

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT

INTRODUCTION TO KINESIOLOGY

DATE: JANUARY 2014

SUBJECT AREA: ELECTIVE

PROPOSED GRADE LEVEL(S): 11-12

COURSE LENGTH: One Year / Term

GRADING A-F

NUMBER OF CREDITS: 5 per semester

PREREQUISITES: Fitness 1

COURSE DESCRIPTION: Foundations of Kinesiology explores the multifaceted world of kinesiology: the study of human movement and the body's response to exercise. It examines the systems, factors, and principles involved in human development within the context of society. Relevant fields in the study of kinesiology include anatomy, physiology, biomechanics, nutrition, motor learning and control, and sport psychology, sociology, and philosophy. The relevant career options available to students in the field are also examined.

GENERAL GOALS/ESSENTIAL QUESTIONS:

Students will understand and explain how the body response to exercise in a physiological manner.

Students will learn and apply the fields of kinesiology; anatomy, physiology, biomechanics, nutrition, motor learning, and sport psychology, sociology, and philosophy.

Students will gain knowledge of career options available in the field of kinesiology.

CCSS READING COMPONENT:

The Foundations of Kinesiology is a comprehensive course providing basic knowledge of kinesiology. The course will use the Foundations of Kinesiology lesson plans and curriculum. This will be supplemented with various selected articles on Kinesiology. A variety of texts will be used in order to impart knowledge and understanding. The use of diagrams, detailed steps, demonstrations, and video clips will be utilized in order to teach the different components of the class. These informational sources, in addition to teacher led discussions and lectures, will provide the majority of the content knowledge.

CCSS WRITING COMPONENT:

Students will each have a composite notebook where they will record lessons, lectures, and class discussions. There will be essential written response questions and analytical comparisons where students will demonstrate their knowledge and reasoning.

CCSS SPEAKING AND LISTENING COMPONENTS:

Class discussion will be utilized in order to create a safe learning environment which fosters teamwork and support for every student. Students will work in teams, pairs, or as a whole where communication will be critical for success. Students will improve their ability to listen and learn from oral instruction and cues.

DETAILED UNITS OF INSTRUCTION:

1. Introduction to Kinesiology
 - The meaning, significance, and scope of the focus of kinesiology
 - The meaning of kinesiology in your own life
2. Human Anatomy: The pieces of the body puzzle
 - Demonstrate an understanding of the basis for anatomical description and analysis
 - Use correct anatomical terminology when describing the human body and performance
 - Describe the various parts of the skeletal and muscular systems and the ways in which they relate to human performance
 - Demonstrate an understanding of the organization and complexity of human anatomy
3. Out of Harm's Way: Sport Injuries
 - Identify the factors associated with injury prevention
 - Describe the common musculoskeletal injuries
 - Demonstrate an understanding of the implications of various chronic and acute injuries and how to treat them
4. Muscle Structure and Function
 - Describe the macro and micro structures of skeletal muscles
 - Describe muscle contraction and explain the sliding filament theory
 - Demonstrate an understanding of nerve-muscle interaction
 - Differentiate among types of muscle fibers
 - Describe group action of muscles
 - Discuss muscle adaptation to strength training
5. Muscles at Work
 - Differentiate between the various types of muscle contractions
 - Describe the factors that influence strength development
 - Identify the components of strength
 - Discuss the relationships between the various components of strength
6. Energy for Muscular Activity
 - Use and understand the basic terminology of human metabolism related to exercise
 - Describe the basic chemical processes the body uses to produce energy in the muscles
 - Demonstrate an understanding of the body's three energy systems and their contribution to muscular contraction and activity
 - Discuss the effects of training and exercise on the energy systems
7. The Heart and Lungs at Work
 - Explain the function and control of the cardiovascular and respiratory systems
 - Describe the relationship between the cardiorespiratory system and energy production
 - Explain the measures that are used to evaluate and describe the various components of the cardiovascular and respiratory systems
 - Describe the acute and chronic effects of physical activity on the body
 - Analyze the effects of different environmental conditions on the body during physical activity
8. How Do I Move? The Science of Biomechanics
 - Distinguish between different types and causes of human motion
 - Identify Newton's laws of motion and describe practical illustrations of the laws
 - Describe the expected path and motion of a projectile
 - Describe the conservation of momentum within the body, and explain why changes in the configuration of a rotating airborne body produce changes in its angular velocity
 - Explain the role of friction in the context of fluid dynamics
 - Evaluate qualitative analyses of human motion
9. Technology and Sport
 - Describe the role of technology in the refinement of sport

Explain how technology has led to changes in sports equipment
Recognize that not all technological advancement is for the better

10. Growth, Motor Development, and Physical Literacy

Explain the importance of early exposure to physical activity
Define growth, motor development, and physical literacy and outline the stages of growth and motor development
Describe various factors affecting optimal growth, motor development, and physical literacy across the life cycle
Explain the necessity of physical activity for optimal growth, motor development, and physical literacy
Demonstrate an understanding of the differences between the sexes in growth and motor development across the life cycle
Demonstrate an understanding of individual differences in growth and motor development

11. Information Processing in Human Movement

Describe the structure and function of the human nervous system as it relates to information processing
Explain the ways humans perceive and process information
Demonstrate an understanding of the role of feedback in motor control
Explain the advantages and disadvantages of closed and open loop control systems in motor control

