East Penn School District

Curriculum and Instruction

Curriculum for:

Grade 10 Aquatics Grade 11/12 Wellness/Fitness

Course(s): Grade 10 Aquatics, Non-Swimmer Aquatics, Adapted Aquatics, 11th & 12th Wellness/Fitness, Adapted Wellness/Fitness

Grades: 10th, 11th, 12th

Department: Wellness/Fitness Length of Period (average minutes): 41 minutes

Periods per cycle: 3 Length of Course (yrs.): 0.50

Type of offering: _____ required _____elective Credit(s) awarded: 0.25

Developed by: Eleni Assise, Eric Bednar, Patrick Birns, Todd Breiner, Vincent D'Agostino, Natalie Deacon, Jeannine Martini, Laura Moye, Michael Seip, Lori Sheipe-Miller, Lisa Wells

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Enduring Understanding	Essential Questions	Content	Standard	Skills
10th Grade Aquatics				
Participation in physical activity impacts wellness throughout a lifetime	What does it mean to participate in physical activities?	When you are physically active on most, preferably all days of the week you are participating regularly in physical activity. There are many physical activities you can choose to help you be activities most days. The Physical Activity Pyramid has a variety of physical activities listed. Activities are put together on the physical Activity Pyramid by fitness and health benefits.	10.4.12.E. Analyze the interrelationships among regular participation in physical activity, motor skill improvement and the selection and engagement in lifetime physical activities.	Analyze impact of participation in physical activities on most days of the week and the relationship of improved motor skills through increasing strength, practicing skills, and gaining experience.
	How does regular participation in physical activities help you improve motor skills?	Regular participation in physical activities can help you improve your motor skills. You will want to improve your motor skills to be a skillful mover. There are many reasons why regular participation can help you become a skillful mover. Regular participation in physical activity can make you stronger. Regular participation in physical activity can give you time to practice. Regular participation in physical activity can give you time to learn through experience.		
	Why does participating regularly in physical activities improve motor skills?	 Regular participation in physical activity provides a good time for you to become stronger. As you become stronger you might find that you get better at some motor skills. Regular participation in physical activity provides a good time for your heart and lungs to become stronger. 		
	Why else does participating regularly in physical activities improve motor skills?	 Regular participation in physical activities provides a good time for you to practice your motor skills. When you practice a skill, do the skill again and again to learn to do the skill well. Here are two important ideas (concepts) to help you practice skills to improve: Make sure you know 'how to do; the skill correctly. Learn the important parts (critical elements) of the skill. Correctly practice the skill using critical 		

	Why else does participating in physical activities improve motor skills?	elements. Regular participation in physical activities provides a good time for you to gain experience. When you learn by doing we call that experience. Experience also means to try something new. Regular participation in a variety of physical activities allows you to use both meanings of experience. Experience helps you improve your motor skills and become a skillful mover.		
Quality lifelong movement is based on scientific concepts/principles.	 How do you apply knowledge of movement skill, skill related fitness and movement concepts to promote personal lifelong learning? How do you promote life-long participation for the achievement of personal fitness? How do you identify and evaluate physical activities that promote personal lifelong learning? 	 Students must learn to identify movement skills, skill related fitness and movement concepts within the context of game play, fitness activities, and dance. Life-long participation gives students an overview of the skills, knowledge, motivation, and independent problem-solving skills they need to live physically active healthy lives (Physical Best, 2006). The emphasis is on helping students become responsible for their own planning and learning about personal fitness and health achievement through relevant meaningful relationships. Students select a physical activity based on their own personal interest and motivation. Factors that will impact this selection will include adequate fitness level, skill level, availability, cost, personal benefits gained or lost during activity, physical benefits, social benefits, and the frequency in 	10.5.12.A. Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.	 Apply skill-related fitness components, movement skills, movement concepts and game strategies to promote participation in lifelong physical activities. Identify and evaluate physical activities that promote participation for a lifetime.
Quality lifelong movement is based on scientific concepts/principles.	What are the practice session criteria and movement criteria for judging the impact of practice strategies for skill development from the inconsistent to consistent stage?	 which the person participates. Practice sessions for inconsistent stage performers should consist of self-paced environments using 	10.5.12.C. Evaluate the impact of practice strategies on skill development and improvement.	Evaluate how mental and physical practice strategies increase skill development and skill improvement by changing from coordinated skill movement to automatic response.

