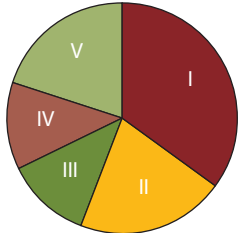


Elementary Education: Instructional Practice and Applications (5015)

Test at a Glance

Test Name	Elementary Education: Instructional Practice and Applications		
Test Code	5015		
Time	2 hours		
Number of Questions	90 multiple-choice questions; 4 short constructed-response questions		
Format	Multiple-choice and constructed-response questions		
Test Delivery	Computer delivered		
	Content Categories	Approximate Number of Questions	Approximate Percentage of Examination
	I. Reading/Language Arts	40	35%
	II. Mathematics	24	21%
	III. Science	13	12%
	IV. Social Studies	13	12%
	V. Applications (Constructed Response)	4	20%

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/middle school education or have prepared themselves through some alternative certification program.

The test questions cover the breadth of material a beginning teacher needs to know to begin safe and effective practice. They assess 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; 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 of them are set in the context of the subject matter most commonly taught in elementary school: reading and language arts, mathematics, science, and social studies. The 90 multiple-choice questions constitute 80 percent of the total test score.

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 thoughtful, written responses. The questions pose problems for the test taker to analyze and solve, thereby assessing the examinee's in-depth understanding of elementary education necessary for safe and effective practice.

Each of the four constructed-response questions presents a specific teaching situation and is set in the context of a subject area (or integrated subject areas). For example, the test taker might be asked to evaluate an authentic student work sample and outline the steps necessary to achieve an instructional goal related to the sample.

One question will focus on reading and language arts and one on mathematics. The remaining questions will focus on science and social studies. At least one question will ask the test taker to show an understanding of interdisciplinary instruction.

Each short constructed-response question will be scored independently by two trained and calibrated raters who have demonstrated they can effectively apply the general rubric and question-specific rubrics for the test. The four questions together will contribute 20 percent of the total test score.

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

Test Overview

Across the subject matter fields covered in the test, the questions address topics in three broad areas:

CURRICULUM topics examine the organization, materials, and resources of each content area and the implications for using them:

- Components of curricula and how they are organized
- Integration of concepts within each content area and across content areas and the pedagogical implications of that integration
- Types of curricular materials, media, and resources, such as basal readers and trade books in reading, maps and globes in social studies, measurement equipment in math, equipment and displays in science, and technologies, including computer software and video

INSTRUCTION topics examine content-specific teaching and learning principles and their application for appropriate and effective instruction:

- Methods to identify, assess, activate, and build on the prior knowledge, experiences, and skills that a given group of students brings to learning in each content area
- Methods for preparing, evaluating, and justifying instructional activities in each content area and across content areas for a given group of students
- Selection of teaching and learning strategies—such as demonstration, cooperative learning, guided oral and silent work, use of journals, graphic organizers, and the inquiry method—that help individual students and groups of students to see and understand varied topics and concepts
- Methods for adjusting instruction to meet students' needs, including corrective and developmental instruction, reteaching, follow-up, and enrichment instruction
- Strategies for motivating and encouraging student success
- Theoretical and empirical bases of various methods of instruction
- **Diversity:** Working with diverse students such as students with special needs, second language-acquisition learners, bilingual learners, and gifted students; tailoring of instruction to meet students' instructional needs in all areas

ASSESSMENT topics examine content-specific and general assessment and evaluation procedures and the implications for using these procedures appropriately and effectively:

- Traditional and standardized testing methodologies—such as standardized tests, basal reader tests, and screening tests—that are appropriate for use in each content area and in general instruction
- Informal, classroom-based, and nontraditional assessment strategies—such as observation, questioning, oral reports, running records, informal reading inventories, portfolios, and performance samples—that are appropriate for use in each content area and in general instruction
- Interpretation of data obtained from various assessment strategies in each content area and in general instruction
- Anticipation and identification of common points of confusion in the content areas, such as errors, patterns of error, inaccuracies, misconceptions, and buggy algorithms

Topics Covered

Representative descriptions of topics covered in each content category—reading and language arts, mathematics, science, and social studies are provided below. However, the list is not exhaustive.

- I. READING/LANGUAGE ARTS** contains approximately 35% of the test, or 40 questions. Within the reading and language arts content area, this section covers teaching strategies and activities that aid in the development, delivery, and evaluation of the curriculum, instruction, and assessment of reading, writing, speaking, listening, and viewing.

