the country during every step of the *Praxis* test development process. First, ETS asked them what knowledge and skills a beginning teacher needs to be effective. Their responses were then ranked in order of importance and reviewed by hundreds of teachers.

After the results were analyzed and consensus was reached, guidelines, or specifications, for the selected-response and constructed-response tests were developed by teachers and teacher educators. Following these guidelines, teachers and professional test developers created test questions that met content requirements and [\*ETS Standards for Quality and Fairness\*](#).\*

When your state adopted the research-based *Praxis* tests, local panels of teachers and teacher educators evaluated each question for its relevance to beginning teachers in your state. During this “validity study,” the panel also provided a passing-score recommendation based on how many of the test questions a beginning teacher in your state would be able to answer correctly. Your state’s licensing agency determined the final passing-score requirement.

ETS follows well-established industry procedures and standards designed to ensure that the tests measure what they are intended to measure. When you pass the *Praxis* tests your state requires, you are proving that you have the knowledge and skills you need to begin your teaching career.

### How are the tests updated to ensure the content remains current?

*Praxis* tests are reviewed regularly. During the first phase of review, ETS conducts an analysis of relevant state and association standards and of the current test content. State licensure titles and the results of relevant job analyses are also considered. Revised test questions are then produced following the standard test development methodology. National advisory committees may also be convened to review and revise existing test specifications and to evaluate test forms for alignment with the specifications.

### How long will it take to receive my scores?

Scores for tests that do not include constructed-response questions are available on screen immediately after the test. Scores for tests that contain constructed-response questions or essays aren’t available immediately after the test because of the scoring process involved. Official score reports are available to you and your designated score recipients approximately two to three weeks after the test date for tests delivered continuously, or two to three weeks after the testing window closes for other tests. See the test dates and deadlines calendar at [www.ets.org/praxis/register/dates\\_centers](http://www.ets.org/praxis/register/dates_centers) for exact score reporting dates.

### Can I access my scores on the web?

All test takers can access their test scores via My *Praxis* Account free of charge for one year from the posting date. This online access replaces the mailing of a paper score report.

The process is easy—simply log into My *Praxis* Account at [www.ets.org/praxis](http://www.ets.org/praxis) and click on your score report. If you do not already have a *Praxis* account, you must create one to view your scores.

**Note:** You must create a *Praxis* account to access your scores, even if you registered by mail or phone.

\**ETS Standards for Quality and Fairness* (2014, Princeton, N.J.) are consistent with the *Standards for Educational and Psychological Testing*, industry standards issued jointly by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (2014, Washington, D.C.).

Your teaching career is worth preparing for, so start today!  
Let the *Praxis*® *Study Companion* guide you.

To search for the *Praxis* test prep resources  
that meet your specific needs, visit:

**[www.ets.org/praxis/testprep](http://www.ets.org/praxis/testprep)**

To purchase official test prep made by the creators  
of the *Praxis* tests, visit the ETS Store:

**[www.ets.org/praxis/store](http://www.ets.org/praxis/store)**

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