

Elementary Education: Curriculum, Instruction, and Assessment (0011)

Test at a Glance

Test Name	Elementary Education: Curriculum, Instruction, and Assessment		
Test Code	0011		
Time	2 hours		
Number of Questions	110		
Format	Multiple-choice questions		
	Content Categories	Approximate Number of Questions	Approximate Percentage of Examination
	I. Reading and Language Arts Curriculum, Instruction, and Assessment	38	35%
	II. Mathematics Curriculum, Instruction, and Assessment	22	20%
	III. Science Curriculum, Instruction, and Assessment	11	10%
	IV. Social Studies Curriculum, Instruction, and Assessment	11	10%
	V. Arts and Physical Education Curriculum, Instruction, and Assessment	11	10%
	VI. General Information about Curriculum, Instruction, and Assessment	17	15%

About This Test

The Elementary Education: Curriculum, Instruction, and Assessment 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 new teacher needs to know. The questions assess knowledge of both principles and processes. Some of the questions assess basic understanding of curriculum planning, instructional design, and assessment of student learning; many pose particular problems that teachers routinely face in the classroom; and many are based on authentic examples of student work. Some of the questions concern general issues, but the majority are set in the context of the subject matters most commonly taught in elementary school: reading and language arts, mathematics, science, social studies, arts, and physical education.

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

Overview of the Test

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 videotapes

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

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, 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, social studies, arts and physical education, as well as general information—are provided on the following pages.

However, the list is not exhaustive.

I. READING AND LANGUAGE ARTS CURRICULUM, INSTRUCTION, AND ASSESSMENT

contains approximately 35% of the test, or 38 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

- **Phonemic awareness:** Blending, segmenting, rhyming, 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., tone, purpose, audience); **types of text** (e.g., narrative, expository, persuasive); **structure of text** (e.g., story grammar, comparison, cause/effect); **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

- **Phonemic awareness:** Elkonin (phoneme) boxes, letter sounds, segmentation of words in sentences
- **Phonics:** Word families, word wall, morning message, word building (making words), explicit, systematic instruction
- **Fluency:** Read-alouds, repeated readings, choral and echo reading, readability levels, sight words
- **Vocabulary:** Word wall, graphic organizers, context clues
- **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

ASSESSMENT

Reading

- **Phonemic 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
- **Comprehension:** Retellings, summarizations, informal reading inventories

Writing

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

Speaking, listening, and viewing

- Student presentations, rubrics

II. MATHEMATICS CURRICULUM, INSTRUCTION, AND ASSESSMENT contains approximately 20% of the test, or 22 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, 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 special education students, 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 conceptualizing 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 and teacher-made tests

III. SCIENCE CURRICULUM, INSTRUCTION, AND

ASSESSMENT contains approximately 10% of the test, or 11 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, provide 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 special education students, 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; concepts 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

IV. SOCIAL STUDIES CURRICULUM, INSTRUCTION, AND ASSESSMENT contains approximately 10% of the test, or 11 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 U.S., 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 special education students, 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 tests and narrative tests 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; concepts 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 assessment in social studies: 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

V. ARTS AND PHYSICAL EDUCATION CURRICULUM, INSTRUCTION, AND ASSESSMENT

contains approximately 10% of the test, or 11 questions. Within the arts (music and art) and physical education content area, this section covers teaching strategies and activities that aid in the curriculum, instruction, and assessment of arts (art and music), and physical education.

CURRICULUM

- **Art:** Design, technique, balance, visual communication and production, art history, judgments and criticism, aesthetics, originality, flexibility, fluency, imagination
- **Music:** Melody, timbre, making and listening to music, music notation
- **Physical Education:** Exercise, physical fitness, game and sport skills, safety, locomotor patterns, body management, social discipline, healthy lifestyles

INSTRUCTION

- **Instructional methods, strategies, modifications, and adjustments:** Various methods to adjust instruction to meet students' needs: what is appropriate and why; effective implementation, organization, and planning; reteaching, enrichment, and extensions; instructing and demonstrating; providing feedback; questioning and problem solving
- **Diverse student needs:** Working with diverse students (e.g., special education students, second-language-acquisition leaders, bilingual learners, and gifted students); tailoring instruction to meet students' instructional needs in the arts and physical education; meeting the physical, social, and emotional development of students (e.g., muscle control, perspective, maturity, and expectation levels)
- **Materials, equipment, texts, and technology:** Use of manipulatives and developmentally appropriate materials, equipment, texts, and technology, including art materials, musical instruments, physical education equipment, information from various sources, multicultural tests and narrative tests, software, and the Internet