CURRICULUM

Reading

- **Phonological awareness:** Listening habits, phoneme awareness, segmenting, blending, manipulating, rhyming sounds, oral language development
- **Phonics:** Alphabetic principle, orthography (spelling patterns), morphology (structural analysis), syllabication, onset and rime
- **Fluency:** Automaticity, prosody, rate, accuracy, sight words
- **Vocabulary:** Structural analysis, concept vocabulary, content vocabulary, expressive/receptive vocabulary, semantics, sight words, word-learning strategies
- **Comprehension:** Schema (textual connections), literal versus inferential understanding, prereading, during reading, postreading, previewing, questioning, summarizing
- **Features of children's fiction and nonfiction books:** Character, theme, setting, index, glossary, pictures/photographs

Writing

- **Types of writing** (e.g., narrative, persuasive, descriptive, journaling); **traits of writing** (e.g., ideas, organization, word choice, voice, fluency, conventions, tone, purpose, audience); **types of text** (e.g., descriptive, narrative, expository, persuasive); **structure of text** (e.g., story grammar, comparison, cause/effect, order/sequence); **progression of writing expectations** (e.g., words to phrases to transitions); **stages of writing development** (e.g., language experience approach, developmental spelling, handwriting)

Speaking, listening, and viewing

- Reading, writing, speaking, listening, and viewing, and the interrelatedness of the strands

INSTRUCTION

Reading

- **Phonological awareness:** Elkonin (phoneme) boxes, phonemes, segmenting, blending, manipulating sounds, rhymes
- **Phonics:** Decoding, letter sounds and spelling, word families, word wall, word building (making words), explicit, systematic instruction, automaticity
- **Fluency:** Read-alouds, repeated readings, choral and echo reading, readability levels, sight words, readers' theater
- **Vocabulary:** Sight words, word wall, graphic organizers, context clues, direct instruction, levels of word knowledge, contextual information, analogies, categorizing, concept maps, linear arrays, high frequency words
- **Comprehension:** Graphic organizers, story structure, text elements, genre, think-alouds, predict and confirm, literature circles and book clubs, grand conversation

Writing

- **Process writing** (e.g., prewriting, drafting, revising, editing, publishing); **writing conventions** (e.g., spelling, grammar, mechanics); **writing instruction** (e.g., guided, interactive, and shared writing); **technology** (e.g., how to analyze sources via writing software)

Speaking, listening, and viewing

- Theories of language acquisition (constructivist, sociolinguistic, psycholinguistic, and English-language acquisition); use of technology
- **Diversity:** Working with diverse students such as students with special needs, second language-acquisition learners, bilingual learners, and gifted students; tailoring of instruction to meet students' instructional needs in reading and language arts

ASSESSMENT

Reading

- **Phonological awareness:** Phonemic segmentation, phonemic deletion and substitution
- **Phonics:** Spelling tests, nonsense-word fluency, running records, informal reading inventories
- **Fluency:** Oral reading fluency, leveled phrases such as in Dolch Basic and Fry Instant word lists, running records, miscue analysis, sight words
- **Vocabulary:** Word-use fluency, informal writing and speaking samples, word sorts, cloze activities
- **Comprehension:** Retellings, summarizations, informal reading inventories

Writing

- Benchmark writing, portfolios, analyzing students' writing, rubrics

Speaking, listening, and viewing

- Student presentations, rubrics

II. MATHEMATICS contains approximately 21% of the test, or 24 questions. Within the mathematics content area, this section covers teaching strategies and activities that aid in the curriculum, instruction, and assessment of number operations, prealgebra and algebra concepts, geometry and measurement, and probability, statistics, and data analysis concepts.

CURRICULUM

- **Number Operations:** Number sense; model building and forecasting; prenumber and number concepts; base-10 numeration system; arithmetic operations (e.g., addition, subtraction, multiplication, and division) of whole numbers, fractions, and decimals; number theory; number terminology; number properties; rational numbers
- **Prealgebra and Algebra:** Patterns, expressions, equations, formulas, variables, xy-coordinate system, additive and multiplicative inverses, equalities and inequalities, quantitative and qualitative change, mathematical relations, representations
- **Geometry and Measurement:** Geometric figures and relationships, geometric relationships, symmetry, dimension, motion geometry, coordinate geometry, informal geometry, nonmetric and metric units of measurements, metric and standard units, nonstandard units, length, area, volume, weight, angles, time, temperature, distance, rates
- **Probability, Statistics, and Data Analysis:** Counting; organizing, representing, and interpreting data; intuitive concepts of chance; mean, median, and mode; average; range; spread

INSTRUCTION

- **Teaching methods:** Guided discovery, laboratory approach, problem solving, exposition and direct instruction, games, situations and recreations, investigations
- **Problem solving:** Investigating and understanding content, formulating problems from everyday situations, verifying and interpreting results, identifying and solving problems that are developmentally appropriate
- **Materials, equipment, texts, and technology:** Use of manipulatives and developmentally appropriate materials, equipment, texts, and technology in mathematics instruction such as spinners, number cubes, balls in a jar, software, the Internet, handheld calculators, and spreadsheets
- **Instructional methods, strategies, modifications, and adjustments:** Personal, social, and emotional development of students; language and communication; developmentally appropriate instruction; various methods to adjust instruction: what is appropriate and why; effective implementation, organization, and planning; reteaching, enrichment, and extensions
- **Diverse student needs:** Working with diverse students such as students with special needs, second language-acquisition learners, bilingual learners, and gifted students; tailoring of instruction to meet students' instructional needs in mathematics

