

**CURRICULUM**  
**Sports Injuries I**

**Hillsborough Township Public Schools**  
**Health and Physical Education**  
**Grade 9-12 Elective Course**

## COURSE OVERVIEW

Sports Injuries I is a course designed for those students who have an interest in the sports medicine profession, specific athletic training and physical therapy. It covers the roles and responsibilities of the athletic trainer including injury prevention, recognition, evaluation, treatment and rehabilitation. Anatomy of the lower extremity (the foot, ankle, knee and hip) is discussed with an emphasis on sports related injuries to those areas. Splinting, bandaging and taping athletic injuries are also highlighted.

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Unit 1 – Introduction to Athletic Training and Sports Medicine  
 Pacing – 6 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the educational requirements to become an athletic trainer?	Athletic training is a profession dedicated to maintaining and improving the health and well-being of the physically active population. The National Athletic Trainers Association (NATA) is responsible for setting the professional standards and overseeing the certification process.	9.4.12.E.3- Demonstrate science knowledge and skills required to pursue the full range of postsecondary education and career opportunities.	Identify the requirements for licensure and certification and registration to become a qualified athletic trainer.	Make a chart summarizing the subject areas included in the course of study at a collegiate athletic training program.	SL 4.-Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.	

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
<p>What are the major roles and responsibilities of an athletic trainer and other sports medicine personnel?</p>	<p>The NATA Board of Certification has established six main responsibilities for an athletic trainer: injury prevention, recognition, evaluation and assessment of injuries, immediate treatment, rehabilitation, administration of duties and ongoing professional development.</p>	<p>9.4.12.E.3- Demonstrate science knowledge and skills required to pursue the full range of postsecondary education and career opportunities.</p>	<p>Describe the various roles and responsibilities of athletic trainers and sports medicine personnel.</p>	<p>Create a poster of the sports medicine team including the central and peripheral team members. Identify each member's roles and responsibilities.</p>	<p>SL 4.-Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.</p>	<p>9.1.12.B.1- Present resources and data in a format that effectively communicates the meaning of the data and its implications for solving problems, using multiple perspectives.</p>

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What are the legal implications of sports medicine policies and procedures?	Because an athletic trainer is liable for the health and well-being of athletes, he must establish safe practices and procedure to avoid legal problems.	L 6.-Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a work or phrase important to comprehension or expression.	Explain legal concepts such as liability, negligence, torts and assumption of risk	Write 4 short scenarios illustrating: 1. the three requirements for assumption of risk. 2. negligence 3. gross negligence 4. proximate cause  Create a list of ways a trainer can reduce the risk of legal liability.	W 4.- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	
What are the administrative aspects of athletic training?	An athletic trainer should create an environment designed to prevent injury, and should clearly document the occurrence of all injuries and illnesses as well as the treatment and rehabilitation the athletes receive.	2.5.8.C.2- Summarize types of equipment, products, procedures, and rules that contribute to the safety of specific individual, small-group, and team activities	Identify the various documents used by an athletic trainer and explain their correlation to the health and welfare of the athlete.	Choose one of the current forms used by the athletic trainer at the high school. Write a short summary critiquing the form highlighting the important aspects in terms of injury prevention and treatment as well as suggestions for improving the form.		

