

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



<i>Test at a Glance</i>			
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.

Test questions cover the breadth of material a new teacher needs to know and assess knowledge of both principles and processes. Some questions assess basic understanding of curriculum planning, instructional design, and assessment of student learning. Many questions pose particular problems that teachers might routinely face in the classroom, and many are based on authentic examples of

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student work. Although some questions concern general issues, most questions are set in the context of the subject matters most commonly taught in the elementary school: reading/language arts, mathematics, science, social studies, fine arts, and physical education.

- Curriculum topics examine the organization, materials, and resources of each content area and the implications for using them:
 - components of curriculums and how they are organized
 - integration of concepts within each content area and across content areas, and the pedagogical implications of this 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 will 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
 - 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
 - interpretation of data obtained from various assessment strategies in each content area and in general

- 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 category are provided below. The list, however, is not exhaustive.

I. Reading and Language Arts Curriculum, Instruction, and Assessment

Teaching strategies and activities that will aid in the development, delivery, and evaluation of the following:

- Components of the curriculum – for example:
 - Balanced reading, writing, speaking, and listening programs
 - Integration into other content areas
 - Scope and sequence of skills and materials
 - Learner objectives
 - Curricular materials – developmentally appropriate (such as readability), basal readers and anthologies; trade books; reference and nonfiction materials; children's literature (such as fables, fairy tales, tall tales, poetry); technology

- Knowledge and understanding of topics, procedures, and methods (such as various teaching and learning strategies like guided instruction or modeling)
- Instruction – for example:
 - Reading
 - ▶ Determining individual reading levels
 - ▶ Language acquisition and readiness such as: knowing letter-sound correlations; left-to-right, top-to-bottom concepts of print; spacing of words in reading and writing
 - ▶ Prereading instruction – for example, K-W-L chart (what we *know*, what we *want* to know, and what we have *learned*); word recognition (such as picture and context clues); structural analysis; semantics; syntactic; phonics; scanning
 - ▶ During reading – for example, vocabulary development; comprehension; control; reading aloud; word recognition; syllabication; decoding; graphic organizers
 - ▶ Post reading – for example, concept vocabulary; writing-journaling; reactions; comprehension and interpretations; rewriting information
 - Writing, spelling, and listening
 - ▶ Writing process
 - ❖ Prewriting – for example, brainstorming, clustering, outlining, and webbing
 - ❖ Drafting – for example, knowledge of audience
 - ❖ Revising – for example, Praise-Question-Polish; restructuring; deleting, and adding information and details; conferencing
 - ❖ Editing – for example, spell-check; peer or teacher conferencing
 - ❖ Publishing – for example, anthologies; author’s chair
 - ▶ Stages of development – for example, invented spelling; use of words with prefixes and suffixes; proper punctuation; misformed letters, spacing, and control in handwriting
 - ▶ Memorization
 - Methods of adjusting instruction to meet students’ needs – for example, what is appropriate and why; effective implementation, organization and planning; reteaching, enrichment, and extensions
 - Strategies for motivation and encouraging success – for example, feedback and follow-ups; cooperative groups; modeling; flexible skill groups
- Assessment
 - Analysis of student work
 - ▶ Identifying strengths and weaknesses
 - ▶ What the student is doing correctly
 - ▶ Recognizing stages of development
 - ▶ Misconceptions and errors
 - ▶ Adjusting instruction
 - ▶ Patterns
- Traditional and standardized forms of assessments
 - ▶ Standardized tests
 - ▶ Basal reader assessments
 - ▶ Frye Readability Index
- Informal assessments
 - ▶ Informal reading inventory
 - ▶ Miscue analysis
 - ▶ Close procedure
 - ▶ Running record
 - ▶ Anecdotal record
 - ▶ Conferencing
 - ▶ Retellings
 - ▶ Portfolios
 - ▶ Journals

II. Mathematics Curriculum, Instruction, and Assessment

Teaching strategies and activities that will aid in the development, delivery, and evaluation of the following:

- Curriculum components – for example, scope and sequence of skills and materials; appropriate materials and technology; learner objectives
- Pre-number and number concepts – for example, counting objects, comparing objects; classifying objects; exploring sets; ordering sets; number patterns
- Base-ten numeration system – for example, place value; reading and writing numbers; expanded form of numbers