ASSESSMENT

- **Analysis of student work to guide mathematics instruction:** What students can do correctly; concepts students are grasping or developing; student misconceptions and errors; appropriate methods of reteaching, remediation, acceleration, and enrichment; appropriate methods of scoring student work and understanding
- **Evaluation of mathematics instructional effectiveness and student progress**
 - Informal and/or authentic mathematics assessment: Teacher observation and questioning; interviews and conferences; group and peer assessment; self-assessment; performance-based samples such as portfolios, project learning, and student work; organizing data, problem solving; comparing and contrasting; model building; planning, forecasting, and decision making
 - Formal mathematics assessments: Unit or chapter tests, standardized state tests and national tests, normed tests, and criterion-referenced tests

III. SCIENCE contains approximately 12% of the test, or 13 questions. Within the science content area, this section covers teaching strategies and activities that aid in the curriculum, instruction, and assessment of life science, Earth and space science, physical science, and health concepts.

CURRICULUM

- **Life Science:** Characteristics of organisms, life cycles of organisms, organisms and environments
- **Earth and Space Science:** Interrelationships in Earth systems and space systems; Earth patterns, cycles, and change; geology; hydrology; meteorology; oceanography; soil science
- **Physical Science:** Physical and chemical changes; temperature and heat; sound; light; electricity and magnetism; force, motion, and energy; matter; astronomy
- **Health:** Healthy living, growth, nutrition, safety and well-being, communicable diseases, substance abuse, common diseases

INSTRUCTION

- **Science concepts and processes:** Understanding unifying concepts and processes in science—that is, providing connections between traditional scientific disciplines, systems, subsystems, models, and conservation; personal and social perspective of science; history and nature of science
- **Scientific inquiry:** Constructing ideas and explanations; asking questions and using appropriate questioning techniques; developing testable questions and hypotheses; planning, conducting, and observing simple investigation; constructing explanations and communicating results; solving problems
- **Scientific data:** Choosing the appropriate tools of science to gather data; organizing and using data to construct reasonable explanations; explaining and communicating investigations, data, evidence, and results; organizing and analyzing data in the form of databases, spreadsheets, and graphics programs
- **Model building and forecasting:** Use of plans and computer simulations
- **Materials, equipment, texts, and technology:** Use of manipulatives and developmentally appropriate materials, equipment, texts, and technology in science in the form of graphic organizers, displays, rulers, balances, thermometers, textbooks, trade books, software, the Internet, graphing calculators, videomicroscopes, film, and computer simulations; justifications for use of materials, equipment, texts, and technology
- **Instructional methods, strategies, modifications, and adjustments:** Effective implementation, organization, and planning; reteaching, enrichment, extensions; language and communication; developmentally appropriate instruction
- **Teaching methods:** Guided discovery, laboratory approach, problem solving, exposition and direct instruction, games, situations and recreations, investigations
- **Diverse student needs:** Working with diverse students such as students with special needs, second language-acquisition learners, bilingual learners, and gifted students; tailoring of instruction to meet students' instructional needs in science: what is appropriate and why

ASSESSMENT

- **Analysis of student work to guide science instruction:** What students can do correctly; ideas students are conceptualizing or developing; misconceptions and errors students may be having difficulty with; how students are progressing; appropriate methods of reteaching, remediation, acceleration, and enrichment; appropriate methods of scoring
- **Evaluation of science instructional effectiveness and student progress**
 - **Informal and/or authentic science assessment:** Teacher observation and questioning; journals and/or logs; interviews and conferences; group and peer assessment; self-assessment; performance based samples such as portfolios, project learning, and student work; comparing and contrasting
 - **Formal science assessments:** Unit or chapter tests and teacher-made tests, standardized state or national tests

IV. SOCIAL STUDIES contains approximately 12% of the test, or 13 questions. Social studies is the integrated study of the social sciences to promote civic responsibilities. Within social studies, this section covers the teaching strategies and activities that aid in the curriculum, instruction, and assessment of geography; history; government, civics, and economics; anthropology and sociology; and historical analysis and interpretation.

CURRICULUM

- **Geography:** Uses of geography; locations, place, and human movement; environment and society; places and regions; human and physical systems; state, regions, United States, and the world
- **History:** Society, democracy, chronological thinking, relationships between past and present, U.S. history from founding to 20th century, 20th-century developments and transformations in the United States, classical civilizations: Egypt, Greece, Rome, and China
- **Government, Civics, and Economics:** Market economy; economic decision-making as consumers, employers, and workers; global marketplace; politics; local, state, and federal government; constitution of the United States; citizenship; industrialization; government's role in economics and impact of economics on government
- **Anthropology and Sociology:** Impact of conditions and events; how people of different cultural backgrounds interact with their environment; self, family, neighborhoods, and communities; interactions between different communities; connections between causes and effects of events; communication; transportation; technology; social organization and human behavior in society
- **Historical Analysis and Interpretation:** Causes of events; compare and contrast events; hypothesize how past influenced present