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Unit 2-Injury Prevention  
 Pacing- 10 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
How does one achieve a level of physical fitness that reduces the risk of injury?	Flexibility is an inherent trait can only be improved with consistent effort.	2.6.12.A.1 – Design, implement and evaluate a fitness plan that reflects knowledge and application of fitness training principles. 2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.	Describe the various flexibility methods.	Demonstrate a static, ballistic and dynamic stretch. Perform proprioceptive neuromuscular facilitation.		
	Although many strength training programs exist, the premise of each is the same. One must overload the muscles in a specific manner on a consistent basis.	2.6.12.A.1 – Design, implement and evaluate a fitness plan that reflects knowledge and application of fitness training principles. 2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.	Identify the qualities of a sound strength training program.	Design a strength training program for a specific sport.	W 4.- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
	Muscular endurance and power can be developed within a strength training program by varying the resistance and speed of the muscle movement.	2.6.12.A.1 – Design, implement and evaluate a fitness plan that reflects knowledge and application of fitness training principles. 2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.	Explain the difference between strength, power and muscular endurance.	Create a circuit training program. Highlight which aspect of fitness is being developed at each station. Present to the class.		9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
<p>What are the responsibilities of the athlete, coach and trainer regarding conditioning?</p>	<p>Following the principles of conditioning will reduce the risk of injury both during the pre-season and in-season.</p>	<p>2.6.12.A.1 – Design, implement and evaluate a fitness plan that reflects knowledge and application of fitness training principles.                      2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.                      2.1.12.D.1 – Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.                      2.5.8.C.2- Summarize types of equipment, products, procedures, and rules that contribute to the safety of specific individual, small-group, and team activities</p>	<p>Explain the principles of conditioning.</p>	<p>In groups, assume the role of the coach and, using the conditioning principles, create a six week pre-season program for a team.</p>	<p>5.1.12.D.1 – Engage in multiple forms of discussion in order to process, make sense of, and learn from others’ ideas, observations and experiences.                      SL 1.- Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 11-12 topics, texts and issues, building on others’ ideas and expressing their own clearly and persuasively.</p>	<p>9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences.</p>

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Unit 3 – Anatomy  
 Pacing – 9 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the basics of human anatomy and physiology involving the musculo-skeletal system?	An understanding of the musculo-skeletal system is the foundation of many health care professions including that of the athletic trainer and physical therapist.	5.3.12.A.1 –Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.	Define common medical terms related to location on the body.	Recite the descriptive anatomical terms when presented in a flash card format.	L 6.-Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a work or phrase important to comprehension or expression.	
	Before a trainer can understand specific injuries, he must first understand the basic functions of the anatomical structures involved.	5.3.12.A.1 –Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.	Identify the functions and structures of the skeletal system.	Label a diagram of the skeleton.  Go to: <a href="http://www.anatomyarcade.com">www.anatomyarcade.com</a> and solve the skeletal system puzzles.		9.4.12.C.21- Operate Internet applications to perform tasks.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
		5.3.12.A.1 –Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.	Identify the components of a joint.	Create a 3 dimensional representation of a hinge or ball-and-socket joint.		
		5.3.12.A.1 –Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.	Identify the major muscles of the body and their movements.	Recite the names of the muscles when presented on flashcards.  Play a game of “Simon Says” to demonstrate muscle movements.  Go to: <a href="http://www.anatomyarcade.com">www.anatomyarcade.com</a> and play the games related to the muscular system.	L 6.-Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a work or phrase important to comprehension or expression.	9.4.12.C.21- Operate Internet applications to perform tasks.

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Unit 4- Characteristics of Injuries  
 Pacing-11 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the forces or mechanisms that can cause bodily injury?	Compression, tension and shearing forces, when exerted on the body, can cause physical harm. The type of force is directly related to the types of injuries.	2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance. 2.1.12.D.1 –Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.	Identify the three forces that can be generated on the body and explain the types of injuries that may result.	Using the internet, identify examples of compression, tension and shearing injuries in athletics. Present the examples in class in some form of a visual aid (poster, diagram, PowerPoint).		9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.
What are the types of injuries that can happen to the various body tissues?	Injuries to soft tissue, specifically the skin, muscles and ligaments, can be classified respectively as wounds, strains and sprains.	2.1.12.D.1 –Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies. 2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.	Describe the various types of wounds.	Complete a diagram of types of wounds.	L 6.-Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a work or phrase important to comprehension or expression.	

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		<p>2.1.12.D.1 – Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.</p> <p>2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.</p>	<p>Explain the differences between 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> degree sprains and strains.</p>	<p>Create a chart comparing and contrasting the signs and symptoms of sprains and strains.</p>	<p>5.3.12.A.1 – Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.</p>	
	<p>Hard tissue or bone fractures are named according to the force applied and how failure of the bone occurs.</p>	<p>2.1.12.D.1 – Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.</p> <p>2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.</p>	<p>Identify the signs, symptoms and types of fractures.</p>	<p>Using three sugar wafers, apply a compression, tension and shearing force to them, describing the results as they apply to the types of fractures discussed.</p>	<p>5.3.12.A.1 – Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.</p>	