 What will be produced so the impact of practice strategies can be evaluated? 	Practice records: Documentation of implemented practice strategies and skill performance results before, during, and after practice.
 What are the practice criteria and movement criteria for judging the impact of practice strategies for skill development from the consistent to the automatic stage? 	 Criteria for judging the effect of practice strategies on consistent to automatic skill development: Practice sessions should consist of constant physical and mental practice of self-paced skills and variable physical and mental practice in changing environments for externally paced skills. Movements of the body should change from coordinated skill performance to automatic, mechanical performances that appear effortless.
What are the practice session criteria and movement criteria for judging the impact of practice strategies for skill improvement in self-paced and externally-paced skills?	Criteria for judging the effect of practice strategies on the improvement of self-paced skills: 1. Have the practice sessions for self-paced skills consist of constant practice physical practice to refine the timing of the skill and/or enhance the complexity of the skill using changes in speed, height, direction, force, body part, relationship to a partner or equipment; of the skill with more speed, height, or change in direction, force, body part or relationship to a partner or equipment; and mental practice of the critical performance cues. 2. Have the timing of self-paced movements been refined with changes from mistimed to smooth and fluid? 3. Has the complexity of self-paced skills been enhanced with changes in speed, height, direction, force, body part relationship to a partner or equipment, and mental practice of the critical cues needed to execute the variable? Criteria for judging the effect of practice strategies on the improvement of externally-paced skills: 1. Have the practice sessions for externally-paced skills consisted of: variable practice of the skill in response to a changing environment and mental practice of the knowledge or result cues (thoughts of when and how to move in response to situations on will encounter)?

	Has the result of the movement changed (to meet the goal of the developmentally appropriate situation)?	• Is the skill higher, faster, stronger, longer, at the right time, speed, location; in the desired sequence with other skills in response to game conditions.		
Quality lifelong movement is based on scientific concepts/principles.	What is efficiency of movement?	Efficiency of movement is the state or quality of competence in performance with minimum expenditure of time and distance.	10.5.12.E. Evaluate movement forms for appropriate application of scientific and biomechanical principles.	Evaluate how efficiency of movement is influenced by scientific and biomechanical principles during various physical
	What is mechanical advantage?	 Mechanical advantage is the ratio between the force put into a machine and the force that comes out of the same machine. 	 efficiency of movement mechanical advantage kinetic energy potential energy inertia safety 	activities.
	• How does energy affect mechanical advantage?	 Energy is the ability of a person or object to do mechanical work. To apply force over a distance against resistance. 		
	What are the two forms of energy?	 Energy: the capacity of an athlete to do work, Mechanically, energy takes two forms: 1. Potential energy that is energy due to position or deformation 2. Kinetic energy that is energy due to motion Energy due to the motion of an object that is half of the mass times the square of the velocity of the object. Kinetic energy is the energy of an object possessed by virtue of its motion. Whenever any person is on the move, he/she has both momentum and kinetic energy. Think of a car skid- imagine you are driving your car at 10 mph and you suddenly slam on your breaks and you skid 5 feet. What would happen if you were driving 20 mph and you suddenly skid? In this simulation, you doubled your velocity, which squares its effect on the car's kinetic energy and its ability to do mechanical work (in the skid). Consequently, your car's stopping distance will be 30 feet (four times longer than the original of 5 feet). When you drive you must leave larger distance between you and the car ahead of you. More mass plus more speed = greater kinetic energy. Changing velocity means changing kinetic energy- if more work is done there is a greater change in energy. 		