INSTRUCTION

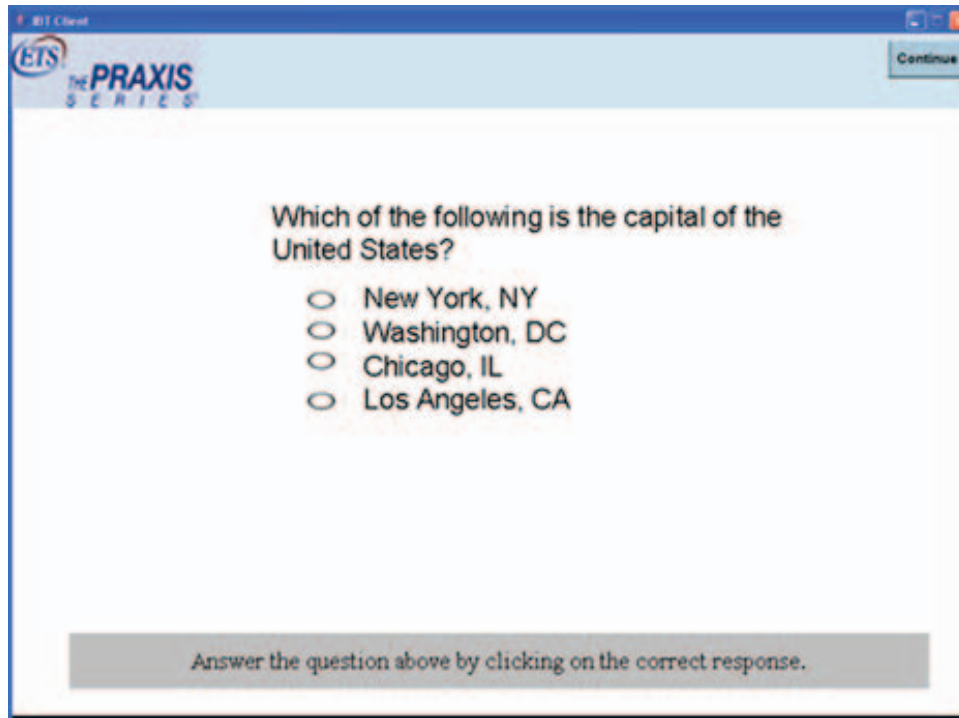
- **Instructional methods, strategies, modifications, and adjustments:** Various methods to adjust social studies instruction to meet students' needs: what is appropriate and why; effective implementation, organization, and planning; reteaching, enrichment, and extensions; multidisciplinary and interdisciplinary; separate subjects; integration strategies such as reading and writing across the curriculum
- **Teaching methods:** Activating learning, projects, guided discovery, problem solving, exposition and direct instruction, games, situations and recreations, investigations
- **Diverse student needs:** Working with diverse students such as students with special needs, second language-acquisition learners, bilingual learners, and gifted students; tailoring of instruction to meet students' instructional needs in social studies
- **Materials, equipment, texts, and technology:** Use of manipulatives and developmentally appropriate materials, equipment, texts, and technology in social studies, such as physical, topographic, political, and weather maps; globes, aerial imagery, satellite images, graphs, tables, diagrams, graphic organizers, pictures, real-word resources, and trade books, including multicultural texts and narrative texts as well as information from various sources, software, and the Internet

ASSESSMENT

- **Analysis of student work to guide social studies instruction:** What students can do correctly; ideas students are conceptualizing or developing; student misconceptions or errors; how students are progressing; appropriate methods of reteaching, remediation, acceleration, and enrichment; appropriate methods of scoring student work and understanding
- **Evaluation of instructional effectiveness and student progress**
 - Informal and/or authentic social studies assessment: Teacher observation and questioning; interviews and conferences; group and peer assessment; self-assessment; performance-based samples such as portfolios, project learning, oral reports, and student work; comparing and contrasting; organizing data; problem solving; critical thinking; model building; planning, forecasting, and decision making
 - Formal assessments in social studies: Unit or chapter tests and teacher-made tests, standardized state or national tests

This test is available via computer delivery.

The following sample question provides a preview of what a screen looks like in the computer-delivered test.



The screenshot shows a computer window titled "BIT Client". In the top left corner is the ETS logo and the text "The PRAXIS SERIES". In the top right corner is a "Continue" button. The main area of the window contains the following text:

Which of the following is the capital of the United States?

- ☐ New York, NY
- ☐ Washington, DC
- ☐ Chicago, IL
- ☐ Los Angeles, CA

At the bottom of the window, there is a grey rectangular box containing 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 in 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.

- Mr. Harrison, a fourth-grade social studies teacher, recognizes that students are experiencing difficulty comprehending a chapter in the textbook. Mr. Harrison decides to use a strategy in which he and his students share responsibility for discussions as they predict, clarify, and summarize while reading the text. Mr. Harrison is most likely using which of the following instructional strategies?
 - Modeling
 - Reciprocal teaching
 - Coaching
 - Guided reading
- Terry is a third-grade student in Ms. Henley's class. In his response journal, Terry wrote the following.

Manuel is tallest than his brother.