- Addition and subtraction of whole numbers – for example, computational procedures; relationships between addition and subtraction; relationships between subtraction and division; regrouping; modeling the operations; story problems
- Multiplication and division – for example, modeling the operations, interpretations for the operations; computational procedures; skill development; story problems
- Concepts related to number theory – for example, factors, multiples, primes and composites, remainders, odd and even
- Rational numbers – for example, fraction and decimal equivalence; computation; modeling
- Problem solving – for example, investigate and understand content; formulate problems from everyday situations; develop strategies applicable to a wide range of problems; verify and interpret results; build student confidence; identify and solve problems that are developmentally appropriate
- Geometric concepts – for example, geometric figures and relationships; non-metric and metric units of measurement; coordinate geometry; informal geometry
- Measurement – for example, length, area, volume, weight, angles, time, temperature, distance

- Probability and statistics – for example, counting, organizing, representing and interpreting data; intuitive concepts of chance
- Hand-held calculators and computers – for example, justification of use; programs of instruction; appropriate use; use in problem solving and concept development
- Classroom management and motivation – for example, efficient instruction; small group instruction; whole group instruction; atmosphere that encourages questions, conjectures, problem solving, and experimentation
- Analysis of students' work – for example, what students do correctly; what concepts students are developing; misconceptions and errors; scoring; remediation and acceleration; use of rubrics
- Use of manipulatives and developmentally appropriate materials; variety and reliability
- Content specific pedagogy – for example, theories necessary for implementing a sound instructional program such as accessing prior knowledge, constructing knowledge, modeling, informal reasoning, graphic organizers

III. Science Curriculum, Instruction, and Assessment

Teaching strategies and activities that will aid in the development, delivery, and evaluation of the following:

- Unifying concepts and processes in science – for example, providing connections between traditional scientific disciplines; systems, subsystems, models, and conservation
- Science as inquiry – for example, active construction of ideas and explanations; engaging; development of ability to ask questions, investigate, observe, construct explanations and communicate results; problem solving
- Use of materials and technology – for example, justification and appropriateness of use of tools such as rulers, balances, thermometers
- Model building and forecasting – for example, plans; computer simulations
- Analysis of students' work – for example, what the child can do correctly; what the child is working on conceptualizing; misconceptions and errors; scoring rubrics; formal and informal assessments; remediation and enrichment
- Basic principles of health education for example, healthy living, growth
- Content specific pedagogy – for example, learning cycle, constructivism, discovery learning

IV. Social Studies Curriculum, Instruction, and Assessment

Teaching strategies and activities that will aid in the development, delivery, and evaluation of the following:

- Curriculum components – for example, scope and sequence; appropriate materials and technology; learner objectives
- Social organizations and human behavior in society – for example, self, family, neighborhoods and communities; citizenship
- Social structures – for example, communication; transportation; industrialization; technology; and economics
- History, geography, and government – for example, state, regions, United States, world
- Students’ development of appropriate concepts and skills – for example, organizing data; problem solving; comparing and contrasting; model building; planning, forecasting, and decision making
- Classroom management and motivation – for example, participation, inclusion, organization, fairness, expectations
- Content specific pedagogy – for example, map and globe skills; inquiry based instruction; decision making; models

V. Art, Music, Physical Education Curriculum, Instruction, and Assessment

Teaching strategies and activities that will aid in the development, delivery, and evaluation of the following:

- Curriculum planning and design that is developmentally appropriate – for example, muscle control, perspective,

- maturity, expectation levels, selection of materials, learner objectives, maximizing learning
- Basic concepts in music and art – for example, rhythm, melody, and timbre in music; design, technique, and balance in art
- Teaching strategies to encourage creativity and appreciation in art and music – for example, room environment, capitalizing on individuality, motivation, cultural variations
- Basic concepts in physical education – for example, locomotor patterns, physical fitness, body management, social discipline, game and sport skills, healthful lifestyles
- Teaching strategies – for example, motivating children and creating a positive atmosphere, instructing and demonstrating, providing feedback, questioning and problem solving
- Evaluation of instructional effectiveness and student achievement – for example, what the student is doing correctly, assessing student progress, misconceptions or errors, assessment of student work products

