YSRH 11

BAA Sports Rehab Medicine **Framework**

District Name: Abbotsford

District Number: 034

Developed by: Lorraine Olsen and Lynnet Schramm

Date Developed: January 2004

School Name: Yale Secondary and Rick Hansen Secondary

Principal's Name: Bruce Nicholson and Jinder Sarowa

Board/Authority Approval Date: APR - 5 2004 ✓

Board/Authority Signature:

Course Name: Sports Rehab Medicine 11

Grade Level of Course: 11

Number of Course Credits: 4

Number of Hours of Instruction: 120

Prerequisite(s): none

Special Training, Facilities or Equipment Required: Teacher or resource person will need training in Emergency First Aid (St. John Ambulance), CPR, Athletic Taping and Sports First Aid. Equipment needed will include computers, sports medicine supplies (tape etc.) and equipment, TV monitor and VCR, Training Tables.

Course Synopsis: Sports Medicine is a senior level course for grade 11 and 12 students interested in sports, fitness, recreation or fields such as athletic training, physical therapy, medicine, fitness, physiology of exercise, kinesiology, nutrition and other sports medicine related fields. The course includes class work and practical hands-on applicatio in the following areas: prevention, treatment and rehabilitation of sports injuries, first aid/CPR, emergency procedures and sports medicine careers. The course offers practica experiences with local sports medicine specialists. As a culmination, students complete 2 hours of field work in sports medicine. The course is designed to be taken in conjunction with the Level I Sports First Aid and Taping Programs and students will have the opportunity to be certified by the Sports Medicine Council of BC.

Rationale: With the increased number of participants involved in physical activity and competitive sports in schools, such a course will help meet the increasing need for studen to become familiar with the prevention, care and treatment and rehabilitation of athletic injuries.

The course has been developed to support and encourage students to help prevent injuries, observe procedures and assist in a sports medicine setting, and to explore caree options in sports medicine. Students will identify the essential components of an effective sports medicine program. They will explore career options and research web sites, such as the Sports Medicine BC web site, to increase their knowledge of professional

organizations and associations of various sports medicine professions. Students will learn and demonstrate basic injury treatment and taping procedures, design a strength and conditioning program for one sport, and perform basic CPR and emergency first aid. The will read sports medicine articles of personal interest, make presentations and write repor to summarize their research. Finally, students will apply their skills and complete twenty hours of field work in a sports medicine setting. The course supports student learning through meaningful methods of inquiry, interpretation, demonstration and presentation of variety of skills on important topics.

Organizational Structure:

Unit/Topic	Title	Time
Unit 1	Introduction to Sports Medicine	10 hours
Unit 2	Body Basics and Injury Prevention	10 hours
Unit 3	Life Threatening Conditions and Emerg. Procedures	30 hours
Unit 4	Common Injuries: Assessment and Management	25 hours
Unit 5	Specific Sports Injuries: Evaluate, Treat, Wrap	25 hours
Unit 6	Field Experience in Sports Medicine	20 hours
	Total Hours	120 hours

Unit/Topic/Module Descriptions:

Unit 1: Introduction to Sports Medicine 10 hours

Overview

Students will examine the components of an effective sports medicine program and the role and concerns of the Sports Aider. They will do a complete navigation of the Sports Medicine of British Columbia web site, research at least two articles and identify personal characterist of sports medicine practitioners. Students will use this informatio to complete a career search project.

Curriculum Organizers and Learning Outcomes

I. Role of the Sports Aider

It is expected that students will:

- identify the essential components of an effective sports medicine program
- identify personal characteristics of sports medicine practitioners and sports aiders
- describe their role, responsibilities, performance standards, liability concerns and limitations for athletic care
- define medical terminology and abbreviations

II. Sports Medicine Careers

It is expected that students will:

- navigate and collect articles of interest

- list and describe career options in sports medicine
- complete at least one career search

Unit 2: Body Basics and Injury Prevention 10 hours

Overview

Students will gain a basic understanding of functional human anatomy including the fuel, production and control systems of the body. Students will demonstrate knowledge of the skeletal, circulatory and nervous systems and the importance of proper nutrition, strength and conditioning programs in preventing injuries. Students will know how to manage the environment and facilities, use protective equipment and enforce officiating standards to prevent injury.

