East Penn School District Curriculum and Instruction

Curriculum for: Modified Wellness/Fitness

Course(s): Modified Wellness/Fitness Individualized Program

Grades: 9th, 10th, 11th, 12th

Department: Wellness/Fitness

Periods per cycle: N/A

Length of Period (average minutes): N/A

Length of Course (yrs.): 0.50

Type of offering: _____ required ______elective

Credit(s) awarded: 0.25

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Modifications

Objective	Content	Evaluation
Students will participate in as many of the same activities that are in the Wellness/Fitness curriculum that his/her disability will allow (with doctor's approval).	• "Can Do List" will be completed by a doctor for each student.	• Refer to "Can Do List" and Wellness/Fitness Curriculum.
Students will participate in a modified wellness/fitness independent study curriculum due to religious reasoning.	 Admittance into this program will be determined by parental contact of the student's guidance counselor and grade level principal. Wellness/Fitness department chair will sign off approval on the "Can Do List". Independent study curriculum on individualized fitness plan. 	 Refer to guidance counselor and grade level principal Refer to independent study curriculum on individualized fitness plan
Students will participate in a modified wellness/fitness independent study curriculum due to long term medical leave resulting in being excused from standard class.	 "Can Do List" will be completed by a doctor for each student. Independent study curriculum on individualized fitness plan. 	 Refer to "Can Do List" and Wellness/Fitness curriculum. Refer to independent study curriculum on individualized fitness plan
Students will participate in a modified wellness/fitness independent study curriculum due to homebound placement as homebound schedule permits.	 Admittance into this program will be determined by student's guidance counselor, grade level principal, and Wellness/Fitness department chair, if homebound schedule permits. Independent study curriculum on individualized fitness plan. 	 Refer to guidance counselor and grade level principal. Refer to independent study curriculum on individualized fitness plan.

Enduring Understanding	Essential Questions	Content	Standard	Skills
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 lifetime. Regular physical activity releases endorphins, which enable people to enjoy and sustain commitment to their personal activity goals.	10.4.12.A. Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.	 Identify lifetime physical activities that strike interest, meet self-monitored activity goals, increase energy expenditure, and allow for adaptation throughout the lifetime. Develop a personal fitness portfolio.
	• How can participation in physical activity enhance my life?	• Physical activities are any movements that involve the body or parts of the body that increases energy expenditure.		• Establish a long term and short term goal related to their initial fitness assessment. Evaluate your goals and plans of angagement
	• What is an individualized physical activity plan?			 goals and plans of engagement keeping in mind the FITT principle and the SMART principle. Complete a fitness assessment
	• What must you do while engaging in 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 		
	• How do you develop a long-term activity and personal fitness program that promotes a long term 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.		
	• What are the health related fitness components that should be included in your personal fitness plan?	 Health related fitness components: Muscular strength, muscular endurance, flexibility, body composition, cardiovascular endurance, aerobic capacity, and heart rate. 		

	•	How do you evaluate a personal fitness 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.	•	What is a personal challenge? What is motivation? What factors influence the motivation of an adolescent in their physical activity and exercise preferences? What are the physical benefits that influence 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 Achieve success Develop fitness Pursuit of health Weight-loss 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, ie. SHD, cancer, Type II diabetes, ect. A testing of our ability or resources in a demanding but stimulating undertaking.
Participation in physical activity impacts wellness throughout a lifetime.	•	What changes in your body do you notice when you are physically active during physical education class? How can we tell that our heart rate is changing? How can we tell that our breathing rate is changing?	 Changes in your body during physical activity include: heart beats faster, breathe faster and louder, body gets warm, begin to sweat and get tired. You can feel your heart rate by placing your hand on your chest over your heart and counting the 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 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 Changes in your body during physical 10.4.12.B. Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities. social social physiological physiological physical activities. Complete of post fitness assessment and reflect on the health related components of fitness. Guilange your lungs with air. During physical Physical Physical Physical Physical Physical Physical activities. Physical activities.