12. Movement Intelligence: A Vast Store of Motor Programs

Explain the concept of movement intelligence in motor skill development
Describe the rationale for and characteristics of motor programs and movement abilities
Discuss the relationship between motor abilities, motor programs, and skills
Define motor skills and describe their characteristics
Apply knowledge of the characteristics of a skill to analyze movement
Explain classification of skills and demonstrate an ability to design learning progression for an open skill

13. Motor Learning in Practice: Skill Acquisition

Explain the skill acquisition process
Describe the stages of learning a skill
Describe the types of feedback and their roles in skill learning
Apply motor learning principles to teach a skill
Describe the types of transfer and apply transfer principles to learning a skill
Use effective practice methods when designing a learning environment

14. Introduction to Health and Wellness

Define health and its various dimensions
Describe the factors influencing your personal health and wellness
Discuss the value systems that affect decisions about your personal health and wellness
Demonstrate an understanding that health is a personal responsibility and lifelong journey

15. Physical Fitness

Identify and discuss the various components of physical fitness
Describe the contribution of physical fitness to overall health
Evaluate the effects of various training methods on performance
Examine your own physical fitness level and develop an awareness of personal fitness requirements

16. The Nutrition Connection

Describe the anatomy and physiology of the digestive system
Identify the nutritional requirements and components of a healthy diet
Outline the official nutritional advice provided for the United States
Explain the unique nutritional needs of various populations
Describe the effects of nutrition on athletic performance

17. Weight Management: Finding a Healthy Balance
 - Discuss the differences between overweight and obese and their implications for health
 - Explain the concept of energy balance in weight management
 - Describe the role of exercise and lifestyle modification in maintaining a healthy body weight
 - Discuss the consequences of dieting and eating disorders
 - Set and evaluate personal goals for maintaining a healthy body weight
18. The Mental Side of Human Performance
 - Define the topic of sport psychology
 - Discuss the influence of personality on performance
 - Describe the effect of sport on personality
 - Explain the relationship between anxiety and performance
 - Describe the effect of motivation on sport performance
 - Explain the effects of the audience on athletic accomplishments
19. Society, Culture, and Sport
 - Provide a brief history of the development of physical activity and sport in America
 - Describe the history of the Olympic movement
 - Discuss the accomplishments of some American sports heroes
 - Explain how the commercialization of sport in modern society has evolved and how it impacts the consumer
20. Physical Activity and Sport Issues
 - Identify the major issues and controversies in the field of sport sociology
 - Examine the impact of our “win at all cost” philosophy on a sports participant’s behavior
 - Foster a greater awareness of the needs of diverse groups in your community
 - Examine personal attitudes and values critically as they relate to modern day sport and physical activity
21. Philosophy of Sport
 - Define philosophy of sport and identify the tools of philosophical analysis
 - Define and give examples of the internal and external goods of sport
 - Describe the two components of athletic integrity
 - Explain the aesthetic components of sport and distinguish between aesthetic and nonaesthetic sports
22. Technology, Sport, and the Body
 - Define technology as it relates to sport and exercise
 - Explain four different theoretical positions regarding technology
 - Describe how science and technology have transformed sport over the years, especially elite sport
 - Identify and provide examples of the differently types of sport technologies
 - Argue the pros and cons of technology in sport
23. Career Opportunities
 - Describe the diversity of college and university programs in physical education
 - Identify career opportunities available to kinesiology graduates
 - Describe the role of kinesiology in today’s society

TEXTBOOKS AND RESOURCE MATERIALS:

Foundations of Kinesiology: Studying Human Movement and Health 2nd Edition; Klavora, Peter

COMMON CORE STANDARDS TO BE ADDRESSED:

Below each Common Core Standard are examples of how the Foundations of Kinesiology course will improve the knowledge, skills, and reasoning abilities of the students and the products they are creating to demonstrate their understanding has been given.

College and Career Readiness Anchor Standards for Reading

ELA Standards for Science and Technical Subjects grades 11-12

SUBJECT AREA CONTENT STANDARDS TO BE ADDRESSED:

Standard 1 Students will demonstrate knowledge of and competency of motor skills, movement, patterns, and strategies needed to perform a variety of physical activities.

Standard 2 Students demonstrate knowledge of fitness concepts, principles, and strategies.

Standard 3 Students demonstrate knowledge of psychological and sociological concepts, principles, and strategies that apply to the learning and performance of physical activity.

Standard 1 (Health) Students will understand ways in which they can enhance and maintain their own health and well-being.

Standard 4 (Health) Students will play a positive, active role in promoting the health of their families.

Standard 9 (Health) Students will know how to identify products, services, and information that may be helpful or harmful to their health.

DISTRICT ESLRs TO BE ADDRESSED:

Self Directed Learners: who will be able to utilize their knowledge of anatomy and physiology to understanding relation to health and fitness and be able to integrate knowledge of physiology and anatomy in lifestyle choices.

Effective Communicators: who will demonstrate responsible social behavior including respect for others. This requires the ability to communicate effectively with peers and teachers in all components of class.

Quality Producers/Performers: who will take pride in the quality of their work and who will use time management and organizational skills to produce a quality product.

Constructive Thinkers: who are able to take learned information and integrate it into a construct, holistic, perspective, that allows for free and independent thought processes when dealing with health/fitness, and physiology.

Collaborative Workers: who are able to work cooperatively and collaboratively with a wide diversity of fellow students to facilitate an understanding of the course work.

Responsible Citizens: who practice democratic values with integrity and responsibility within the classroom to help foster a positive learning environment for all sports medicine students.

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