Which of the following statements can Ms. Henley make to provide Terry with the most specific positive feedback?
 - "Terry, this is a great sentence."
 - "Terry, this sentence needs more description. Can you use a dictionary to add more detail?"
 - "Terry, the subject and verb in your sentence need to agree."
 - "Terry, the word 'tallest' is used to compare more than two things. Can you think of another way to write the sentence and show me the revision?"
- A fifth-grade teacher in an urban school is having the class read the book *The Noontday Friends*, set in New York City's Greenwich Village, by Mary Stolz. Joanne, a new student, who lived in a rural community for her entire life prior to moving to the school, is having difficulty understanding the novel, although she has read many books of comparable difficulty. Which of the following is the most likely reason for Joanne's difficulty in comprehension?
 - Joanne's instructional level is significantly below that of the other students.
 - Joanne's experiences do not include background knowledge of certain topics in the story.
 - Joanne's previous instruction has focused on building word recognition skills and fluency.
 - Joanne's oral language abilities are significantly above her reading comprehension skills.
- A fourth-grade teacher organizes the class into literature circles and allows each group to choose a book of interest to them. Before students begin to read independently, the teacher gives students a story map to complete while reading. When students meet in their literature circles, they use the story map to guide discussion of the story. Which of the following reading skills is best reinforced by the activity?
 - Word recognition
 - Comprehension
 - Fluency
 - Vocabulary development
- A teacher asks students to look at the words "boil" and "caught" and notice how the two vowels in each word begin with one vowel sound and move or glide to another within the same syllable. The examples best illustrate which of the following concepts?
 - Diphthong
 - Blend
 - Digraph
 - Onset

6. Which of the following is the most effective way to help young children strengthen their emerging literacy skills?

- (A) Allowing children to play games matching letters and sounds
- (B) Giving students phonics work sheets to complete
- (C) Reading to children and providing opportunities for the children to read independently
- (D) Teaching children how to use a picture dictionary

7. In an elementary language arts class, the students selected and read two stories from *Grimm's Fairy Tales*. Which of the following activities is most appropriate to encourage students' critical-reading skills?

- (A) Selecting and memorizing a passage from one of the fairy tales
- (B) Completing a graphic organizer to compare the two fairy tales
- (C) Skimming the fairy tales to create a list of unknown words to define
- (D) Preparing an oral summary of one of the fairy tales to present to the class

8. 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 them to proofread the first paragraph of their own writing samples. Which of the following traits of writing is the teacher's focus?

- (A) Ideas
- (B) Voice
- (C) Conventions
- (D) Organization

9. A teacher says to the students, "Let's put together these sounds: /ch/-/i/-/n/ (chin)." The primary focus of the activity is to foster students' development in which of the following areas?

- (A) Alphabetic principle
- (B) Phonemic awareness
- (C) Sight words
- (D) Syllable formation

Once upon a time there
lived a princess

10. Given the handwriting sample above of a second-grade student, which of the following is probably true?

- (A) The student needs more practice in proper word spacing.
- (B) The student needs more practice in correctly connecting letters.
- (C) The student needs more practice in under strokes but not over strokes.
- (D) The student needs more practice in baseline function.

11. A fourth-grade student is struggling to understand the following mathematics problem.

Riding on a school bus are 18 students in first grade, 12 in second grade, 9 in third grade, and 11 in fourth grade. What percent of the students on the bus are in first grade?

Which of the following guiding questions will help the student understand the meaning of percent in the context of the problem?

- (A) Percent means per hundred, so what would the numerator be if the denominator was 100?
- (B) When you divide 18 by 50 you get 0.36. What do you do to the decimal point to change to percent?
- (C) If the ratios stayed the same and there were 100 students on the bus, how many would be in first grade?
- (D) If the ratios stayed the same, how many buses would you need to have 100 students in first grade?

12. Students in a fifth-grade class are using centimeter grid paper and scissors to explore how some two-dimensional figures can be folded into three-dimensional figures. Which of the following are the students exploring?

- (A) Rotations
- (B) Reflections
- (C) Nets
- (D) Translations

13. To introduce students to geometry, a first-grade teacher gives the students objects with different shapes from around the classroom. Which of the following concepts is most appropriate for the students to explore?
- (A) Measurement of angles
 - (B) Plane and solid figures
 - (C) Areas and perimeters
 - (D) Reflection and rotation
14. A third-grade student makes errors in subtraction problems because of a lack of understanding of place value. Which of the following strategies is most likely to be effective in assisting the student?
- (A) Giving the student the correct answers
 - (B) Allowing the student to use a calculator to solve a set of subtraction exercises
 - (C) Asking the student to use concrete aids to represent the subtraction process
 - (D) Showing the student where the errors were made and having the student redo the problems
- 30÷6, 53÷7, 84÷8, 75÷9
15. Third graders studying division were asked to solve and check the four division problems above and then write a story for each problem. Which of the following is the most likely reason for asking the students to write the stories?
- (A) To have students demonstrate that division can mean partitioning a set of objects
 - (B) To have students practice division skills through drill-and-check exercises
 - (C) To help students write quotients that might contain a decimal
 - (D) To have students practice the strategy of solving a simpler problem than those presented
16. Which of the following activities will best help students make real-life connections?
- (A) First graders use pennies as manipulatives to help them solve subtraction problems
 - (B) Third graders write journal entries explaining their solution strategies for multiplication problems
 - (C) Kindergarteners write fractions to represent proportions that the teacher demonstrates with fraction pies
 - (D) Fifth graders use cardboard cutouts to make small boxes for a holiday-gift drive