	 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? 	 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. 		
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 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)	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 • injury • disease	 Evaluate how adult health status, including increased risk of obesity and decreased activity, affects responses of the body system during moderate and vigorous activity. Evaluate the body's response to moderate to vigorous physical activities within weekly fitness logs. Complete a post fitness assessment and reflect on the health related components of fitness. Complete a summative evaluation of total portfolio plan in a reflective research based assessment/paper.
Participation in physical activity impacts wellness throughout a lifetime.	 Why do people choose the physical activities they participate in over a lifetime? How can participation in physical 	 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 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 	10.4.12.A. Evaluate and engage in an individualized physical activity plan that supports achievement of personal fitness and activity goals and promotes life-long participation.	 Create an individualized weight training/exercise plan that is individually appropriate for meeting the student's muscular strength and endurance goals. Evaluate and engage in an individualized weight training/exercise plan that is individually appropriate for

	activity enhance my life?	the body or parts of the body that increases energy expenditure.		meeting the student's muscular strength and endurance goals.
	• What is an individualized physical activity plan?	• 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.		
	• What must you do while engaging in 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 		
	• How do you develop a long-term activity and personal fitness program that promotes a long term 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.		
	• How do you evaluate a personal fitness plan?	• Chart results of engagement over time and reflect on connections among the plan, adherence, progress, and goal attainment.		
Quality lifelong movement is based on scientific concepts/principles.	• How does an individual incorporate exercise principles to create a fitness program for personal use?	personal preference and set realistic and attainable goals that incorporate the FITT principle with a specific intent.	10.5.12.D. Incorporate and synthesize knowledge of exercise principles, training principles and health and skill-related fitness components to create a fitness	• Create a personal fitness plan through incorporating training principals and health/skill related fitness components.
	• How does knowledge of training principles help individuals to create a fitness program for personal use?		program for personal use.	

	• How does an individual create a fitness plan for personal use that incorporates exercise and training principles?	• An individual must first identify activities based on personal preference and set realistic and attainable goals that incorporate exercise and training principles with a specific intent.		
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, everchanging 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) pieces or chunks 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. 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). 	 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 as included in student developed individualized portfolio. Analyze 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 event performance the improvement of the synthesize knowledge of the synthesize knowledg	 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. Process goal: the quality of performance is based on aspects of the movements. The quality is determined by the degree of automatic 		
	of good performance to improve the quality of motor development (learning)?	 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.		
Participation in physical activity impacts wellness throughout a lifetime.	• How do adult groups interact?	• 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.	 10.4.12.F. Assess and use strategies for enhancing adult group interaction in physical activities. shared responsibility open communication goal setting 	 Assess group interactions including shared responsibility, open communication, and goal setting. Apply game strategies for different categories of physical activities.
	• What are important steps for goal setting?	 Goal Setting: O Set specific goals: Specific goals are the most motivating. O Measuring goals to chart and document progress towards short-term goal. O Adjusting goals: Flexible to change for unexpected challenges. O Realistic goals: Attainable for the students. O Time based goals: Being able to complete the goal within the time frame. 		
	• What is important for open communication in group settings?	• Open 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.		
	• What steps are important for establishing shared responsibility?	 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. 		
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 the interrelationship of participating in physical activities on most days of the week to help to improve motor skills. Reflect on how this helps through increasing strength, practicing skills, and gaining experience within the summative evaluation.
	• 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.		• Create accurate logs of weekly fitness plans.
	• 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. 		

	•	Why else does participating in physical activities improve motor skills?		 Correctly practice the skill using critical 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. 			
Participation in physical activity impacts wellness throughout a lifetime.	•	What changes in your body do you notice when you are physically active during physical education class? How can we tell that our heart rate is changing?	•	Changes in your body during physical activity include: heart beats faster, breathe faster and louder, body gets warm, begin to sweat and get tired. You can feel your heart rate by placing your hand on your chest over your heart and counting the 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.	 10.4.12.B. Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities. social physiological psychological 	•	 Recognize changes in the body when physically active including changes in heart rate, breathing, body temperature, and perceived exertion. Compare the difference between moderate and vigorous physical activities. Reflect on the skill related components of fitness within the posttest reflection.
	•	How can we tell that our breathing rate is changing?	•	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.			
	•	What changes can we feel in our heart and breathing rates during moderate physical Activity?	•	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.			
	•	What changes can you feel in your heart and breathing during vigorous physical activity?		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			

Quality lifelong movement is based on scientific concepts/principles.	How do you analyze the application of game strategies?	 <u>Striking/fielding games-</u> 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 <u>Net/wall games:</u> 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 <u>Invasion games-</u> have offensive tactics the enable players to intercept the object and prevent scoring. Compare and contrast how offensive and contrast how offensive and score. Defensive tactics enable players to return the ball, handball, paddleball, racquetball, platform tennis 	 10.5.12.F. Analyze the application of game strategies for different categories of physical activities. individual team lifetime outdoor 	 Distinguish the different game strategies used in individual, team, lifetime and outdoor activities. Incorporate a variety of lifetime activities within achievement of goals in individualized portfolio.
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 	 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 	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 knowledge of skill-related fitness components, movement skills, movement concepts and game strategies to promote participation in lifelong physical activities as included within the goals of student developed individualized portfolio.

		level, skill level, availability, cost, personal benefits gained or lost during activity, physical benefits, social benefits, and the frequency in which the person participates.		
Participation in physical activity impacts wellness throughout a lifetime.	• How do adult groups interact?	• 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.	 10.4.12.F. Assess and use strategies for enhancing adult group interaction in physical activities. shared responsibility open communication goal setting 	 Use open communication to exchange dialogue with a local fitness professional in regard to strategies for enhancing adult group interactions. Assess the importance of shared responsibility, open communication, and goal setting.
	• What are important steps for goal setting?	 Goal Setting: O Set specific goals: Specific goals are the most motivating. O Measuring goals to chart and document progress towards short-term goal. O Adjusting goals: Flexible to change for unexpected challenges. O Realistic goals: Attainable for the students. O Time based goals: Being able to complete the goal within the time frame. 		
	• What is important for open communication in group settings?	• Open 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.		
	• What steps are important for establishing shared responsibility?	 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.	• 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?	 Practice sessions for inconsistent stage performers should consist of self-paced environments using constant physical practice (repetition using the same movement characteristics) and mental practice of the critical cues. Movements of the body should change from: uncoordinated, mistimed, awkward, jerky, too much/little force, and unbalanced; to coordinated, well-timed, fluent, smooth, flowing, appropriate force and balanced. Practice records: Documentation of implemented 	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. Evaluate the impact of practice strategies on skill development and improvement towards reaching overall personal fitness goals established within the
	• 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. 		individualized personal portfolio.
	• 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: 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. Have the timing of self-paced movements been 		

	• Has the result of the movement changed (to meet the goal of the developmentally appropriate situation)?	 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: 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)? 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? What is mechanical advantage? How does energy affect mechanical advantage? 	 Efficiency of movement is the state or quality of competence in performance with minimum expenditure of time and distance. Mechanical advantage is the ratio between the force put into a machine and the force that comes out of the same machine. Energy is the ability of a person or object to do mechanical work. To apply force over a distance against resistance. 	10.5.12.E. Evaluate movement forms for appropriate application of scientific and biomechanical principles. • efficiency of movement • mechanical advantage • kinetic energy • potential energy • inertia • safety	 Compare efficiency of movement and its influence by scientific and biomechanical principles. Evaluate how the strategies for application of scientific and biomechanical principles relate to physical activity.
	What are the two forms of energy?What is potential energy?	 Energy: the capacity of an athlete to do work, Mechanically, energy takes two forms: Potential energy that is energy due to position or deformation 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 		

• How does an athlete use both kinetic and potential energy?	 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. Potential energy is energy due to position or deformation. 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 activates?	• According to Mohnsen (2011), there are 2 biomechanics principles that are important for participating safely in everyday activates:
	 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

• How can you maximize safety in a physical activity setting?	• 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.		
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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