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Unit 5 – The Healing Process  
 Pacing – 12 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
How does the body heal?	The body has the ability to heal itself. The time it takes depends on several factors. The healing process occurs in phases: inflammation, repair and remodeling.	5.3.12.A.4 – Distinguish between the processes of cellular growth (cell division) and development(differentiation).	Describe the three phases of the healing process.	Write a descriptive paragraph explaining the healing process of soft tissue or hard tissue.	W 4.- Produce clear and coherent writing in which the development, and organization, and style are appropriate to task, purpose, and audience.	9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences. 9.4.12.C.51- Employ teamwork skills to achieve collective goals and use team members' talents effectively.
What can one do to accelerate the healing process?	Rest, ice, compression and elevate (RICE) can reduce further injury, pain and swelling, therefore shortening the inflammation phase.	2.1.12.D.6- Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.	Perform tasks that are effective in resting and elevating an extremity.	Demonstrate how to immobilize a bone or joint using a splint, sling and crutches.		
How does the application of ice affect the healing process.	Cryotherapy is the use of cold to reduce inflammation associated with injury. Cold constricts surrounding blood vessels to slow circulation, lowers body temperature to slow cellular destruction and reduces pain.	.2.1.12.D.6- Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.	Describe the appropriate cryotherapy methods to reduce pain and swelling of an injury.	Complete a chart listing the advantages and disadvantages of different icing procedures, indicating the appropriateness of each method.		9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences.

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What effects does applying an elastic bandage have on an injury?	By wrapping the affected area, swelling accumulates away from the damaged tissue which allows for a quicker entrance into the repair phase.	2.1.12.D.6- Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.	Demonstrate how to apply a compression wrap.	In small groups, use an elastic bandage to wrap a hip, thigh, ankle, shoulder, wrist and thumb.  Demonstrate how to stop bleeding and bandage a wound.		9.4.12.C.51- Employ teamwork skills to achieve collective goals and use team members' talents effectively.
Is there any way to aid the body in the repair process?	Thermotherapy, the use of heat, is effective at increasing circulation to accelerate the repair phase.	5.3.12.A.4 – Distinguish between the processes of cellular growth (cell division) and development(differentiation).	Describe the physiological effects of heat.	Using web resources, write a short summary of the indications and contraindication of a heat modality of your choice.	W 4- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	8.1.12.F.1- Select and use specialized databases for advanced research to solve real-world problems.

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What are the advanced modalities available to a licensed trainer or physical therapist that aid the body in healing?	Mechanical and electrical elements are highly effective means of stimulating healing, but can only be used by licensed personnel.	5.3.12.A.4 – Distinguish between the processes of cellular growth (cell division) and development(differentiation).	Describe the effects of advanced modalities such as ultrasound, infrared light, electrical stimulation and massage.	Visit a physical therapy office and experience the different advanced modalities. Discuss your impression of the trip in a small group setting.	5.1.12.D.1 – Engage in multiple forms of discussion in order to process, make sense of, and learn from others' ideas, observations and experiences.	9.4.12.E.3– Demonstrate science knowledge and skills required to pursue the full range of postsecondary education and career opportunities. 9.4.12.C.11- Apply active listening to obtain and clarify information.
How does rehabilitation influence the healing process?	The extent of the injury and the phases of tissue healing should influence the selection of activities and goals of the rehabilitation program.	2.6.12.A.1 – Design, implement and evaluate a fitness plan that reflects knowledge and application of fitness training principles.	Identify the phases of treatment in a rehabilitation program.	Create a PowerPoint presentation that explains the IMPRESS program: Initial Inflammatory phase Mobility Restoration Proprioception Resistance Training Endurance Training Sports Specific Training		9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences. 9.4.12.C.21- Operate Internet applications to perform tasks.