Curriculum Organizers and Learning Outcomes

I. Basic Functional Anatomy
It is expected that students will:

- describe the fuel production and control systems of the body
- identify the function for each major skeletal muscle
- identify the major parts of the skeletal and nervous systems
- describe the functions of the circulatory system

II. Injury Prevention
It is expected that students will:

- use a facility, equipment, and environment check list to help prevent injuries
- know how to monitor athletes to respect officiating, rules and others
- design and present one strength and conditioning program they will use as an athletic trainer
- understand how to document and use medical information to prevent injury
- describe proper hygiene and nutrition for injury prevention

Unit 3: Life Threatening Conditions and Emergency Procedures 30 hours

Overview

Students will enact an emergency action plan, do proper assessment, and apply specific techniques to respond to any incident regardless of the nature and severity of the circumstances. They will practice first aid and CPR skills through regular injury simulations, evaluate injuries and learn how to manage life threatening and serious injuries.

Curriculum Organizers and Learning Outcomes

I. Emergency Procedures
It is expected that students will:

- describe the emergency action plan protocol
- describe non emergency situations and follow-up
- describe and demonstrate the function and uses of various sports medicine supplies and equipment

II. Life Threatening Conditions
It is expected that students will:

- demonstrate proper techniques for treating respiratory arrest and shock
- demonstrate the proper procedure in providing cardiopulmonary resuscitation and artificial respiration
- describe and demonstrate various first aid procedures (splinting, bleeding control, etc.)
- demonstrate the procedures in obtaining vital signs of an injured person
- describe and demonstrate the anatomical basis, specific evaluation procedures, and treatment for head and cervical spine injuries
- describe and demonstrate how to recognize and treat environmental illness (heat stroke, heat exhaustion, hypothermia, hyperthermia, frostbite)

Unit 4: Common Injuries: Assessment and Management 25 hours

Overview
Students will learn some basic information to help determine the severity of common musculo-skeletal conditions. Students will use injury simulations to practice the principles of injury management for various common injuries. They will understand the three general phases of healing and repair, the importance of rehabilitation and the criteria for return to activity.

Curriculum Organizers and Learning Outcomes

I. Assessment and Management of Injuries
It is expected that students will:

- perform an injury evaluation using the HOPE procedure
- describe and demonstrate basic treatment for sports injuries (RICE, PIER, RICER)
- describe the injury cycle, three phases of healing and repair and criteria for return to activity

II. Common Injuries
It is expected that students will:

- describe how the human body reacts to injury
- identify the difference between acute, chronic and recurring injuries
- identify, describe and demonstrate basic treatment for common injuries to bones, muscles, tendons, joints, skin, face, abdomen and the pelvis
- in groups make a visual, written, and oral presentation to the class on various injuries to demonstrate their knowledge

Unit 5: Specific Sports Injuries 25 hours

Overview

This unit includes lecture, demonstration and practical sessions for injury

recognition and care. Students will understand the objective of taping/ wrapping and what taping/wrapping can and cannot do. Students will perform and be evaluated primarily on the techniques of taping/wrapping the foot and ankle, hand, thumb, wrist and elbow. Students will research and report on conditions of the knee, thigh and various other muscles and tendons that are evaluated and treated by medical personnel.

Curriculum Organizers and Learning Outcomes

Athletic Injuries Evaluation, Treatment, and Taping/Wrapping Procedures
It is expected that students will:

- identify the basic procedures and supplies needed for athletic taping and wrapping
- describe and demonstrate the preventative exercises, specific evaluation procedures, treatment techniques and specific taping and wrapping procedures for the foot and ankle, hand, wrist, thumb and elbow
- demonstrate the procedure for athletic wrapping
- increase their knowledge of the treatment, taping and wrapping as well as the rehabilitation of the knee, thigh, and various muscles and tendons through research and group presentations to the class

Unit 6: Field Experience in Sports Medicine 20 hours

Overview

Students will apply their learning and skills and demonstrate leadership abilities in the field of sports medicine through work with the school or local sports medicine specialists.

Curriculum Organizers and Learning Outcomes

Sports Aider
It is expected that students will:

- choose a sports medicine setting for athletic training and physical therapy
- list and describe their role, responsibilities and standards for performance
- define assessment standards (indicators of success)
- identify equipment and supplies needed
- gather applicable reporting forms
- complete a minimum of 20 hours for the sports medicine work experience
- assess the work experience (process, strategies, performance recommendations for future improvement)
- assess the supervisor's evaluation and comments

Instructional Component:

The following methods will be used in the teaching of Sports Rehab Medicine:

- guided discovery
- direct instruction
- indirect instruction

•active learning •interactive instruction •cooperative instruction
•modelling •independent instruction •brainstorming
•group work

Scope and Sequence

Unit I. Athletic Trainer
Career search (SMBC web site)
Six Duties
Role of Sports Aider
Concerns of Sports Aider - liability
Professional Behaviour of Sports Aider
Medical Terminology
Career Research