$\begin{array}{r} 65 \\ +28 \\ \hline 813 \end{array}$	$\begin{array}{r} 17 \\ +74 \\ \hline 811 \end{array}$	$\begin{array}{r} 45 \\ +15 \\ \hline 510 \end{array}$
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17. Given the student work sample above, the most likely reason for the errors is that the student has difficulty
- (A) recalling addition facts
 - (B) recognizing a reasonable answer
 - (C) interpreting arithmetic symbols
 - (D) rounding up whole numbers
18. For a social studies unit, students in a third-grade class will be learning about the town in which they live. Since most of the students have lived in the town all their lives, the teacher plans to begin the unit with an activity that will activate their prior knowledge. Which of the following activities will be most effective in meeting the teacher's goal?
- (A) Having students brainstorm as a group about the important events in the town's history
 - (B) Asking each student to make a list of the important events in the town's history
 - (C) Allowing each student to pick an event in the town's history to write an essay about
 - (D) Showing a video of the town's history and having students summarize the important events
19. Students in a social studies class are studying the three branches of government and how power is shared among them through the system of checks and balances. The teacher asks the students to come up with examples of when their choices have been limited as a result of their being a member of a family or group. The activity will require the students to use which of the following levels of cognition?
- (A) Analysis
 - (B) Synthesis
 - (C) Application
 - (D) Knowledge
20. Primary-grade teachers in a school plan to invite guests from service industries to speak to their classes. The activity best fits with which of the following units from the social studies curriculum?
- (A) Government
 - (B) Geography
 - (C) Economics
 - (D) History
21. Which of the following best integrates literature into a unit about settling the frontier beyond the Appalachian Mountains?
- (A) Having students work in pairs to identify why settlers moved from the original colonies to the frontier
 - (B) Asking students to pretend that they are pioneers traveling into the frontier areas and keep a diary of their experience, as suggested by the journal of Jedidiah Morse
 - (C) Asking students to research the daily life of the American pioneers and find drawings that illustrate interesting events that took place at that time
 - (D) Having students read and do a report on one of the books of Laura Ingalls Wilder, which tell about the experience of a family homestead in the 1800s
22. After conducting an experiment to test a hypothesis they proposed, two students concluded that the hypothesis was incorrect. Assuming their data are accurate, which of the following is the best next step for the teacher?
- (A) Asking the students to use the Internet to search for information relating to the hypothesis
 - (B) Recommending that the students reformulate their hypothesis with the new data in mind
 - (C) Suggesting that the students repeat the experiment until their results confirm the hypothesis
 - (D) Explaining to the students what they did wrong

23. Information regarding which of the following needs to be taught prior to a unit for elementary students about the life cycles of organisms?
- (A) Classification of plants and animals
 - (B) Habitats and adaptations
 - (C) Biodiversity
 - (D) Genetics
24. Fifth-grade students have been learning about famous inventors, including the Wright brothers, who invented and built the first airplane. Their teacher suggests that the students design paper planes that will fly. Then she suggests that the students test them, make changes, and come up with a design for a paper airplane contest. The scenario given reflects effective use of
- (A) inquiry teaching
 - (B) reciprocal teaching
 - (C) cooperative teaching
 - (D) interdisciplinary teaching
25. While planning units for science instruction, a teacher includes weekly quizzes, a project, and end-of chapter tests. Which of the following best describes the primary purpose for including such activities while planning instruction?
- (A) To determine students' prior knowledge
 - (B) To monitor students' progress
 - (C) To forecast students' success rates in state tests
 - (D) To compare student achievement with that of previous classes

Answers

1. This question asks you to apply your understanding of instructional strategies that will aid comprehension. Reciprocal teaching (B) is an instructional approach that features interactive dialogue between teacher and students. Initially, the teacher models strategies such as clarifying, predicting, questioning, and summarizing, and then gradually turns over the responsibility to the students. The students take turns being the teacher and leading small-group discussions of the text. Modeling (A) refers to a description that is intended to show the flow of an overall process. Coaching (C) is the process of using direct instruction to support an individual to achieve a specific goal. Guided reading (D) describes reading instruction in which the teacher provides the structure and purpose for reading and for responding to the material read. The correct answer therefore is (B).

2. This question asks you to apply your understanding of evaluating students' writing and providing appropriate feedback. In (D), the teacher provides the student with specific feedback, pointing out the error in the sentence. The teacher also provides the student with a next step by asking him to think of another way to write the sentence. In option (A), the sentence is positive but does not give the student adequate feedback. In (B), the response is inaccurate and does not address the problem in the sentence. In (C), the feedback is neither specific nor accurate about the student's work. The correct answer therefore is (D).