	What is potential energy?	Potential energy is energy due to position or deformation.		
	 How does an athlete use both kinetic and potential energy? 	• Kinetic energy is developed during the approach because of the person's mass and the mass of the pole in motion. When the pole is planted for the take-off potential energy loads it with deformation energy.(Ex: a pole vaulter)		
	 Why is inertia important for evaluating movement form? 	The property of an object or person to resist change in motion. Remember, inertia is the quantity with depends solely upon mass.		
	• What is safety?	Safety is the knowledge, attitude, and confidence that a person needs to prevent injury.		
	 What biomechanical principles are important for safety in everyday activities? How can you maximize safety in a physical activity setting? 	 According to Mohnsen (2011), there are 2 biomechanics principles that are important for participating safely in everyday activities: Lifting and carrying: Avoid bending and twisting, keep trunk erect, hold close to the body. Tension in the spinal muscles increases when a load is held in front of the body. These muscles must produce enough torque to balance the torque generated by the load to prevent the body from toppling forward. You want to minimize the work from the muscles by lifting and carrying a load close to the body. Exercising must be performed in a slow and controlled fashion to increase muscular strength and faster movements tend to increase power. Maximize safety with spotters, overhead spotting rigs, safety belts, crash pads, pits filled with foam rubber, or any other specialized equipment that fully protects your students while participating in a variety of activities. 		
11th & 12th Grade A Year				
Participation in physical activity impacts wellness throughout a lifetime.	Why do people choose the physical activities they participate in over a lifetime?	People choose personally developed and self- monitored activity goals based on assessment, interest, desires, and access to the activity that affect physical activity participation over a	10.4.12.A. Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness	Identify lifetime physical activities that strike interest, meet self-monitored activity goals, increase energy expenditure, and

	• W	low can participation in physical ctivity enhance my life? Vhat is an individualized hysical activity plan?	•	lifetime. Regular physical activity releases endorphins, which enable people to enjoy and sustain commitment to their personal activity goals. Physical activities are any movements that involve the body or parts of the body that increases energy expenditure. An individualized physical activity plan is a collection of games, sports, exercises, and activities based on an individual's personal preferences chosen to enhance health and well-being. This is an opportunity for individuals to be self-directed in designing personal programs that consist of activities which provide for the achievement of personal, social, emotional, health, cognitive, fitness, and activity goals. This plan must be flexible and it must change over time in order to allow for life-long participation.	and activity goals and promotes life-long participation.	•	physical activity plan.
		What must you do while engaging a your plan to reach your goals?	•	 Use the SMART, FITT, and training principles to: Monitor adherence and progress toward goals. Adjust participation so short-term goals are reached 			
	ac pi	low do you develop a long-term ctivity and personal fitness rogram that promotes a long erm healthy lifestyle?	•	A personal program must be flexible, changing over time to reflect the new capabilities, limitations, and changes in interest and fitness status to determine when and how to vary that way you are training and type of activities that will help you attain and maintain fitness throughout life.			
		ow do you evaluate a personal ness plan?	•	Chart results of engagement over time and reflect on connections among the plan, adherence, progress, and goal attainment.			
Participation in physical activity impacts wellness throughout a lifetime.	yo pl	What changes in your body do ou notice when you are hysically active during physical ducation class?	•	Changes in your body during physical activity include: heart beats faster, breathe faster and louder, body gets warm, begin to sweat and get tired.	10.4.12.B. Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities. • social	•	Recognize changes in the body when physically active including changes in heart rate, breathing, body temperature, and perceived exertion.
		low can we tell that our heart ate is changing?	•	You can feel your heart rate by placing your hand on your chest over your heart and counting the	physiological psychological	•	Comprehend the differences between moderate and vigorous

	 How can we tell that our breathing rate is changing? What changes can we feel in our heart and breathing rates during moderate physical Activity? What changes can you feel in your heart and breathing during vigorous physical activity? 	beats. When you feel the beat, you know your heart is pumping blood to your body through blood vessels. During physical activity, our hearts beat faster and heavier than when we are at rest. • Your breathing rate is the number of breaths you take in a minute. As you take in air, count each inhale. As you inhale your chest expands (gets larger) b/c you are filling your lungs with air. During physical activity, our breathing rate is faster and heavier than when we are at rest. • Compared to being at rest, your heart and breathing rates will increase slightly during moderate activity. You may notice your heart beating harder and your breathing being harder, but you will still be able to talk to someone while being moderately physically active. • Vigorous physical activity that makes your heart beat much faster and harder also make your heart stronger. Likewise, vigorous physical activities that make you breathe much faster and harder make your lungs stronger. You will find it difficult to talk to someone while being vigorously physically active.	physical activities. • Analyze the impact of regular participation in moderate to vigorous physical activities.
Participation in physical activity impacts wellness throughout a lifetime.	 How do adult groups interact? What are important strategies for goal setting? 	 Adults often form groups to reach a common goal. To facilitate reaching the goal they must make sure the goal is clear, engage in open communication and share responsibility for reaching the goal. To assess how to use or if a group is using strategies that enhance adult interaction, design checklists from the characteristics of each adult interaction category listed. Goal Setting: Set specific goals: Specific goals are the most motivating. Measuring goals to chart and document progress towards short-term goal. Adjusting goals: Flexible to change for unexpected challenges. Realistic goals: Attainable for the students. 	 Investigate the enhancement of group interaction through the strategies of shared responsibility, open communication, and goal setting. Use shared responsibility, open communication and goal setting to enhance group interactions.

	 Why is open communication important for group interactions? Why is shared responsibility important for group interactions? 	 Time based goals: Being able to complete the goal within the time frame. Communication enhances interaction because it is a free exchange of ideas, which encourages hearing all points of view. People share ideas and give their rationale without putting down the ideas of others. Shared Responsibility enhances interaction because people collaborate to reach a goal by: Listening with the intent to understand other's points of view Respecting and supporting other's ideas Giving the group their best ideas and positive energy Identifying key issues Determining results for a fully acceptable solution Identifying alternatives to achieve results Choosing the solution (consensus, unanimous, majority) Implementing the solution Evaluating the implementation for positive results, limitations, and the changes needed to eliminate the limitations. 		
Quality lifelong movement is based on scientific concepts/principles.	 How do you incorporate and synthesize knowledge of the concepts of open and closed skills to improve the quality of motor development (learning)? How do you incorporate and synthesize knowledge of the concepts of short-term and long-term memory to improve the quality of motor development (learning)? 	 Open and closed skills are used to classify the predictability of the movement environment. Closed skills are performed in predictable, unchanging environments. The performer controls the performance situation, e.g.: bowling, diving gymnastics, tennis serve, foul shooting, archery, and golf. Open skills are performed in unpredictable, ever-changing environments. Performers must continually adapt their response to the changing demands of the environment, e.g.: most aspects of field, net, and invasion games. Memory is the ability to store and recall information. Memory can be short-term or long-term. Short-term memory (STM) has a limited storage capacity of seven (plus/minus 2) 	10.5.12.B. Incorporate and synthesize knowledge of motor skill development concepts to improve the quality of motor skills. open and closed skills short-term and long-term memory aspects of good performance	 Refine open and closed skills and integrate short and long term memory to improve the quality of motor skills. Interpret the aspects of good performance through product and process goals to improve the quality of motor development.

	•	How do you determine the aspects of good performance? How do you incorporate and synthesize knowledge of the aspects of good performance to improve the quality of motor development (learning)?	•	pieces or chunks of information at a time for 20-30 seconds. Transfer of information from short-term to long-term memory requires processing the pieces or chunks of information from short-term memory through repetition, association or rehearsal. 2. Long term memory (LTM) has a limitless storage capacity and duration. "Short-term memory and long-term memory work together to integrate information about the current situation and past experiences to enable a performer to make, execute, and evaluate strategic and movement decisions" (Coker, 2004, 92). The aspects of good performance, the characteristics that make implementation of movements during a game, routine, dance, etc. high quality, are determined by the process or product goal of the performance. Good performance: 1. Process goal: the quality of performance is based on aspects of the movements. The quality is determined by the degree of automatic (seemingly effortless) execution of the movement or sequence of movements, e.g.: dives, dance, gymnastics, and skating routines. 2. Product goal: the quality of performance is based on the outcome of the movements. The quality is determined by the degree in which the intended outcome was achieved, e.g.: baskets made, pins knocked down, aces served, steals of the ball or base, shots blocked, turnovers, speed of a dash or height or distance of a jump.		
11th & 12th Grade B Year						
Participation in physical activity impacts wellness throughout a lifetime.	•	What changes in adult health status may affect the responses of the body systems during moderate to vigorous physical activity?	•	As we move into our adult years and enter the workforce, studies show that obesity increases and activity decreases. Most adult feel that increased health benefits are very important and are a motivator. Children and adolescents do not see the importance of health benefits. They do not think	10.4.12.C. Evaluate how changes in adult health status may affect the responses of the body systems during moderate to vigorous physical activity. • aging	Evaluate how changing adult health status affects responses of the body systems during moderate to vigorous physical activity, including increased risk of obesity, decreased activity,

				they will get ill. Initiating continuing behaviors throughout childhood, adolescence improves the chances that they will continue in adulthood. (NASPE, 2005 and Corbin and Lindsey, 2007)	• injury • disease		and potential for injury.
Participation in physical activity impacts wellness throughout a lifetime.	•	What is motivation? What factors influence the motivation of an adolescent in their physical activity and exercise preferences?	•	A testing of our ability or resources in a demanding but stimulating undertaking. Motivation is defined as the direction and intensity of one's effort. It can be intrinsic or extrinsic. Motivation factors may include: Having fun Be with friends Experience excitement Achieve success Develop fitness Pursuit of health Weight-loss	10.4.12.D. Evaluate factors that affect physical activity and exercise preferences of adults. • personal challenge • physical benefits • finances • motivation • access to activity • self-improvement	•	Evaluate the factors that affect activity and exercise preferences in adults including, personal challenge, motivation, physical benefits, financial situation, motivation levels, access to activity and desire for self-improvement.
	•	What are the physical benefits that influence physical activity and exercise preferences?	•	Physical benefits include: Improved cardiovascular fitness and health Greater lean body mass and less body fat Improved strength and muscular endurance Stronger bones Reduced risk of disease, i.e. SHD, cancer, Type II diabetes, etc.			
Quality lifelong movement is based on scientific concepts/principles.	•	How does an individual incorporate exercise principles to create a fitness program for personal use? How does knowledge of training principles help individuals to create a fitness program for personal use?	•	An individual must first identify activities based on personal preference and set realistic and attainable goals that incorporate the FITT principle with a specific intent. Knowledge of training principles such as: specificity, overload, progression, aerobic/anaerobic, circuit/interval and repetition/set will help an individual to improve fitness levels. Work to improve fitness level by applying training principles to participation in exercise and physical activities chosen with a specific intent (NASPE, 2004).	10.5.12.D. Incorporate and synthesize knowledge of exercise principles, training principles and health and skill-related fitness components to create a fitness program for personal use.	•	Create a personal fitness plan through incorporating training principals and health/skill related fitness components.
	•	How does an individual create a fitness plan for personal use that incorporates exercise and training	•	An individual must first identify activities based on personal preference and set realistic and attainable goals that incorporate exercise and			

	principles?	training principles with a specific intent.		
Quality lifelong movement is based on scientific concepts/principles.	How do you analyze the application of game strategies?	 Striking/fielding games- have offensive tactics that enable players to strike a ball with sufficient accuracy and/or power to elude players on the fielding team, and give time for the hitter to run between bases and score. Defensive tactics enable fielders to prevent scoring. Compare and contrast how offensive and defensive tactics are used in a variety of striking/fielding games: softball, baseball, kickball, cricket Net/wall games: have offensive tactics that enable players to send the ball back to the opponent so the opponent is unable to return it or is forced to make an error. Defensive tactics enable players to return the ball and keep it in bounds. Compare and contrast how offensive and defensive tactics are used in net/wall games: badminton, pickle ball, table tennis, tennis, volleyball, handball, paddleball, racquetball, platform tennis Invasion games- have offensive tactics the enable players to move the ball on the court or field to get near the goal and score. Defensive tactics enable players to intercept the object and prevent scoring. Compare and contrast how offensive and defensive tactics are used in a variety of invasion games: football, hockey, lacrosse, rugby, soccer, speedball, ultimate Frisbee, water polo 	10.5.12.F. Analyze the application of game strategies for different categories of physical activities. • individual • team • lifetime • outdoor	Analyze the different game strategies used in individual, team, lifetime and outdoor activities.

Materials and Resources:

Clover, Jim, and Jim Clover. Student Workbook to Accompany Sports Medicine Essentials, Second Edition: Core Concepts in Athletic Training and Fitness Instruction. Clifton Park, NY: Thomson Delmar Learning, 2007. Print.

Giles-Brown, Liz. Physical Education Assessment Toolkit. Champaign, IL: Human Kinetics, 2006. Print.

Martens, Rainer. Directing Youth Sports Programs. Champaign, IL: Human Kinetics, 2001. Print.

Mitchell, Stephen A., Judith L. Oslin, and Linda L. Griffin. Teaching Sport Concepts and Skills: A Tactical Games Approach. Champaign, IL: Human Kinetics, 2006. Print.

Physical Best Activity Guide: Middle and High School Levels. Champaign, IL: Human Kinetics, 2005. Print.

Teacher Designated Supplemental Materials