Unit 2. Facility assessment prior to an athletic event
On field and emergency protocol
Body Basics
Joints
Movement
Muscles
Muscle types
Contraction types
Arm, Shoulder, Face, Neck, Abdominal, Lower Limb,
Bones
Types
Body
Upper Limb
Pelvis
Lower Limb

Cardiovascular System
Arteries and Veins
Blood
Strength and Conditioning Program
Hygiene and Nutrition for Injury Prevention
Fuel for athletes
Hydration
Eating Disorders
Role of Nutritional Supplements
Pharmacology and Drug Testing

Unit 3. FIRST AID - certification with SJA will be awarded - Level A
Emergency Scene Management / Action Plan
Shock, Faint
Artificial Respiration
Choking
CPR - one and two person
Cardio emergencies
Infant CPR
Amputations
Secondary Survey
Closed fractures
Chest Wounds

Embedded Object
Wound to the hand
Multiple Casualty Management
Carries for Rescue
Testing - practical and book
First aid/trainers' kits

Unit 4. How to assess common sports injuries
Injury Cycle
Rehabilitation of injuries
Criteria for Return to Activity
Soft tissue injuries
Head injuries
Facial injuries
Fracture management
Environmental injuries
Blisters
Cryotherapy

Unit 5. Taping Principles - General Information
Procedures for Taping/Wrapping
Skin care
Types of tape - wrap versus tape
When and why to tape
Wrapping Techniques
Foot and Ankle
Shinsplints
Wrist/fingers/thumb/hand/elbow
Research and report on conditions of knee, thigh, groin and selected other muscle and tendon injuries

Unit 6. Ongoing throughout the curriculum - field experience of 20 hr:

Optional Unit.
Sports massage
Reflexology
Sports Psychology

Possible Field Studies to:
The Vancouver Canuck Training Facility
8 Rinks Human Performance Lab (Dusan Benicky)
The Running Room
Fitness Testing Lab (UBC)
Abbotsford Sports Medicine Clinic
West Coast College of Massage Therapy

Guest Speakers Available:
John Forde - Sports Massage Therapist, Apollo Clinic
Chiropractic Doctor - orthotics, foot scan
Frank Roffel (Yale Sec) - Masters in Kinesiology
Yvette Eastman - Reflexology Assoc of BC
Stephanie Beare - Sports Medicine Council of BC

Assessment Component:

Sixty per cent (60%) of the grade will be based on evaluations conducted throughout the course. This portion will reflect the students' achievement within each unit based on laboratory work, research assignments/projects and evaluations for knowledge and understanding.

Forty per cent (40%) of the grade will be based on a combination of a final exan and work experience project at the end of the course. The supervisor of the field work an the student will meet on a regular basis and together complete the final evaluation of the field work.

Type of Assessment	Category	Details	Weightir
Formative (60%)	1. Practical Applications 2. Knowledge and Understanding	Lab Work a. Research Assignments Projects b. Tests Quizzes	20 20 20
Summative (40%)	Final Assessment	a. Final Exam b. Field Work	20 20

Performance Methods

- •Field Simulations and Situations
- •Field Work Outline
- •Projects
- •Posters
- •Practical labs
- •Presentations of completed works
- •Field work evaluations

Personal Communications

- •group dialogue
- •student/instructor/mentor trialogue
- •self evaluation
- •peer evaluation
- •increased confidence in dealing with emergency situations and personnel
- •increased leadership skills in a work experience

Other

- •weekly assessment for field work
- •check lists
- •rubrics
- •teacher anecdotal records

Learning Resources:

Anatomy Charts and Diagrams

The Anatomy Coloring Book by Wynn Kapit and Lawrence M. Elson

Athletic Taping by the Sports Medicine Council of BC

Athletic Taping and Wrapping Techniques video by Cramer

Basic Athletic Training by Kenneth E. White and William R. Whitehill

Complete Guide to Sports Injuries by H. Winter Griffith

The Comprehensive Manual of Taping and Wrapping Techniques by Kenneth E. White and William R. Whitehill

Modern Principles of Athletic Training by Arnheim and Prentice

Muscle Man and Bone Skeleton

Safety Oriented First Aid video and booklet by St. John Ambulance

Sports First-Aid - A Guide to Sport Injuries by the Sports Medicine Council of BC

Sports Medicine Council of BC Journal - Sports aider

A Teacher's Curriculum Guide to Sports Medicine by Jan C. Lauer

Web sites:

Dr. Weil nutrition web site
Mayo Clinic web site
WebMD web site
Sports Medicine Council of BC web site