3. This question asks you to apply your knowledge of selecting appropriate reading materials and the factors that affect reading comprehension. Readers use their background knowledge to help them comprehend the information in a text. In the process of comprehending, readers relate the new information presented by the author to old information stored in their minds. It is highly probable that the student had little or no prior knowledge about the topic and therefore had difficulty constructing meaning. With the information given, (A), (C), and (D) are not correct because the student had previously read books of a comparable reading level. The correct answer therefore is (B).

4. This question asks you to apply your understanding of instructional strategies that foster reading comprehension. The task requires students to summarize a selection using a graphic organizer and then use that graphic organizer to guide a discussion of the story. The activity does not require students to decode words (A, word recognition) or look for the meaning of new words (D, vocabulary development). The activity also does not foster fluency (C) since it does not focus on how well the students are able to read the text. The correct answer therefore is (B).

5. This question asks you to apply your understanding of phonics and phonological awareness. Diphthongs (A) refer to vowel sounds produced when the tongue glides from one vowel sound toward another vowel sound in the same syllable. Blends (B) describe the joining of two or more letters with minimal change in those sounds. Digraphs (C) are two letters that represent one speech sound. Onsets (D) are the consonants preceding the vowel of a syllable. The correct answer therefore is (A).

6. This question asks you to apply your understanding of activities that foster the development of children's reading skills. Emergent literacy is a continuously evolving ability that results from one's experiences and experiments with language in literacy contexts. Emergent literacy focuses on the reading and writing development of young children before they attain conventional literacy skills and strategies. Highlights of a child's progression toward conventional literacy include developing an understanding of concepts about print, the alphabetic principle, and a sense of story. (A) and (B) are incorrect because they are skills that children acquire later in the literacy development process. (D) is not relevant. The correct answer therefore is (C).

7. This question asks you to apply your understanding of effective questioning strategies. Critical-reading skills are the ability to analyze, evaluate, and synthesize what one reads. It is also the ability to see relationships between different ideas used in a story and to use that information as an aid in reading. (A) describes rote learning, (C) describes vocabulary development, and (D) describes an activity that fosters comprehension and oral language development. The correct answer therefore is (B).

8. This question asks you to apply your understanding of the traits of writing. Ideas (A) refer to the message the writer hopes to convey. Voice (B) describes the writer's emotions, opinions, and personality. Conventions (C) are the editing and revising components of the writing process. Organization (D) describes how a writer clarifies and organizes his or her thoughts. The correct answer therefore is (C).

9. This question asks you to apply your understanding of phonics and reading development. The teacher is providing the students with the individual component sounds that make up a word and showing them how to blend the sounds into one word. Alphabetic principle (A) describes the assumption underlying the alphabetic writing systems—that each speech sound or phoneme of a language should have its own distinctive graphic representation. Phonemic awareness (B) is the perception of the sounds that make up spoken words. Sight words (C) are words that are immediately recognized as a whole and do not require word analysis for identification. Syllables (D) describe the unit of organization of a sequence of sounds. The correct answer therefore is (B).

10. This question asks you to apply understanding of stages of writing development and evaluating a student's work. With the given sample, the student connected the letters in cursive correctly (B), used appropriate spacing between words (A), and used correct letter formation (C). However, the student needs more practice in baseline formation because the letters do not reside appropriately on the lines. The correct answer therefore is (D).

11. This question asks you to apply your understanding of effective reteaching strategies. (A) and (B) would help the student get the answer but do not explain the concept of percents. Option (C) uses the context of the problem given to explain percents. (D) is wrong because the number of buses required is irrelevant to answering the question. The correct answer therefore is (C).

12. This question asks you to apply your understanding of geometric figures and relationships. A net (C) is a closed-plane figure that can be folded into a closed three-dimensional figure. A rotation (A) is a figure that turns around a point. A reflection (B) is a transformation in which a figure is flipped over a line. Translation (D) refers to moving a shape without rotating or flipping it; the shape still looks exactly the same but is in a different place. The correct answer therefore is (C).

13. This question asks you to apply your understanding of curriculum planning and selecting appropriate activities for different age groups or grade levels. Students in first grade are already familiar with some shapes, and using this prior knowledge, the teacher can introduce the students to other shapes and vocabulary used in geometry. The topics in (A), (C), and (D) are more advanced and are therefore not appropriate for this grade level. The correct answer therefore is (B).

14. This question asks you to apply your understanding of using appropriate strategies to support students' learning. When students make computational errors, an effective way to guide them is by allowing the students to use manipulative or visual aids to model the process. (A) does not teach the student anything and would not guard against future mistakes. Option (B) does not foster the student's understanding. Showing the student the error (D) does not give the student an opportunity for self-correction. The correct answer therefore is (C).

15. This question asks you to apply your understanding of appropriate teaching methods. In writing word problems, students need to demonstrate an understanding of arithmetic operations, different terms that are equivalent to a specific operation, and how to use those terms appropriately in word problems. (B) is incorrect because drill-and-check exercises help students memorize math facts. Option (C) is incorrect because in third grade, students will most likely deal with remainders as a leftover. Word problems in most instances require students to think critically about the situation presented, so (D) is wrong. The correct answer therefore is (A).

