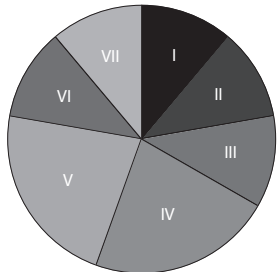


Principles of Learning and Teaching

Test at a Glance

Test Names and Test Codes	Principles of Learning and Teaching: Grades K-6 (0522) Principles of Learning and Teaching: Grades 5-9 (0523) Principles of Learning and Teaching: Grades 7-12 (0524)	
Time	2 hours	
Number of Questions	12 short-answer questions and 24 multiple-choice question	
Format	4 case histories will be presented, each followed by 3 short-answer questions; 24 multiple-choice questions are included in two sections of 12 questions each	
	Categories that will appear on your score report	Approximate Percentage of Total Score
	I. Students as Learners (multiple-choice questions) II. Instruction and Assessment (multiple-choice questions) III. Teacher Professionalism (multiple-choice questions) IV. Students as Learners (short-answer questions) V. Instruction and Assessment (short-answer questions) VI. Communication Techniques (short-answer questions) VII. Teacher Professionalism (short-answer questions)	11% 11% 11% 22% 22% 11% 11%
Pacing Considerations	You will need to monitor your time carefully. Plan on approximately 25 minutes per case history. This amount of time has been ample for most examinees to read the case study and respond to the short-answer questions. Allow approximately 10 minutes to answer each of the two sections of multiple-choice questions. The multiple-choice questions are not associated with the case histories. Do not spend too much time on any one section of the test or on any one question.	

About this test

The Principles of Learning and Teaching test is designed to assess a beginning teacher's knowledge of a variety of job-related criteria. Such knowledge is typically obtained in undergraduate preparation in areas such as educational psychology, human growth and development, classroom management, instructional design and delivery techniques, evaluation and assessment, and other professional preparation.

The test includes four case histories, each presenting a particular teaching situation. For each case history, the examinee will respond to three short-answer questions related to the teaching situation described in the case history. The twelve short-answer questions will cover all of the content areas listed under Topics Covered. Each short-answer question will be scored on a scale of 0-2. Questions may require the examinee to do any of the following: demonstrate understanding of the importance of an aspect of teaching, demonstrate understanding of the

principles of learning and teaching underlying an aspect of teaching, or recognize when and how to apply the principles of learning and teaching underlying an aspect of teaching. Each case history with short-answer questions will require approximately 25 minutes.

In addition, the test contains two sections of twelve multiple-choice questions covering an array of topics listed under Topics Covered. Each multiple-choice question section will require approximately 10 minutes.

Topics Covered

I. Students as Learners

A. Student Development and the Learning Process

1. Theoretical foundations about how learning occurs: how students construct knowledge, acquire skills, and develop habits of mind
 - Examples of important theorists
 - Important terms that relate to learning theory
2. Human development in the physical, social, emotional, moral, and cognitive domains
 - Contributions of important theorists
 - Major progressions in each developmental domain and the ranges of individual variation within each domain
 - Impact of students' physical, social, emotional, moral, and cognitive development on their learning and how to

address these factors when making instructional decisions

- How development in one domain, such as physical, may affect performance in another domain, such as social

B. Students as Diverse Learners

1. Differences in the ways students learn and perform
 - Learning styles
 - Multiple intelligences
 - Performance modes
 - Concrete operational thinkers
 - Visual and aural learners
 - Gender differences
 - Cultural expectations and styles
2. Areas of exceptionality in students' learning
 - Visual and perceptual difficulties
 - Special physical or sensory challenges
 - Learning disabilities
 - Attention Deficit Disorder (ADD); Attention Deficit-Hyperactivity Disorder (ADHD)
 - Functional mental retardation
3. Legislation and institutional responsibilities relating to exceptional students
 - Americans with Disabilities Act (ADA)
 - Individuals with Disabilities Education Act (IDEA)
 - Inclusion, Mainstreaming, and "Least Restrictive Environment"
 - IEP (Individualized Education

