



# California Subject Examinations for Teachers®

## TEST GUIDE

### PHYSICAL EDUCATION SUBTEST I

#### Subtest Description

This document contains the Physical Education subject matter requirements arranged according to the domains covered by Subtest I of CSET: Physical Education. In parentheses after each named domain is the domain code from the Physical Education subject matter requirements.

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CS-TG-SD129X-01

**Physical Education**  
**Subtest I: Growth, Motor Development, and Motor Learning;**  
**The Science of Human Movement**

**Part I: Content Domains for Subject Matter Understanding and Skill in  
Physical Education**

**GROWTH, MOTOR DEVELOPMENT, AND MOTOR LEARNING (SMR Domain 2)**

Candidates must demonstrate an understanding of human growth and development processes, as well as how these processes interact with and influence motor learning, in order to teach the movement knowledge and skills contained in the Challenge Standards for Student Success: Physical Education (1998). Foundational knowledge of physical growth, motor development, and motor learning helps ensure that candidates are prepared to provide students, including students with disabilities, with an appropriate, safe, and effective physical education program.

**0001 Individual Differences (SMR 2.1)**

- a. Demonstrate knowledge of individual motor and physical fitness variables such as agility, balance, flexibility, coordination, strength, and speed.
- b. Analyze individual physical changes and their impact on mechanical and physiological aspects of motor performance.

**0002 Perceptual-Motor Development (SMR 2.2)**

Know components of perceptual-motor development such as visual, auditory, tactile, and kinesthetic discrimination and how they relate to skill acquisition and performance.

**0003 Physical and Developmental Changes (SMR 2.3)**

Demonstrate an understanding of physical changes that occur with growth, development, and age, and analyze their impact on mechanical and physiological aspects of motor performance.

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**0004 Motor Learning (SMR 2.4)**

Relate classical and current theories and models of motor learning to fundamental concepts underlying skill acquisition such as transfer, feedback, retention, practice, readiness, and observational learning.

**0005 Motor Task Analysis (SMR 2.5)**

Apply knowledge of motor task analysis as it relates to motor development, enabling students to select or design motor tasks that are appropriate to the process of learning movement skills.

**0006 Conditions Affecting Growth, Motor Development, and Motor Learning (SMR 2.6)**

Analyze conditions that affect growth, motor development, and motor learning such as diseases, disabilities, and social, emotional, and environmental factors.

**0007 Developmental Differences Affecting Motor Skills Acquisition (SMR 2.7)**

Demonstrate an understanding of developmental differences in motor learning and factors that affect motor skills acquisition for individuals with disabilities.

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 1 and 2. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standard 2.)

**THE SCIENCE OF HUMAN MOVEMENT (SMR Domain 3)**

Candidates demonstrate an understanding of the scientific bases of human movement. To guide students in meeting the goals identified in the Challenge Standards for Student Success: Physical Education (1998), candidates must be able to analyze motion according to scientific principles and apply that knowledge with consideration for individual differences, including disabilities. A broad and deep understanding of the sciences involved in human movement, including anatomy, physiology, kinesiology/biomechanics, exercise physiology, and health-related fitness, enables candidates to understand and explain motion; recognize changes in body systems resulting from practice, development, and response to exercise; and provide instruction in safe and efficient body mechanics.

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**0008 Body Systems (SMR 3.1)**

Demonstrate knowledge of the skeletal system, the general organization of the nervous system, the actions of muscles and major muscle groups, and the interaction of these systems with one another and with the external environment in producing motion.

**0009 Basic Kinematic and Kinetic Principles of Motion (SMR 3.2)**

Apply knowledge of basic kinematic and kinetic principles of motion including, but not limited to, summation of forces of equilibrium, vectors, and force-velocity relationships.

**0010 Biomechanical Principles (SMR 3.3)**

- a. Apply knowledge of biomechanical principles (e.g., Newton's laws of motion, center of gravity) to a broad range of movement activities.
- b. Apply knowledge of biomechanical principles in relation to individual differences and to body mechanics for safe and efficient movement/motion.

**0011 Movement Analysis (SMR 3.4)**

Apply knowledge of movement analysis to movement patterns, including technologies for movement analysis.