ASSESSMENT

- **Analysis of student work to guide instruction: What students can do correctly;** concepts 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 instructional effectiveness and student progress:** Functions of classroom assessment, authentic and traditional assessments, effective assessment practices, measurement
 - Informal and/or authentic assessments: Teacher observation and questioning; interviews and conferences; group and peer assessment; self-assessment; performance-based samples such as portfolios, project learning, and student work; comparing and contrasting
 - Formal assessments: Unit or chapter tests and teacher-made tests

VI. GENERAL INFORMATION ABOUT CURRICULUM, INSTRUCTION, AND ASSESSMENT contains approximately 15% of the test, or 17 questions. Within general information, this section covers teaching strategies and activities that aid in curriculum, instruction, and assessment.

CURRICULUM

- **Standards:** State and national standards, defined as the general purposes of elementary students' learning
- **Curriculum Planning:** Developmentally appropriate curriculum planning in terms of students' maturity levels, expectation levels, selection of materials, learner objectives, and maximization of learning; integrate concepts across and within the content areas
- **Standards, Objectives, and Sequencing:** Standards, sequencing, material selection, and learner objectives—that is, translation of curricular standards into classroom instruction, development of age- and grade-appropriate learner objectives, and unit planning and appropriate sequencing, building of students' knowledge and skills from unit to unit and from year to year

INSTRUCTION

- **Instructional strategies and learning theories:** Knowledge of learning theories and instructional strategies by activating prior knowledge, constructing knowledge and constructivism, coaching, behavioral approaches, modeling, behaviorism and cognitive views of learning, informal reasoning, demonstration, cooperative learning, inquiry method and discovery learning, and learning cycle; metacognition; problem-solving abilities; higher-order thinking skills
- **Instructional approaches to classroom management:** Developmentally appropriate instruction; procedural skills; model-based classroom management; efficient instruction; small-group and whole-group instruction; cooperative learning; flexible skill groups; learner responsibility; creation of an atmosphere that encourages questions, conjectures, problem solving, and experimentation
- **Student motivation strategies:** Participation, inclusion, organization, fairness, expectations, procedures, modeling, role playing, feedback and follow-ups

- **Differentiation and intervention:** Learner motivation; modify the learning environment, adopt materials, and adjust instructional methods to meet specific student needs; diversity, equity

ASSESSMENT

- **Standardized assessments:** Use of standardized tests, use of results, scoring and score reporting
- **Basic principles of assessment and purposes of assessment**
- **Evaluation of instructional effectiveness and student progress:** Functions of classroom assessment, authentic and traditional assessments, effective assessment practices, measurement
- **Professionalism:** Reflective teaching, collaboration, partnerships with colleagues and community, interactions with parents

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 with respect to 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.

READING AND LANGUAGE ARTS

Questions 1–2 are based on the following scenario.

A small group of second-grade students is reading a story together orally. One of the children has difficulty reading the word “sparkled.” To make sure that all the students understand the word, the teacher asks the student to read the rest of the paragraph aloud. Then, when the student has finished reading, the teacher asks the group how the character in the story felt as she spoke and what her eyes did to show her excitement.

- The teacher is helping her students use which of the following word attack strategies?
 - Phonic clues
 - Context clues
 - Configuration clues
 - Morphemic clues
- Which of the following is one of the limitations of the word attack strategy described in the scenario above?
 - The strategy can be used only in the reading of narrative texts or stories.
 - The strategy can be used only when a text is written at the reader’s instructional reading level.
 - The text might not contain sufficient information to supply the definition being sought.
 - The pronunciation of consonant blends is not always constant from word to word.
- “Making words” is an activity in which children are individually given some letters that they use to make words. Below is a list of some letters:

s n p h a e s i p

Children begin making two-letter words (e.g., “as”) and continue by making three-letter (e.g., “sip”), four-letter (e.g., “pine”), and longer words until the final big word is made. The final word always includes all the letters they were given to make the smaller words.