VI. General Information about Curriculum, Instruction, and Assessment

Teaching strategies and activities that will aid in the development, delivery, and evaluation of the following:

- Knowledge and understanding of topics dealing with the personal,

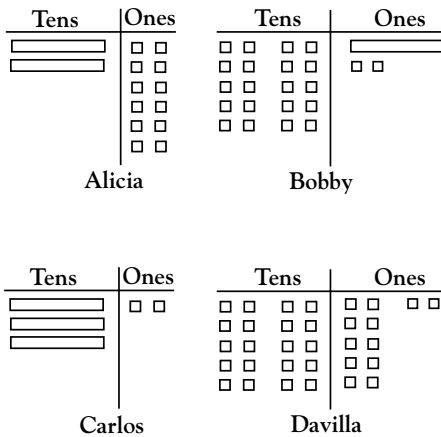
- social, and emotional development of children; language and communication; developmentally appropriate instruction
- Learning theories – for example, behaviorism and cognitive views of learning; problem-solving abilities; higher order thinking skills; metacognition; constructivism
- Curriculum components – for example, scope and sequence; curricular materials; learner objectives
- General principles of instruction – for example, learner motivation, learning environments; diversity; enrichments and reteachings; procedural skills; planning; conferencing
- Classroom management – for example, organization; discipline; procedures; learner responsibility; interventions
- Evaluation of instructional effectiveness and student progress – for example, functions of classroom assessments such as increasing learning and motivation; authentic and traditional assessments; analyzing results; effective assessment practices; measurement
- General issues of professional growth – for example, reflective teaching; collaboration; partnerships with colleagues and community; interactions with parents

Sample Test Questions

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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.

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.



- The illustrations above show how four students, Alicia, Bobby, Carlos, and Davilla, used base ten blocks to represent the number 32. Which of the students used the blocks to represent the number 32 in a way that reveals an understanding of the underlying concepts of a numeration system based on powers of ten?
 - Alicia
 - Bobby
 - Carlos
 - Davilla

Questions 2-3 are based on the following scenario.

A small group of second-grade students are 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 when reading 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.
- An 8 year old tries to ice-skate by moving her legs in the same way that she has done when roller-skating. Which of the following of Piaget’s concepts of development does this behavior exemplify?
 - Accommodation
 - Assimilation
 - Reversibility
 - Egocentrism

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

5. 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 $9/11 - 1/7$ will most likely be
- (A) $\frac{10}{4}$
- (B) $\frac{8}{7}$
- (C) $\frac{8}{4}$
- (D) $\frac{9}{8}$
6. In which of the following theories is the influence of rewards most likely to be emphasized in explaining behavioral change?
- (A) Information-processing theory
- (B) Operant conditioning theory
- (C) Classical conditioning theory
- (D) Cognitive development theory
7. 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 the Earth's axis
- (D) Time zones
8. 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 be likely to 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

Go on to the next page.

9. A middle school 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 in Bloom's Taxonomy of Educational Objectives that this assignment is likely to require students to use?
- (A) Analysis
(B) Synthesis
(C) Application
(D) Knowledge
10. After conducting an experiment to test a hypothesis they proposed, a pair of students concluded that the hypothesis was incorrect. Assuming that their data are correct, which of the following would be the LEAST appropriate response for their teacher to make to them?
- (A) Encouragement, 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 the students repeat the experiment to check their results
(D) An explanation of what the students did wrong
11. As elementary school 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
12. 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 have taken a different form of the same test the previous year.

Answers

1. Choice C is the correct answer. Only Carlos has shown the correct representations of tens and ones, three long bars and two unit cubes.

2. 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.

3. 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.

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

5. Choice C is the correct answer. The student's error pattern is to subtract both the numerator and the denominator.

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

7. Choice C is the correct answer. The "midnight sun" phenomenon can occur in the polar regions of the Earth because as the 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.

8. 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.

9. Choice A is the correct answer. The assignment involves analyzing evidence and, possibly, recognizing assumptions, tasks that are classified at the analysis level of Bloom's taxonomy.

10. Choice D is the best answer. Merely providing an explanation would display a lack of understanding about how science works and would "punish" students for doing good science.

11. Choice D is the best answer. Although there is an increased interest among upper elementary students to draw more realistically, "a high degree of accuracy" is totally inappropriate to their developmental readiness or ability.

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