16. This question asks you to apply your understanding of selecting appropriate teaching methods. Reality-based instruction helps convey complex concepts. Instruction is explicit, and interactive techniques let students spend time with ideas, manipulate them, and grasp them. (A) is not appropriate for first graders and is not being used in real-life context. (B) helps students clarify their thoughts, but will not help students make real-life connections. (C) uses manipulatives to help clarify students' understanding of fractions, but does not provide a real-life connection. The correct answer therefore is (D).

17. This question asks you to apply your understanding of analyzing students' work to guide mathematics instruction. From the samples provided, the student does not make any errors adding the columns. The student added the numbers, and the questions do not require rounding up. (A), (C) and (D) are incorrect. From two-digit numbers all less than 100, the student arrives at sums ranging between 500 and 800. Since the numbers being added are all less than 100, the student should have noticed that the answers were far too large to be correct, and the sums should be less than a hundred. This shows that the student was unable to recognize the value of an appropriate answer. The correct answer therefore is (B).

18. This question asks you to apply your understanding of appropriate ways to foster students' learning. Activating prior knowledge requires finding out what background knowledge students have. One way to activate prior knowledge is by brainstorming with students about the topics or ideas in a reading assignment. Asking relevant questions reveals background information that students have. Although option (B) requires the student to list important events, it is not effective in capturing all the information a student knows about the town. In options (C) and (D), the students are using resources to learn about the town, which does not require them to use prior knowledge. The correct answer therefore is (A).

19. This question asks you to apply your understanding of using appropriate strategies to enrich and extend students' learning. The activity requires students to use newly acquired information to connect with their personal experiences. Analysis (A) describes the process of examining and breaking down information into parts. Synthesis (B) refers to compiling information in a different way by combining elements in a new pattern. Application (C) describes solving problems by applying acquired knowledge, facts, and techniques in different situations. Knowledge (D) is remembering previously learned material, recalling facts, terms, or basic concepts from stated text. The correct answer therefore is (C).

20. This question asks you to apply your knowledge of economics to the types of jobs people do. Service industries are in the sector of the economy that provides services (i.e., activities where people offer their knowledge and time to improve productivity, performance, potential, and sustainability) rather than create goods. Options (A), (B), and (D) refer to civics, geography, and history. The correct answer therefore is (C).

21. This question asks you to apply your understanding of effective curriculum integration. Successfully integrating literature into a social studies unit should involve activities that will best utilize the students' literacy skills, such as reading, writing, and oral presentations. Option (A) focuses on team work and requires students to use research skills. Option (B) focuses on students' creativity and imagination. Option (C) focuses on research. In option (D), students read and report on a book, which requires skills such as summarizing and organizing information. The correct answer therefore is (D).

22. This question asks you to apply your understanding of the process of scientific inquiry, developing testable questions and hypotheses. Scientific inquiry is a powerful way of understanding science content. Students learn how to ask questions and use evidence to answer them. In the process of learning the strategies of scientific inquiry, students learn to conduct an investigation and collect evidence from a variety of sources, develop an explanation from the data, and communicate and defend their conclusions. Since the data the students used are accurate, the next best step for the students will be to redevelop their hypotheses given the evidence collected. Options (A) and (C) do not support the fact that the data is correct, while option (D) is not an appropriate way to support the students' learning process. The correct answer therefore is (B).

23. This question asks you to apply your understanding of how the components of a curriculum are organized. To learn about life cycles and reproduction, students need to know the characteristics of living things (feeding habits, habitat, and structures that help them adjust to their environment in order to survive). Option (A) refers to how living things are grouped given shared characteristics. Option (C) refers to the variation of life forms within an ecosystem. Option (D) is the study of heredity. Knowledge of those areas of science is not necessary for elementary students to learn about life cycles. The correct answer therefore is (B).

24. This question asks you to apply your understanding of the instructional process and scientific inquiry. With inquiry teaching (A), the teacher provides the question and procedure while students generate an explanation supported by the evidence they have collected. In reciprocal teaching (B), students become the teacher in small-group reading sessions. The teacher models, then helps students learn to guide group discussions. Cooperative teaching (C) is a strategy in which small teams of teachers, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Interdisciplinary teaching (D) is a method used to teach a unit across different curricular disciplines. The correct answer therefore is (A).

25. This question asks you to apply your understanding of analyzing students' progress to guide science instruction. Formative assessments are embedded into the learning process and provide information that helps monitor students' progress and evaluate instructional effectiveness. The assessments also help teachers to differentiate learning, thereby improving student achievement. Options (A), (C), and (D) are not examples of purposes of formative assessments. The correct answer therefore is (B).

Sample Test Questions

This section presents two sample test 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 examinee does 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

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

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 as well as content-specific pedagogy
- Provides adequate explanations that are somewhat supported by examples or details

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

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

It is the first month of a new school year. Your objective is to teach second graders addition of two- and three-digit numbers without regrouping, but you find that your students do not understand place value.

- a) Describe ONE activity to help students understand place value. Be sure to include details of what the students would be doing during the activity.
- b) Explain how you would assess students' understanding of place value after the students 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.



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