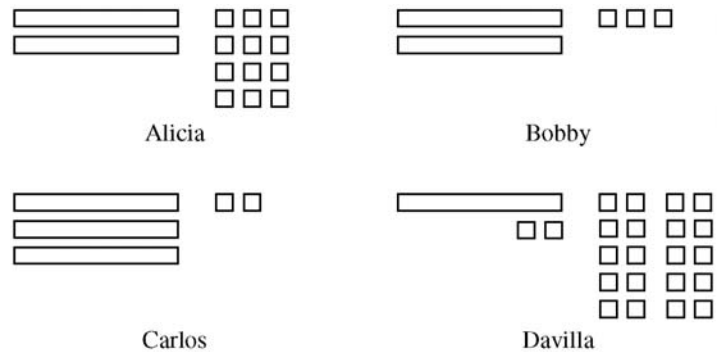
Which of the following students correctly built a big word using all of the letters shown?

 - Student A, who created a-p-p-r-e-h-e-n-s-i-o-n, or “apprehension”
 - Student B, who created h-a-p-p-i-n-e-s-s, or “happiness”
 - Student C, who created p-h-o-t-o-s-y-n-t-h-e-s-i-s, or “photosynthesis”
 - Student D, who created s-y-n-o-n-y-m-m-o-u-s, or “synonymmous”
- A student consistently reads such sentences as “They are my friends” as “They be my friends.” The miscue is most likely an example of
 - an error in semantics
 - the use of a dialect
 - a graphophonic weakness
 - a contextual anomaly
- A social studies teacher recognized that students were having difficulty understanding a chapter in their textbook. The teacher led a dialogue that modeled generating questions, summarizing, predicting, and clarifying. Then the students took turns assuming the teacher’s role. The teacher was most likely using which of the following methods?
 - Think-alouds
 - Reciprocal teaching
 - Cooperative learning groups
 - Question-answer relationships

6. A fifth-grade teacher is having students read the humorous book *The Noonday Friends*, written by Mary Stolz and set in New York’s Greenwich Village. A new student, who lived in a rural community for his entire life prior to moving to the new school, is having difficulty understanding the story, although he has read many books of comparable difficulty. Which of the following is the most probable explanation for the student’s difficulty in comprehension?
- (A) The student’s reading achievement level is significantly below that of the rest of the class.
- (B) The student’s background experiences do not include knowledge of the topic discussed in the story.
- (C) The student’s former reading instruction focused exclusively on the development of word attack skills.
- (D) The student’s oral language abilities are significantly above the student’s reading achievement level.
7. A second-grade student, Terry, wrote the following sentence: “Manuel is the tallest of the two boys.” Terry’s teacher wants to provide her with specific positive feedback about the sentence grammar. Which of the following statements provides Terry with specific positive feedback about the sentence?
- (A) “Terry, what a nice sentence!”
- (B) “Terry, this sentence is almost identical to your friend’s sentence. It is important to turn in original work.”
- (C) “Terry, the subject and verb in your sentence need to agree. Remember, in a sentence every verb must have a subject.”
- (D) “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?”

8. A third-grade teacher uses student-centered reading activities for groups of four to six students. Each group reads a different book that is based on student interest. Each member of a group is assigned a specific role, and students independently read an assigned chapter of the book. After the independent reading, the groups meet and group discussion of the book is guided by the specific role each group member was assigned. Which of the following identifies the reading skill best reinforced by this instructional method?
- (A) Phonemic awareness
- (B) Phonics
- (C) Fluency
- (D) Comprehension

MATHEMATICS



9. The illustrations above show how four students—Alicia, Bobby, Carlos, and Davilla—used base 10 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 10 numeration system?
- (A) Alicia
- (B) Bobby
- (C) Carlos
- (D) Davilla

10.
$$\begin{array}{r} \frac{4}{16} \\ - \frac{1}{8} \\ \hline \frac{3}{8} \end{array}$$

$$\begin{array}{r} \frac{5}{9} \\ - \frac{1}{2} \\ \hline \frac{4}{7} \end{array}$$

$$\begin{array}{r} \frac{7}{16} \\ - \frac{1}{5} \\ \hline \frac{6}{11} \end{array}$$

The examples above are representative of a student's work. If the error pattern indicated in these examples continues, the student's answer to the problem $\frac{9}{11}$ minus $\frac{1}{7}$ will most likely be

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

11. 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%

12. 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 exploring?

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

SCIENCE

13. Information concerning which of the following would need to be taught prior to teaching the cause of the midnight sun phenomenon in polar regions?