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Unit 6- Protective Taping and Wrapping  
 Pacing- 7 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
When is supportive taping indicated?	Protective tape is used to prevent injuries from occurring or reoccurring. Proper use of tape includes tape selection, tape handling, skin preparation and taping technique.	2.2.12.E.1 – Analyze a variety of health products and services based on cost, availability, accessibility, benefits and accreditation. 2.5.8.C.2- Summarize types of equipment, products, procedures, and rules that contribute to the safety of specific individual, small-group, and team activities	Identify the types and purposes of taping supplies available.	Visit the websites: <a href="http://www.ahealthyway.net/kinesiotape/">www.ahealthyway.net/kinesiotape/</a> <a href="http://www.mywisehealth.com/athletic-tape">www.mywisehealth.com/athletic-tape</a> <a href="http://www.ehow.com&gt;sports">www.ehow.com&gt;sports</a> Create a brochure about the different types of athletic tape and their uses.		9.1.12.B.1- Present resources and data in a format that effectively communicates the meaning of the data and its implications for solving problems, using multiple perspectives.  9.4.12.C.21- Operate Internet applications to perform tasks.
		2.5.8.C.2- Summarize types of equipment, products, procedures, and rules that contribute to the safety of specific individual, small-group, and team activities	Demonstrate proper tape handling, skin preparation and technique.	Create a 3 dimensional object using an entire roll of tape. Strips of tape must be torn by hand.  Tape an ankle.		

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Unit 7- Injury Assessment  
 Pacing -- 6 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
How does an athletic trainer proceed when evaluating an injury?	Primary and secondary assessments are made to ensure that all life-threatening conditions are identified and treated immediately, followed by a thorough examination of the non-life threatening injuries.	2.1.12.D.6- Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.	Identify the signs and symptoms of life threatening illnesses and injuries.	List the vital signs and explain what each of them can tell you about an injured athlete. Write a short report about one of the following topics: Hypertropic cardiomyopathy Heat Stroke Shock Asthma Anaphylaxis.	W 4.- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.
How does an athletic trainer evaluate non-life threatening injuries?	A specific set of questions and tests can closely evaluate the location, type and severity of an injury.	9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences	Describe the HOPS procedure. (History, Observation, Palpation, Special Tests/Seriousness)	Give a student a note card with an injury and a specific set of symptoms. Have his partner use the HOPS procedure to evaluate the injury.		9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences.

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Unit 8- The Foot, Ankle and Lower Leg

Pacing- 12 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the anatomical structures associated with the foot, ankle and lower leg?	The lower leg, foot and ankle play a crucial role in balance, shock absorption and movement. The 28 bones in each foot provide structure while the muscles of the lower leg produce movement.	5.3.12.A.1 – Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.	Identify the major anatomical structures (bones, ligaments and muscles) of the lower leg and foot.	Identify each anatomical structure using flash cards.	. L. 6.-Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a work or phrase important to comprehension or expression.	
What are the mechanisms and characteristics of injuries to the foot, ankle and lower leg?	Because most sports rely on the ability to run, injuries to ligaments, muscles, tendons and bones are quite common, the most frequent being an ankle sprain.	2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.  2.1.12.D.1 –Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.	Identify the signs and symptoms of injuries that can occur to the foot, ankle and lower leg.	Evaluate injuries through case studies.		9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What is a shin splint?	Shin splints is a name given to a wide variety of conditions that produce lower leg pain. Treatment directly correlates to the cause of the pain.	2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.  2.1.12.D.1 – Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.	Compare and contrast the different theories and treatments concerning shin splints	Write a short report summarizing the causes and treatments of shin splints or the prevention of stress fractures.	W 4.- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	
Why is foot health so essential in athletics?	Feet form the foundation on which an athlete walks and runs. Taking care of your feet is essential for continuous athletic participation. There are many foot conditions that can prevent effective athletic participation. Most are avoidable with proper foot care.	2.2.12.E.1 – Analyze a variety of health products and services based on cost, availability, accessibility, benefits and accreditation. 2.5.8.C.2- Summarize types of equipment, products, procedures, and rules that contribute to the safety of specific individual, small-group, and team activities.	Describe various foot conditions and propose specific prevention and treatment options.	Write a short report on a specific foot condition. Give an oral presentation to the class including how to treat it such as: -Demonstrate how to perform a pedicure. -Demonstrate how to treat a blister.	W 4.- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.  8.1.12.F.1- Select and use specialized databases for advanced research to solve real-world problems.	9.1.12.B.1- Present resources and data in a format that effectively communicates the meaning of the data and its implications for solving problems, using multiple perspectives. 9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
How do you support the foot, ankle and lower leg?	Because injuries to the foot, ankle and leg are common, various supportive techniques have been developed to prevent injury and reinjury.	<p>2.1.12.D.1 –Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.</p> <p>2.1.12.D.6- Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.</p>	Perform supportive techniques for the toes, foot ankle and lower leg.	Perform the following taping procedures: ↓ Turf toe ↓ Arch support ↓ Ankle ↓ Achilles Tendon		