Plan), including what, by law, must be included in each IEP

4. Approaches for accommodating various learning styles, intelligences, or exceptionalities
 - Differentiated instruction
 - Alternative assessments
 - Testing modifications
5. Process of second-language acquisition and strategies to support the learning of students for whom English is not a first language
6. Understanding of influences of individual experiences, talents, and prior learning, as well as language, culture, family and community values on students' learning
 - Multicultural backgrounds
 - Age-appropriate knowledge and behavior
 - The student culture at the school
 - Family backgrounds
 - Linguistic patterns and differences
 - Cognitive patterns and differences
 - Social and emotional issues

C. Student Motivation and the Learning Environment

1. Theoretical foundations about human motivation and behavior
 - Important terms that relate to motivation and behavior
2. How knowledge of human motivation and behavior should influence strategies for organizing and supporting individual and group work in the classroom

Principles of Learning and Teaching

3. Factors and situations that are likely to promote or diminish student's motivation to learning, and how to help students to become self-motivated
4. Principles of effective classroom management and strategies to promote positive relationships, cooperation, and purposeful learning
 - Establishing daily procedures and routines
 - Establishing classroom rules, punishments, and rewards
 - Giving timely feedback
 - Maintaining accurate records
 - Communicating with parents and caregivers
 - Using objective behavior descriptions
 - Response to student misbehavior
 - Arrangement of classroom space
 - Pacing and structure of the lesson

II. Instruction and Assessment

A. Instructional Strategies

1. Major cognitive processes associated with student learning
 - Critical thinking
 - Creative thinking
 - Higher-order thinking
 - Inductive and deductive thinking
 - Problem-structuring and problem-solving
 - Invention
 - Memorization and recall

2. Major categories, advantages, and appropriate uses of instructional strategies
 - Cooperative learning
 - Direct instruction
 - Discovery learning
 - Whole-group discussion
 - Independent study
 - Interdisciplinary instruction
 - Concept mapping
 - Inquiry method
 - Questioning
3. Principles, techniques, and methods associated with major instructional strategies
 - direct instruction
 - student-centered models
4. Methods for enhancing student learning through the use of a variety of resources and materials
 - Computers, Internet resources, Web pages, email
 - Audiovisual technologies such as videotapes and compact discs
 - Local experts
 - Primary documents and artifacts
 - Field trips
 - Libraries
 - Service learning

B. Planning Instruction

1. Techniques for planning instruction to meet curriculum goals, including the incorporation of learning theory, subject matter, curriculum development, and student development

- National and state learning standards
 - State and local curriculum frameworks
 - State and local curriculum guides
 - Scope and sequence in specific disciplines
 - Units and lessons
 - Behavioral objectives: affective, cognitive, psychomotor
 - Learner objectives and outcomes
2. Techniques for creating effective bridges between curriculum goals and students' experiences
 - Modeling
 - Guided practice
 - Independent practice, including homework
 - Transitions
 - Activating students' prior knowledge
 - Anticipating preconceptions
 - Encouraging exploration and problem-solving
 - Building new skills on those previously acquired

C. Assessment Strategies

1. Types of assessments
2. Characteristics of assessments
3. Scoring assessments
4. Uses of assessments
5. Understanding of measurement theory and assessment-related issues

III. Communication Techniques

- A. Basic, effective verbal and nonverbal communication techniques
- B. Effect of cultural and gender differences on communications in the classroom
- C. Types of questions that can stimulate discussion in different ways for particular purposes
 - Probing for learner understanding
 - Helping students articulate their ideas and thinking processes
 - Promoting risk-taking and problem-solving
 - Facilitating factual recall
 - Encouraging convergent and divergent thinking
 - Stimulating curiosity
 - Helping students to question

IV. Profession and Community

A. The Reflective Practitioner

1. Types of resources available for professional development and learning
 - Professional literature
 - Colleagues
 - Professional associations
 - Professional development activities
2. Ability to read and understand articles and books about current views, ideas, and debates regarding best teaching practices
3. Why personal reflection on teaching practices is critical, and approaches that can be used to achieve this

B. The Larger Community

1. Role of the school as a resource to the larger community
2. Factors in the students' environment outside of

- school (family circumstances, community environments, health and economic conditions) that may influence students' life and learning
3. Basic strategies for involving parents/guardians and leaders in the community in the educational process
 4. Major laws related to students' rights and teacher responsibilities
 - Equal education
 - Appropriate education for handicapped students
 - Confidentiality and privacy
 - Appropriate treatment of students
 - Reporting situations related to possible child abuse

.....

Sample Test Questions for Principles of Learning and Teaching: Grades 7-12 (0524)



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.

Case History: 7-12

Directions: The case history is followed by two short-answer questions.

Mr. Payton

Scenario

Mr. Payton teaches world history to a class of thirty heterogeneously grouped students ages fourteen to sixteen. He is working with his supervisor, planning for his self-evaluation to be completed in the spring. At the beginning of the third week of school, he begins gathering material that might be helpful for the self-evaluation. He has selected one class and three students from this class to focus on.

Mr. Payton’s first impression of the three students

Jimmy has attended school in the district for ten years. He repeated fifth and seventh grades. Two years older than most of the other students in class and having failed twice, Jimmy is neither dejected nor hostile. He is an outgoing boy who, on the first day of class, offered to help me with “the young kids” in the class. He said, “Don’t worry about me remembering a lot of dates and stuff. I know it’s going to be hard, and I’ll probably flunk again anyway, so don’t spend your time thinking about me.”

Burns is a highly motivated student who comes from a family of world travelers. He has been to Europe and Asia. These experiences have influenced his career choice, international law. He appears quiet and serious. He has done extremely well on written assignments and appears to prefer to work alone or with one or two equally bright, motivated students. He has a childhood friend, one of the slowest students in the class.

Pauline is a withdrawn student whose grades for the previous two years have been mostly C’s and D’s. Although Pauline displays no behavior problems when left alone, she appears not to be popular with the other students. She often stares out the window when she should be working. When I speak to Pauline about completing assignments, she becomes hostile. She has completed few of the assignments so far with any success. When I spoke to her counselor, Pauline yelled at me, “Now I’m in trouble with my counselor too, all because you couldn’t keep your mouth shut!”

Mr. Payton’s initial self-analysis, written for his supervisor

I attend workshops whenever I can and consider myself a creative teacher. I often divide the students into groups for cooperative projects, but they fall apart and are far from “cooperative.” The better-performing students, like Burns, complain about the groups, claiming that small-group work is boring and that they learn more working alone or with students like themselves. I try to stimulate all the students’ interest through class discussions. In these discussions, the high-achieving students seem more interested in impressing me than in listening and responding to what other students have to say. The low-achieving students seem content to be silent. Although I try most of the strategies I learn in workshops, I usually find myself returning to a modified lecture and the textbook as my instructional mainstays.

Sample Questions

This section presents two short-answer questions and sample responses along with the standards used in scoring these responses. When you read these sample responses, keep in mind that they are less polished than if they had been developed at home, edited, and carefully presented. Examinees do not know what questions will be asked and must decide, on the spot, how to respond. Each response will be scored by two readers who are practicing teachers; if the two scores differ by more than one point, the response will be scored by a third reader. Readers will assign scores based on the following scoring guide.

GENERAL SCORING GUIDE

All short-answer question will be scored on a 0, 1, 2 scale

Score of 2:

The response contains appropriate* answers to all parts of the question, demonstrating an understanding both of the details in the case study and of the principles of learning and teaching as outlined in the content categories covered by the test.

Score of 1:

The response contains appropriate* answers to only part of the question.

Score of 0:

The response contains no appropriate* responses to any part of the question.

* The criteria for evaluating whether a response is “appropriate” or not are established through a “model answers” methodology, which consists of the following steps:

- After a case and questions are written, three or four knowledgeable experts are asked to read the case and answer the questions, addressing each question exactly as it is worded. These experts are carefully chosen to represent the diverse perspectives and situations relevant to the testing population.
- The case writer uses these “model answers” to develop a Question-Specific Scoring Guide for each question, creating a list of specific examples that would receive full credit. This list is considered to contain *examples* of correct answers, not all the possible correct answers.
- These question-specific scoring guides based on model answers provide the basis for choosing the papers that serve as benchmark and sample papers for the purpose of training the scorers at the scoring session.
- During the scoring sessions, while reading student papers, scorers can add new answers to the scoring guide as they see fit.
- Training at the scoring session is aimed to ensure that scorers do not score papers on the basis of their opinions or their own preferences but rather make judgments based on the carefully established criteria in the scoring guide.

No credit is given for a blank or off-topic response.

Sample Response that Received a Score of 2

For Burns who is a bright, independent learner, providing him the opportunity to take extra responsibility for mastering challenging material and figuring out how to help his classmates understand it might help him to be more open and positive in his classroom behavior. For example, he might use more complex materials to access information, or might create a program using technology to share his knowledge and insights with others. For Jimmy, Mr. Payton might have a conference with him to find out how he was expected to learn social studies in the past and why he is so accepting of failing social studies. This conference may lead to a strategy such as the use of information presented visually or orally, or the use of graphic organizers to access information, or an alternate means of demonstrating his understanding if written assessments are part of the problem.

Sample Response that Received a Score of 1

Jimmy is a very interesting student to consider. He has a history of failure, and seems to accept the fact that he may fail again. However, he seems quite outgoing so he might be willing to try if approached right. I think the first thing Mr. Payton could do would be to sit down and talk with him. He needs to try to figure out why Jimmy failed in the past. He might ask him if he has any ideas about how he learns best — and things teachers have had him do that don't help him. Then, with this information, Mr. Payton might be able to come up with some approaches based on Jimmy's learning style. If Jimmy says he hates to read, Mr. Payton needs to find a way for him to access the information other than reading! Another thing Mr. Payton might do is adjust what he expects Jimmy to learn. Jimmy says he has problems with "a lot of dates and stuff." But he may be interested in other aspects of history — why people did the things they did, for example. By tailoring the study of history to aspects that might be more appropriate for Jimmy, Mr. Payton might have a better chance of helping Jimmy succeed.

Sample Response that Received a Score of 0

I think the modification he should make for both students is to be much clearer about what the

expectations of the course are. Sometimes students are tuned out or bored because they just don't know what is expected of them. Maybe Mr. Payton needs to post his expectations prominently in the room so that both of these students can see what is expected. The expectations also need to indicate what is required for passing, so that Jimmy and Burns will know what the limits are.

Discrete Multiple-Choice Questions

Directions: Questions 3-10 are not related to the previous case. For each question, select the best answer and mark the corresponding space on your answer sheet.

3. Which of the following is something that should almost always be discussed with students when they are given a type of assignment that may be new to them?
 - (A) Whether the students will be tested on the material covered in the assignment
 - (B) Whether the assignment will be graded according to the same criteria as other assignments with which the students are familiar
 - (C) What the students can expect to learn from doing the assignment
 - (D) What kind of prior experience the teacher has had with this type of assignment

4. A teacher gives his students a list of terms to use in an essay and intends the list to serve as a kind of learning support called a scaffold. If the students use the list effectively, which of the following would be an appropriate next step for the teacher to take when assigning the students their next essay?
 - (A) Asking the students to come up with their own list of terms to use in the new assignment
 - (B) Giving the students a longer list of terms to use in the new assignment
 - (C) Giving the students a list of terms and asking them to write down a definition of each before beginning the new assignment
 - (D) Asking the students to use the same terms in the new assignment

Questions 9-10 are based on the following passages.

The following passages are taken from a debate about the advantages and disadvantages of a constructivist approach to teaching.

Why constructivist approaches are effective

The point of constructivist instruction is to have students reflect on their questions about new concepts in order to uncover their misconceptions. If a student cannot reason out the answer, this indicates a conceptual problem that the teacher needs to address. It takes more than content-related professional expertise to be a "guide on the side" in this process. Constructivist teaching focuses not on what the teacher knows, but on what and how the student learns. Expertise is focused on teaching students how to derive answers, not on giving them the answers. This means that a constructivist approach to teaching must respond to multiple different learning methods and use multiple approaches to content. It is a myth that constructivist teaching never requires students to memorize, to drill, to listen to a teacher explain, or to watch a teacher model problem-solving of various kinds. What constructivist approaches take advantage of is a basic truth about human cognition: we all make sense of new information in terms of what we already know or think we know. And each of us must process new information in our own context and experience to make it part of what we really know.