**0012 Effects of Exercise (SMR 3.5)**

Demonstrate knowledge of acute and chronic effects of exercise on body systems (e.g., pulmonary, cardiorespiratory, muscular, skeletal, neural, endocrine) and on energy systems utilized during exercise.

**0013 Components of Wellness (SMR 3.6)**

- a. Demonstrate an understanding of components of wellness, such as nutrition, stress management, cardiorespiratory risk reduction, and physical fitness (i.e., cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition).
- b. Analyze the effects of factors such as gender, age, disability, environment, and substance abuse on physical fitness.

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**0014 Physical Fitness Testing and Prescription (SMR 3.7)**

Demonstrate knowledge of physical fitness testing, exercise prescription, and fitness programs for all individuals, including those with disabilities, as well as the components of health-related fitness and technologies for fitness testing and training.

**0015 Factors Affecting Physical Performance (SMR 3.8)**

Analyze the effects of factors such as gender, age, disability, environment, and substance abuse on physical performance.

**0016 Safety, Injury Prevention, and First Aid (SMR 3.9)**

Demonstrate an understanding of safety-related topics such as the prevention and care of injuries, cardiopulmonary resuscitation, and first aid.

**0017 Physiological Principles of Fitness (SMR 3.10)**

Apply knowledge of physiological principles (e.g., overload, specificity, FIT, reversibility) to the components of physical fitness.

(Challenge Standards for Student Success: Physical Education, Kindergarten Through High School (1998), Standards 1, 2, 3, and 4. Physical Education Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (1994), Standards 3, 5, and 10.)

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**Part II: Subject Matter Skills and Abilities**  
**Applicable to the Content Domains in Physical Education**

Candidates apply knowledge of the theoretical and scientific bases of human movement to design, select, and modify physical activities that reflect students' developmental characteristics and individual differences. They draw upon knowledge of the subdisciplines of kinesiology to ensure that students are able to participate safely and effectively in physical education activities designed to develop and enhance their movement skills and movement knowledge.

Candidates understand significant factors and influences in developing, analyzing, and assessing basic motor skills. They know how to structure developmentally appropriate activities to promote maximum participation, inclusion, and active engagement in a wide range of movement forms, including traditional and nontraditional games, sports, dance, and fitness activities. They select and create cooperative and competitive activities that promote trust building, problem solving, collaboration, leadership, and strategic planning. They design fitness programs and recommend exercises and activities that are based on sound physiological and fitness training principles. Candidates understand the short-term and long-term benefits of a healthy, active lifestyle and know how to demonstrate and communicate these benefits to students.

Candidates apply knowledge of the sociological, psychological, philosophical, historical, and cultural dimensions of physical education to select and develop activities and approaches that promote students' development of positive personal and social behaviors, including social interaction and communication skills. They are aware of the role of movement activities in helping participants develop a sense of individual identity and group member identity. Candidates use knowledge of historical and cultural influences on games, sports, dance, and other physical activities to enhance student awareness and appreciation of cultural and artistic diversity, the role of movement in society, and the use of physical activity for enjoyment and self-expression. They recognize the importance of inclusion, fair play, and etiquette, as well as respect and consideration for self and others. Candidates understand that many factors influence an individual's activity choices and carefully evaluate the appropriateness of activities in terms of participants' age and developmental levels, motor proficiency, gender, cultural background, and physical strengths and limitations. Candidates apply knowledge of student development and learning to select activities and approaches that help students experience the benefits of individual challenges and successes, and they use principles of learning and motivation to spark students' interest in physical activity and their desire to engage in lifelong physical activity.

Candidates use their knowledge of assessment principles and procedures to collect, analyze, interpret, and summarize assessment data. They know physical fitness testing principles, technologies, and techniques and are prepared to administer the state-mandated physical fitness assessment. Candidates are able to interpret and communicate test results, performance profiles, and other types of assessment information in a meaningful and sensitive way.

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Candidates understand connections among the subdisciplines of kinesiology, as well as connections between physical education and other subject areas and use this understanding to provide learning activities that promote student skill acquisition and performance. Candidates select, adapt, and modify activities based on program goals, individual differences, and individual needs so that all students have an opportunity to develop their understanding and application of movement skills and concepts and to use this knowledge in exploring other academic and life skills areas.