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**Unit 8- The Knee**  
 Pacing – 7 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the anatomical structures located in the knee?	The knee is an unstable hinge joint formed by three bones, four major ligaments and two menisci. The strong musculature provide movement as well as stability.	5.3.12.A.1 – Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.	Identify the major anatomical structures related to the knee joint.	Identify each anatomical structure using flashcards.	L 6.-Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a work or phrase important to comprehension or expression.	
What are the mechanisms and characteristics of acute knee injuries?	The knee is exposed to many forces, most being tension forces to the ligaments. The patella and menisci are subject to unique types of injuries as well.	2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance. 2.1.12.D.1 – Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.	Identify the signs and symptoms of knee injuries.	Evaluate injuries through case studies.		9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
Why are women predisposed to knee injuries?	Research has shown that women have a predisposition to specific knee injuries. The reasons are both physical and environmental.	2.1.12.D.1 –Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies. 2.6.12.A.1 – Design, implement and evaluate a fitness plan that reflects knowledge and application of fitness training principles.	Identify and propose solutions for the various causes of knee injuries in female athletes.	Invite the high school athletic trainer to lead a discussion on Anterior Cruciate Ligament injuries and prevention programs for female athletes.	5.1.12.D.1 – Engage in multiple forms of discussion in order to process, make sense of, and learn from others' ideas, observations and experiences.	
Are chronic injuries also common in the knee?	Young athletes especially are predisposed to chronic conditions due to their still developing bodies.	2.1.12.D.1 –Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.	Describe the causes and symptoms associated with chronic knee disorders.	Write a short report, create a brochure or design a poster about a topic of your choice: <ul style="list-style-type: none"> <li>➔ Patello-femoral Syndrome</li> <li>➔ Osgood-Schlatter's Disease</li> <li>➔ Jumper's Knee</li> </ul>		9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.

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Unit 9- The Hip, Pelvis and Thigh  
 Pacing – 5 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the anatomical structures associated with the hip, pelvis and thigh?	The hip, pelvis and thigh contain some of the strongest muscles in the body but is also subjected to tremendous demands.	5.3.12.A.1 –Represent and explain the relationship between the structure and function of each class of complex molecules using a variety of models.	Identify the major anatomical structures associated with the pelvic girdle and upper leg.	Label a diagram of the pelvic girdle and thigh identifying bones, ligaments and muscles.	L 6.-Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a work or phrase important to comprehension or expression.	
What is the relationship of gait and hip, thigh and leg injuries?	Abnormal gait characteristics indicate specific muscle weaknesses and flexibility problems that can predispose an athlete to injury.	2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.  2.1.12.D.1 –Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.	Identify a normal gait.	Examine a partner's gait and compare it to the norms.	5.1.12.B.4 – Develop quality controls and examine data sets to examine evidence as a means of generating and reviewing explanations.	9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the mechanisms and characteristics of hip and thigh injuries?	Because the hip is a highly stable joint, most injuries to the area are muscular in nature, such as strains and contusions.	2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance.  2.1.12.D.1 – Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies.	Describe the signs and symptoms of injuries to the hip and thigh regions.	Examine the following website and discuss the information about hamstring strains. <a href="http://orthoinfo.aaos.org/fact/thr_report.cfm?thread_id=137&amp;topcategory=wellness">http://orthoinfo.aaos.org/fact/thr_report.cfm?thread_id=137&amp;topcategory=wellness</a>  Evaluate injuries through case studies.	5.1.12.D.1 – Engage in multiple forms of discussion in order to process, make sense of, and learn from others' ideas, observations and experiences.	9.1.12.A.1- Apply critical thinking and problem-solving strategies during structured learning experiences.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What are the short and long term treatment options for leg injuries?	Proper evaluation, initial treatment and rehabilitation are vital if an injured athlete is to return to sports participation in a timely manner. Treatment varies depending on the severity of the injury, but all injuries require reconditioning of the entire lower extremity to reduce the risk of reinjury.	2.5.12.A.2 – Analyze application of force and motion (weight transfer, power, speed, agility, range of motion) and modify movement to impact performance. 2.1.12.D.1 – Determine the causes and outcomes of intentional and unintentional injuries in adolescents and young adults and propose prevention strategies. 2.1.12.D.6- Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies. 2.5.8.C.2- Summarize types of equipment, products, procedures, and rules that contribute to the safety of specific individual, small-group, and team activities	Understand the injury evaluation, treatment and rehabilitation process.	Create a panel book, flip book or file folder book that explores a lower extremity injury in detail. Include the anatomical structures involved, the injury evaluation process, immediate treatment, advanced medical treatment and procedures and the rehabilitation process. Give an oral presentation of the book to the class.	SL 4.-Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.	9.1.12.B.1- Present resources and data in a format that effectively communicates the meaning of the data and its implications for solving problems, using multiple perspectives.  9.4.12.C.9- Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.