Why constructivist approaches are misguided

The theory of constructivism is appealing for a variety of reasons—especially for its emphasis on direct student engagement in learning. However, as they are implemented, constructivist approaches to teaching often treat memorization, direct instruction, or even open expression of teacher expertise as forbidden. This demotion of the teacher to some sort of friendly facilitator

is dangerous, especially in an era in which there is an unprecedented number of teachers teaching out of their fields of expertise. The focus of attention needs to be on how much teachers know about the content being taught.

Students need someone to lead them through the quagmire of propaganda and misinformation that they confront daily. Students need a teacher who loves the subject and has enough knowledge to act as an intellectual authority when a little direction is needed. Students need a teacher who does not settle for minimal effort but encourages original thinking and provides substantive intellectual challenge.

- 9. The first passage suggests that reflection on which of the following after a lesson is an essential element in constructivist teaching?
 - (A) The extent to which the teacher’s knowledge of the content of the lesson was adequate to meet students’ curiosity about the topic
 - (B) The differences between what actually took place and what the teacher planned
 - (C) The variety of misconceptions and barriers to understanding revealed by students’ responses to the lesson
 - (D) The range of cognitive processes activated by the activities included in the lesson design and implementation

- 10. The author of the second passage would regard which of the following teacher behaviors as essential for supporting student learning?
 - (A) Avoiding lecture and memorization
 - (B) Allowing students to figure out complex problems without the teacher’s intervention
 - (C) Emphasizing process rather than content knowledge
 - (D) Directly guiding students’ thinking on particular topics

Principles of Learning and Teaching: Grades 7-12 (0524)

Answers

1. See sample responses on page 32.
2. See sample responses on page 33.
3. The best answer is C. The consensus among educational researchers is that students will learn only when motivated. To be motivated to learn, students must find academic activities meaningful and worthwhile and work toward learning goals (to gain knowledge and master skills), not merely toward performance goals (to appear capable in the eyes of others). By discussing learning goals with the students, the teacher helps them have motivation to learn.
4. The best answer is A. A scaffold is a temporary learning aid, designed to help the student to grow in independence as a learner; thus, once the skill the scaffold is intended to help teach has been mastered, the scaffold should be withdrawn. Asking the students to come up with their own list of terms to use in the new assignment in effect withdraws the scaffold and encourages independence. None of the actions described in the other answer choices does these things.
5. The best answer is C. Formal accuracy in pronunciation should not be required initially or be expected in the beginning stages of language development. Learning should focus initially on comprehension rather than on correct and incorrect usage.
6. The best answer is B. The concept of “least restrictive” stems from P.L. 94-142 and subsequent legislation regarding the education of students with disabilities and implies that special students are not to be classified by disability and given permanent special placement on the basis of these classifications. Rather, they are to be moved to special settings only if necessary and only for as long as necessary.
7. The best answer is C. A large task is more easily accomplished by breaking the task into smaller parts. Choices A and D involve writing a paper first, which is

exactly what the student finds insurmountable. Choice B may also be too large or too unfamiliar a task for the student to be successful.

8. The best answer is A. Criterion-referenced tests are developed to assess knowledge and understanding of specified standards for learning particular content. They are designed to enable individual students or groups of students who have studied the same material to assess how much they have learned as compared to the criterion, or standard. A norm-group performance is not required for a criterion-referenced test, since the goal is to measure knowledge against a predefined knowledge standard. Whether a person passes a criterion-referenced test is not judged in relation to how other applicants performed (which would be norm-referenced) but in relation to an established standard for minimum number correct.

9. The best answer is C. Constructivist teaching depends on the connection of new information to already learned information or understandings, whether or not they are accurate. The passage says, “The point of constructivist instruction is to have students reflect on their questions about new concepts in order to uncover their misconceptions. If a student cannot reason out the answer, this indicates a conceptual problem that the teacher needs to address.” Thus, a consideration of barriers and/or misconceptions in response to the presentation of new material is an essential follow-up to a constructivist lesson.

10. The best answer is D. The second author maintains that students require teacher guidance and a direct expression of the teacher’s expert content knowledge in order to learn most effectively. Choices A (avoiding lecturing), B (learning without teacher intervention), and C (de-emphasis on content knowledge) are not consistent with this approach to teaching. Direct guidance of students’ thinking is consistent with the second author’s approach.