BA Aquatics 11

District Name: Kamloops/Thompson

District Number: SD 73

Developed by: Brad Dalke

Date Developed: January 2007

School Name: Brocklehurst Secondary School

Principal's Name: Tom Dinsdale

Board/Authority Approval Date:

Board/Authority Signature:

Course Name: Aquatics 11

Grade Level of Course: Grades 11

Number of Course Credits: 4

Number of Hours of Instruction: 120

Prerequisite(s): All participants must have completed Red Cross Swim Kids Level 10 or equivalent.

Special Training:

Facilities: 25 meter or 50 meter swimming pool (Canada Games Swim Pool), classroom equipped with a DVD/VCR, TV, Overhead Projector, Screen and seating to accommodate 24 students for stroke analysis and theory work.

Equipment Required: Students will expected to have their own personal swimming equipment (swimsuit, towel, cap and goggles).

Course Synopsis: The aquatics program has been developed to offer student swimmers an individualized training program. Participants will develop swimming skills (stroke technique, racing skills (starts and turns) and racing strategies), fitness, training knowledge (aerobic and anaerobic), dryland training, flexibility, mental training techniques and become familiar with a variety of aquatic activities (Water running, water polo, under water hockey, etc) . Instruction will take place during pool sessions and dryland sessions both on the pool deck and in a classroom. The program will be based upon Swimming Canada's National Coaches Certification Program (N.C.C.P.) (Skills Coaching – N.C.C.P. Level 1 Theory, Technical and Practical) and Royal Lifesaving's Bronze Medallion.

Rationale: High level swimmers face tremendous time management challenges in balancing their swimming activity and academic demands. These students are typically high achieving (athletically and academically), motivated and conscientious. They often experience a high level of stress while trying to maintain a high level of excellence in their swimming and academic school work. This course will allow the students to maintain/enhance their level of training with a qualified coach/teacher within the school setting. This course will address the academic and athletic needs of students who either compete or desire to compete at a high level in aquatics.

Organizational Structure:

Unit/Topic	Title	Time
Unit 1	Aerobic/Anerobic development	35 hours
Unit 2	Mental Training	15 hours
Unit 3	Racing Skills Development	15 hours
Unit 4	Swimming Skill Development	25 hours
Unit 5	Dryland Training	15 hours
Unit 6a (11)	Royal LifeSaving Bronze Medallion & Aquatic Leadership	15 hours
	Total Hours	120 hours

Unit/Topic/Module Descriptions:

Unit 1: Overview: Aerobic/Anaerobic development.

The foundation of any physical activity is the energy system and its optimal development for physical activity. The swimmers will learn about three primary energy systems and apply training principles of those energy systems into a seasonal training plan (periodization). These energy systems include the aerobic, anaerobic and the anaerobic alactic energy system. The periodization of the program will be developed based upon training progression, overload and the supercompensation model.

Curriculum Organizers and Learning Outcomes:

Active Living: The student will

- design and implement a training (swimming) plan that applies the principles of training (progression, overload, specificity)
- demonstrate an understanding of how the cardiovascular, muscular, and skeletal systems relate to swimming performance
- develop a personal functional level of physical fitness in an aquatic environment

Movement: The student will

- apply the elements of movement to an aquatic environment
- plan and participate safely in an aquatic environment

Personal Behaviours and Safety Practices: The student will

- apply appropriate rules, routines, procedures, and safety practices in an aquatic environment
- demonstrate positive behaviours that show respect for individual abilities, interests, gender, and cultural backgrounds
- demonstrate self-respect and self-confidence while involved in physical activities in the aquatic environment

Leadership and Community Involvement: The student will

- identify and use appropriate technology when analyzing training models

Unit 2: Overview: Mental Training.

In competitive sports, any skills that an athlete can implement to improve their performance is important. Mental training is one such skill that can give an athlete an edge over their competition. Mental training skills are not only beneficial in the athletic environment but are also a valuable life skill which an athlete/individual can apply to their academics, work and social environment.

Curriculum Organizers and Learning Outcomes:

Active Living: The student will

- design and implement plans for balanced, healthy living, including:
    - goal setting
    - visualization
    - relaxation
    - rest
- describe and implement strategies for stress management and relaxation

Movement: The student will

- demonstrate a personal functional level of competence in a selection of mental training skills
- analyze the components of skill performance through mental training

Personal Behaviours and Safety Practices: The student will

- apply appropriate rules, routines, procedures, and safety practices in a variety of mental training techniques in various environments
- demonstrate positive behaviours that show respect for individual abilities, interests, gender, and cultural backgrounds
- demonstrate self-respect and self-confidence while involved in mental training activities

Leadership and Community Involvement: The student will

- describe and demonstrate qualities and problem-solving strategies required for leadership related to an aquatics environment

Unit 3: Overview: Racing Skills Development.