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Unit 9- Related Topics and Careers in Sports Medicine  
 Pacing – 5 days

Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
What other careers are associated with the Sports Medicine Field?	Sports nutrition, sports psychology engineering are relatively new and growing fields in sports medicine.	9.4.12.E.3- Demonstrate science knowledge and skills required to pursue the full range of postsecondary education and career opportunities.	Identify careers associated with sport medicine.	Write a research paper on careers in sports medicine.	W 4.- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9.1.12.B.1- Present resources and data in a format that effectively communicates the meaning of the data and its implications for solving problems, using multiple perspectives.
What are the current issues surrounding sports medicine and athletic participation?	The popularity of sports creates an ever-changing atmosphere of legal and ethical issues surrounding athletics.	SL 4.-Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.	Explain the special considerations involving sports participation.	Using the web investigate: The Diabetic Athlete The Asthmatic Athlete The Epileptic Athlete The Physically Handicapped Athlete Present your findings to the class.		9.1.12.B.1- Present resources and data in a format that effectively communicates the meaning of the data and its implications for solving problems, using multiple perspectives.

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Essential Questions	Enduring Understandings	Standard	Learning Targets	Assessment Formative and Summative	Inter-disciplinary Connections	21 <sup>st</sup> Century Connections
		9.4.12.C.55- Apply ethical reasoning to a variety of situations in order to make ethical decisions.	Describe the ethical issues in sports.	Debate one of the following topics: Should there be drug testing in high school athletics? Should steroids be legalized? Do athletes have a responsibility to be a role model for children? Should college athletes be paid to play/or major in sports?	SL 1.- Initiate and participate effectively in a range of collaborations (one-on-one, in groups, and teacher led) with diverse partners on grade 11-12 topics, texts and issues, building on others' ideas and expressing their own clearly and persuasively	9.1.12.B.1- Present resources and data in a format that effectively communicates the meaning of the data and its implications for solving problems, using multiple perspectives. 9.1.12.F.5- Formulate an opinion regarding current workplace or societal/ethical issue based on research.  9.4.12.C.51- Employ teamwork skills to achieve collective goals and use team members' talents effectively.  9.4.12.C.55- Apply ethical reasoning to a variety of situations in order to make ethical decisions.

# DOCUMENT ANALYSIS (Injury Evaluations)

X-rays

Magnetic Resonance Imaging (MRI) films

Arthroscopic photos

# TYPES OF ASSESSMENT

## FORMATIVE:

- ✚ Teacher directed question and answer
- ✚ White Board survey
- ✚ Small Group discussion
- ✚ Open ended questions
- ✚ Flash card exercises
- ✚ Homework (Chapter reviews)
- ✚ Injury evaluations
- ✚ Partner skill practice

## SUMMATIVE:

- ✚ Anatomy quizzes
  - ✚ Written Unit Tests
  - ✚ Research papers
  - ✚ Projects
  - ✚ Debates
  - ✚ Oral Presentations
  - ✚ Practical (skill) testing
  - ✚ Computer Generated Brochures
  - ✚ Posters
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