- (A) Seasonal changes in the distance between Earth and the Sun
- (B) Seasonal changes in sunspot activity
- (C) The tilt of Earth's axis
- (D) Time zones

14. After conducting an experiment to test a hypothesis they proposed, two students concluded that the hypothesis was incorrect. Assuming their data are correct, which of the following would be the LEAST appropriate response for their teacher to make to them?

- (A) An encouraging remark, because they have discovered evidence that casts doubt on a plausible hypothesis
- (B) A recommendation that they reformulate their hypothesis with the new data in mind
- (C) A suggestion that they repeat the experiment to check their results
- (D) An explanation of what they did wrong

SOCIAL STUDIES

15. A social studies class has studied the system of checks and balances within which the three branches of government operate. The teacher then asks students to find in the Constitution examples of ways the executive branch can limit the power of the legislative branch. Which is the highest level of thinking within Bloom's taxonomy of educational objectives that this assignment is likely to require students to use?
- (A) Analysis
 - (B) Synthesis
 - (C) Application
 - (D) Knowledge
16. A fourth-grade teacher is planning a unit on the history of the state in which the students live. Although they have not studied it at school, the students have some knowledge of the state's history because many of them have lived there all their lives. Prior to beginning the unit, the teacher wishes to activate the students' prior knowledge of state history and also to learn the extent of that knowledge. Which of the following activities would likely meet these two goals most effectively?
- (A) Having students brainstorm as a group about what they know concerning the state's history
 - (B) Having each student make a list of important events in the state's history
 - (C) Having each student pick an event in the state's history and write an essay about why it was important
 - (D) Having students interview older people in the community about what life was like long ago in the state
17. As elementary students progress in the area of art production, it is LEAST important for them to develop the ability to
- (A) use art materials effectively
 - (B) employ multiple processes in artwork
 - (C) see relationships among their work, their world, and their imaginations
 - (D) represent figures and objects with a high degree of accuracy
18. Prior to learning about meter in music class, elementary students should be able to demonstrate their understanding of
- (A) weak and strong beats
 - (B) syncopation
 - (C) subdivision of the beat
 - (D) tempo markings
19. For which of the following locomotor skills does each foot have two tasks to complete before the weight is transferred to the other foot?
- (A) Galloping
 - (B) Running
 - (C) Walking
 - (D) Skipping

GENERAL INFORMATION

20. An 8 year old tries to ice-skate by moving her legs in the same way she has when roller-skating. Which of the following of Piaget's concepts of development does this behavior exemplify?
- (A) Accommodation
 - (B) Assimilation
 - (C) Reversibility
 - (D) Egocentrism
21. In which of the following theories is the influence of rewards most likely to be emphasized in an explanation of behavioral change?
- (A) Information-processing theory
 - (B) Operant conditioning theory
 - (C) Classical conditioning theory
 - (D) Cognitive development theory

ARTS AND PHYSICAL EDUCATION

17. As elementary students progress in the area of art production, it is LEAST important for them to develop the ability to
- (A) use art materials effectively
 - (B) employ multiple processes in artwork
 - (C) see relationships among their work, their world, and their imaginations
 - (D) represent figures and objects with a high degree of accuracy

22. Which of the following events would result in a bias that may affect the validity of the standardized test scores for a test that presents multiple-choice questions and uses a gridded answer sheet?
- (A) Three students use a geometric pattern to fill out their answer sheets.
 - (B) A teacher gives the entire class an extra ten minutes to complete the test because three students with learning disabilities need more time.
 - (C) A teacher selects a test that has questions that match the skills and concepts taught in that classroom.
 - (D) Students taking the test took a different form of the same test the previous year.

Answers

Reading and Language Arts

- Choice B is the correct answer. By focusing on the meaning of an unfamiliar word as it relates to the rest of the paragraph, the teacher is highlighting the use of context clues.
- Choice C is the correct answer. Context does not always make clear the meaning of a specific unfamiliar word. Examples of this situation are technical terms or words for which specialized or obscure meanings are intended.
- Choice B is the correct answer. Student B (choice B) used all of the letters to build a big word. Student A (choice A) used all of the letters except the second letter, s, and added the extra letters e, o, n, and r. Student C (choice C) did not use the letters p and a and added the extra letters h, n, o, o, s, t, t, and y. Student D (choice D) did not use the letters a, e, h, i, p, p and added the extra letters m, m, n, o, o, u, y, y and n.
- Choice B is the correct answer. Use of the verb form “be” instead of the verb form “are” is a regular syntactic structure in certain dialects.
- Choice B is the correct answer. Reciprocal teaching is an approach to instruction that features interactive dialogue between teachers and students. Initially, the teacher does the modeling of comprehension-fostering and comprehension-monitoring strategies and then gradually turns over the responsibilities to the student. The students take turns being the teacher and leading small-group discussions of the text.
- Choice B is the correct answer. 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 this fifth-grade student had little or no prior knowledge about the topic and therefore had difficulty in constructing meaning.
- Choice D is the correct answer. In choice D, the teacher provides the student with specific feedback, “tallest is used to compare more than two things.” Based on the feedback, the teacher then provides the student with a next step by asking her to think of another way to write the sentence. In choice A, the statement is positive but does not provide specific feedback about the work. In choice B, the statement is a comment about the work but not the content of the work. In choice C, the feedback is neither specific nor accurate about the student’s work.
- Choice D is the correct answer. The instructional method described allows readers’ comprehension of text to deepen and expand as ideas are explained by the reader or to the reader. For example, readers are able to remember the plot, make predictions, and make connections to their own life.

Mathematics

- Choice B is the correct answer. 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. Alicia, Carlos, and Davilla have shown different but equivalent representations of 32, indicating they each have some understanding of the base 10 numeration system and of the application of base 10 blocks.
- Choice C is the correct answer. The student’s error pattern is to subtract both the numerator and the denominator.
- Choice B is the correct answer. Percent refers to how many out of one hundred or, in decimal form, how many hundredths. To find a percent, divide the group (20) by the total (46), and round the decimal to the hundredths place (0.43). This is 43 hundredths, or 43/100, or 43%. Student B answered the question correctly. Student A subtracted the number of first graders (20) from the total number of students (46) on the bus. Student C added together all of the students on the bus. Student D subtracted the total number of students on the bus (46) from 100.
- Choice C is the correct answer. A net (choice C) is a closed plane figure that can be folded into a closed three-dimensional figure. A rotation (choice A) refers to a figure turning around a point. A reflection (choice B) refers to a transformation in which a figure is flipped over a line. In a tessellation (choice D), a figure or pattern of figures is repeated to cover a flat surface.

Science

- Choice C is the correct answer. The midnight sun phenomenon can occur in Earth’s polar regions because as Earth orbits the Sun, its axis is tilted. Therefore, at solstice, when the polar region is tilted toward the Sun, the Sun does not set.
- Choice D is the best answer. Merely providing an explanation would display a lack of understanding about how science works and would serve to punish students for doing good science.

Social Studies

- Choice A is the correct answer. The assignment involves analyzing evidence and, possibly, recognizing assumptions—tasks classified at the analysis level of Bloom’s taxonomy.
- Choice A is the best answer. While choices A, B, and C all allow some assessment and activation of prior knowledge, far more knowledge will be activated if students can hear one another’s ideas in a brainstorming session. Choice D does not necessarily require the students to consider prior knowledge they have about the state.

Arts and Physical Education

17. Choice D is the correct answer. Although there is increased interest among upper elementary students to draw more realistically, “a high degree of accuracy” is totally inappropriate to their developmental readiness or ability.

18. Choice A is the correct answer. Meter—the grouping of beats into repeated sets of two, three, or more beats—depends on the differentiation between weak and strong beats, and therefore, students must understand such differentiation before learning about meter. Syncopation, a momentary contradiction of the prevailing meter, can be understood only after students grasp the concept of meter. Subdivision of the beat and tempo markings is not directly related to meter and thus is not essential to understand before learning about meter.

19. Choice D is the correct answer. In skipping (choice D), each foot both “walks” and “hops” before the other foot takes over. In galloping (choice A), each foot performs a single task, but one foot “walks” while the other foot “leaps.” In running (choice B) and walking (choice C), each foot performs a single task before the other foot takes over.

General

20. Choice B is the correct answer. This item assesses a basic understanding of child development. Assimilation involves incorporation of new ideas and concepts into old ideas.

21. Choice B is the best answer. This is a basic definition in educational psychology. Operant conditioning involves the use of reinforcements or rewards to shape appropriate behavior. Inappropriate behavior is ignored—that is, not rewarded by attention.

22. Choice B is the correct answer. Tests cannot be considered valid if the established time limitation used for the standardization is violated.



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