In competitive swimming or recreational swimming a significant contributor to an individuals level of competency is the athletes ability to perform racing skills (starts and turns). These skills vary depending on the swim stroke, distance being completed and where the athlete is in the swim (start, finish or middle)

Curriculum Organizers and Learning Outcomes:

Active Living: The student will

- demonstrate an understanding of how the cardiovascular, muscular, and skeletal systems relate to racing skills

Movement: The student will

- apply the elements of movement to racing skills
- demonstrate a personal functional level of competence in the selection of activity-specific motor skills used in racing
- analyze the components of racing skills
- apply understanding of body mechanics (balance, motion, force, levers, buoyancy) to improve their racing performance and the performance of others
- select and apply problem-solving strategies when planning and leading others in racing skill activities

Personal Behaviours and Safety Practices: The student will

- demonstrate self-respect and self-confidence while involved in racing activities
- apply etiquette and fair play in a variety of roles, including:
    - performer
    - coach
    - observer

Leadership and Community Involvement: The student will

- identify and use appropriate technology when solving problems involving physical activity

Unit 4: Overview: Swimming Skill Development.

The development of swimming strokes is the largest single contributor to a swimmers overall level of competency in an aquatic environment. There are a number of basic aquatic principals students will learn, which contribute to stroke efficiency. The students will develop and refine the four swimming strokes (Freestyle, Backstroke, Breaststroke and Butterfly).

Curriculum Organizers and Learning Outcomes:

Active Living: The student will

- design and implement coaching plans for exercise programs that apply the principles of training (progression, overload, specificity) to various swimming strokes
- demonstrate an understanding of how the cardiovascular, muscular, and skeletal systems relate to stroke mechanics

Movement: The student will

- apply the elements of movement to a swimming strokes
- plan and participate safely in the development and implementation of a swimming technique in an aquatic environment
- demonstrate a personal functional level of competence in a selection of drills to develop swimming strokes
- analyze the components of skill performance and stroke development
- apply understanding of body mechanics (balance, motion, force, levers, buoyancy) to stroke development and the stroke development of others
- select and apply problem-solving strategies when planning and leading others in the development of efficient swimming strokes

Personal Behaviours and Safety Practices: **The student will**

- apply appropriate rules, routines, procedures, and safety practices in the development of swimming strokes
- demonstrate positive behaviours that show respect for individual abilities, interests, gender, and cultural backgrounds
- demonstrate self-respect and self-confidence while involved in aquatics
- demonstrate an understanding of the prevention and treatment of swimming injuries such as shoulders, knees and lower back

Leadership and Community Involvement: The student will

- identify and use appropriate technology when solving stroke mechanic problems

Unit 5: Overview: Dryland Training.

Strength, power, speed, muscular endurance, flexibility and muscular balance are physical characteristics which will help an athlete develop their overall athletic ability.

Curriculum Organizers and Learning Outcomes:

Active Living: The student will

- design and implement a dryland training program for swimming that applies the principles of training (progression, overload, specificity)
- demonstrate an understanding of how the cardiovascular, muscular, and skeletal systems relate to dryland training
- develop a personal functional level of physical fitness for dryland training

Movement: The student will

- apply the elements of movement to dryland activities
- plan and participate safely in a dryland environment

Personal Behaviours and Safety Practices: The student will

- apply appropriate rules, routines, procedures, and safety practices in a dryland environment
- demonstrate positive behaviours that show respect for individual abilities, interests, gender, and cultural backgrounds
- demonstrate self-respect and self-confidence while involved in physical activities in the dryland environment

Leadership and Community Involvement: The student will

- identify and use appropriate technology when analyzing training models

Unit 6 : Overview: Bronze Medallion & Aquatic Leadership.

Bronze Medallion is a prerequistite for the National Lifesaving course to become a certified lifeguard. The students will learn and complete all skills to complete the Bronze Medallion. To become certified for Bronze Medallion an independent asseror will be brought into complete the testing.

Curriculum Organizers and Learning Outcomes: The student will

As per the Canadian Lifesaving Society - Bronze Medallion course requirements.

Learning Resource:

Book - Canadian Lifesaving Manual (Royal Lifesaving Society Canada, 1994).

Instructional Component:

- Direct instruction
- Indirect instruction
- Interactive instruction
- Independent instruction
- Modelling
- Practical creativity
- Video taping
- Analysis of performance videos
- Skills training videos
- Biomechanical evaluatio

Assessment Component:

- Participation – 40% (Affective Domain)
- Skill/Skill Improvement – 30% (Psychomotor Domain)
- Knowledge/Tests/Projects – 30% (Cognitive Domain)

Learning Resources:

Book - Canadian Lifesaving Manual (Royal Lifesaving Society Canada, 1994).

Book – Coaching Young Swimmers 1 (Swimming/Natation Canada, 1990)

Book – Coaching Adolescent Swimmers 2 (Swimming/Natation Canada, 1993)

Book – The Science of Winning, Planning, Periodization and Optimizing Swim Training. By J. Olbrecht (2000).

Additional Information: