Flagler County AICE Physical Education
2025-2026 Scope and Sequence

Year at a glance: Please note that the map is based on a 180-day schedule.

Quarter 1: August 11, 2025- October 10, 2025	
Topics	Learning Objectives
1 Joints, movement and muscles 1.1 Joints and movements	• Identify the types of synovial joint and the articulating bones at the shoulder, elbow, wrist, radioulnar, hip, knee and ankle joints. • Describe the types of movement at each joint and the main agonist muscle that causes these movements.
1.2 Functions of muscles	• Explain the functions of muscles as agonists, antagonists and fixators.
1.3 Types of muscle contraction	• Explain concentric, eccentric and isometric muscle contractions.
1.4 Muscle fiber types	• Describe the structure and function of slow oxidative, fast oxidative and fast glycolytic muscle fibers. • Explain the use of different muscle fiber types using practical examples.
1.5 Movement analysis of actions	• Analyze human movement during sporting actions

2 Biomechanics
2.1 Linear Motion
	• Explain linear motion.
	• Describe, calculate and compare:
	  ○ distance
	  ○ displacement
	  ○ speed
	  ○ velocity

	○ Acceleration ○ momentum. ● Draw and interpret graphs of linear motion.
2.2 Newton's laws of motion	● Explain the concepts of force, mass, weight, inertia and acceleration and how they create and affect linear motion. ● Explain the forces acting during physical activity including: ○ Gravitational force or weight ○ air resistance ○ Friction ○ Reaction ○ action / muscular force ○ balanced and unbalanced forces. ● Describe and apply Newton's laws of motion to examples of human movement and practical examples.
2.3 Angular motion	● Explain angular motion. ● Explain angular momentum, moment of inertia and angular velocity and the relationship between them, using practical examples. ● Explain, using practical examples, factors that affect the moment of inertia of a body. ● Explain, using practical examples, the principle of conservation of angular momentum. ● Sketch and interpret graphs of angular momentum, moment of inertia and angular velocity.
2.4 Parabolic and non-parabolic flight	● Explain the factors that affect the flight paths of different objects. ● Explain the factors that affect the horizontal displacement of objects.
2.5 Properties of bodies and objects	● Explain the center of mass and factors that affect its position. ● Explain the factors that affect the stability of bodies using examples.

3 The cardiovascular system 3.1 Structure and function of the heart	• Explain the structure and functions of the features of the heart and the pathway of blood through the heart.
3.2 The conduction system of the heart and the cardiac cycle	• Explain the conduction system of the heart, the cardiac cycle and the link between them.
3.3 Factors affecting cardiac output	• Explain heart rate, stroke volume and cardiac output, the relationship between them. • State and compare typical values for heart rate, stroke volume and cardiac output at rest and during different intensities of exercise for an untrained individual and a trained athlete. • Explain Starling's law of the heart. • Explain the regulation of heart rate at rest, during exercise and during recovery. • Explain the responses of heart rate, stroke volume and cardiac output at rest, immediately before exercise, during exercise of different intensities and during recovery and sketch and interpret graphs representing these responses. • Explain the physiological changes of heart rate, stroke volume and cardiac output as a result of long-term training.
3.4 Function of the vascular system	• Explain venous return mechanisms. • Explain the distribution of cardiac output at rest, during exercise and during recovery.
Quarter 2: October 14, 2025-December 19, 2025	
Topics	Learning Objectives
4 The respiratory system 4.1 Mechanics and regulation of breathing	• Explain the mechanics of breathing and the roles of the respiratory muscles during inspiration and expiration at rest, during exercise and during recovery. • State and compare typical values for breathing rate, tidal volume and minute ventilation at rest and during different intensities of exercise for an untrained individual and a trained athlete.

	● Explain lung volumes including the use of equations and interpret graphs and spirometer traces of these lung volumes before exercise, during exercise of different intensities and during recovery. ● Explain the regulation of breathing at rest, during exercise, and during recovery. ● Explain the physiological changes of lung volumes as a result of long-term training.
4.2 Gaseous exchange and respiration	● Explain gaseous exchange at the lungs and at the muscles at rest, during exercise and during recovery.
5 Skill and ability 5.1 Classification of skills	● Explain the following skill continua: ○ Muscular involvement ○ Environmental influence ○ Continuity ○ Pacing ○ Difficulty ○ Organization. ● Justify the classification of skills using skill continua.
5.2 Abilities	● Explain the characteristics of abilities
6 Theories of learning 6.1 Motor Programmes	● Explain motor programmes. ● Explain how motor programmes are created, stored and initiated. ● Describe, using examples, motor programmes and their associated subroutines.
6.2 Theories related to the learning of motor skills	● Explain and evaluate the following theories of learning, using examples: ○ Operant conditioning theory ○ cognitive theory (Gestalt) ○ Bandura's observational learning theory.
6.3 Schmidt's schema theory	● Explain the use of schema theory, including the rules of schema, to develop movement skills.

Quarter 3: January 7, 2026- March 12, 2026	
Topics	Learning Objectives
7 Information processing 7.1 Theory of information	● Explain information processing
7.2 Feedback	● Explain the importance and functions of feedback and different types of feedback.
7.3 Memory	● Explain the memory process and strategies to improve the storage of information in long-term memory.
7.4 Response time	● Explain the terms response time, reaction time and movement time and the relationship between them. ● Explain factors that affect reaction time and evaluate strategies to deceive opponents in sporting situations. ● Explain the benefits of a short response time in skilled performance and evaluate strategies to improve response time.
8 Practice and learning 8.1 Types of practice	● Explain and evaluate the following types of practice to develop skilled performance: ○ Whole ○ Part ○ Whole–part–whole ○ Progressive part ○ Massed and distributed ○ Fixed and varied.
8.2 Types of guidance	● Explain and evaluate the following types of guidance to develop skilled performance:

	○ Visual ○ Verbal ○ Manual ○ mechanical
8.3 Stages of Learning	● Describe the characteristics of the following stages of learning: ○ Cognitive ○ Associative ○ Autonomous. ● Evaluate the effective use of types of feedback, practice and guidance at different stages of learning.
8.4 Transfer of learning	● Define transfer of learning and explain the following types of transfer: ○ Positive ○ Negative ○ Zero ○ Proactive ○ Retroactive ○ Bilateral. ● Explain and evaluate strategies to optimize positive transfer and to limit negative transfer.
8.5 Motivation	● Explain and evaluate intrinsic and extrinsic motivation.
Quarter 4: March 23, 2026- May 28, 2026	
Topics	Learning Objectives
9 Sociocultural issues 9.1 The conceptual basis of sport and physical education	● Discuss the similarities, differences and interrelationships between the concept of sport and the concept of physical education.
9.2 Sport	● Describe the characteristics and explain the values of sport. ● Explain possible undesirable outcomes arising from sport.

9.3 Physical Education	● Describe the characteristics of physical education.
9.4 Regular participation	● Explain the factors affecting regular participation in physical activity. ● Evaluate the benefits of regular participation in physical activity, including those for the individual and for society.
9.5 Achieving excellence	● Describe an elite performer in sport. ● Evaluate the benefits and limitations of adopting an elitist policy for excellence in sport. ● Explain the provision needed for excellence in sport. ● Explain pathways to excellence in sport.
10 Ethics and deviance 10.1 Performance -enhancing drugs (PEDs)	● Explain why some sports performers use prohibited performance-enhancing drugs (PEDs). ● Explain the consequences of using prohibited PEDs. ● Explain and evaluate strategies to reduce the use of prohibited PEDs.
10.2 Violence	● Explain the causes of violence in sport in relation to performers and spectators at the event. ● Explain the consequences of violence in sport for the individual, the sport and society. ● Explain and evaluate strategies to prevent violence in sport by performers and by spectators at the event.
10.3 Competition manipulation	● Explain competition manipulation and the forms it may take in sport. ● Explain and evaluate strategies to reduce competition manipulation.

11 Commercialization and the media	● Explain the factors leading to the commercialisation of sport.
	● Explain the golden triangle (the relationship between sponsorship/business, the media and sport).
	● Evaluate commercialisation for:
	  ○ The performer or team
	  ○ The sponsor/business

	○ The event or sport ○ Primary spectators (at the event) ○ Secondary spectators (remote audience).
12 The use of technology	● Explain examples of the use of technology in sport. ● Evaluate the advantages and disadvantages of the use of technology for: ○ The performer, team or coach ○ The sponsor ○ The event, sport or official ○ Primary spectators (at the event) ○ Secondary spectators (remote audience).