LOCALLY DEVELOPED COURSE OUTLINE

Water Experiences 15-3

Submitted By:

Grande Yellowhead Public School Division No. 77

Submitted On:

Feb. 28, 2013

Board Motion

Motion Conclusion

Motion Date

Mar. 4, 2013

Motion Number

Motions

Please find attached the signed board motion for Water Experiences.

Course Basic Information

Course Name	Water Experiences 15
Credit Number	3
Hours of Instruction	62.50 hrs
Implementation Dates	9/1/2013 - 8/31/2016
Proposal Type	Extension
Development Type	Developed
Designed Grade Level	Grade 10

Course Description	This course was developed by GYPSD#77 in partnership with Parks Canada and covers the following five major topics centered around Water Experiences; Hazard Awareness and Mitigation, Ecological Integrity, Historical Importance, Specialist Technology and Skill Development, and Appreciation and Value for the Mountain Parks Environment. GYPSD#77 believes in providing students with experiential education to strengthen ties to the surrounding communities and agencies thus increasing student's skills, and providing its students with possible future opportunities within the workforce. In taking this course, students will have the opportunity to become engaged thinkers by identifying problems or goals to be addressed. They will develop leadership skills by working collaboratively to creatively solve real life issues. They will demonstrate how they exemplify the qualities of an Ethical Citizen by taking personal responsibility to be an adaptable and engaged team builder. They will recognize the importance of their role in passing on their ecological knowledge and understanding of the Parks environment. The structure of this GYPSD#77 course includes pre and post immersion learning through video conference technology. It will immerse students in experiential education in Alberta's National Parks and provide exposure to role models and experts from diverse perspectives.
Course Prerequisite	

Philosophy

The Water Experience 15 course introduces GYPSD's philosophy that education needs to be focused on the learner and on building student competencies. This course is founded on the principles of experiential education through the integration of knowledge, active learning, and reflection. To achieve this, we take advantage of the expertise, terrain, and resources afforded in the National Parks of Canada. The overarching aim of the Water Experience program is to provide gateway opportunities for youth; opportunities that stimulate life-long learning and connect students in tangible ways with our landscape, thus invoking an entrepreneurial spirit for preserving our natural habitats. This course focuses on connecting students with possible career pathways by creating opportunities to interact with role models in a variety of fields dealing with water science and recreation experiences. As with our other levels of this course, our youth will be called upon to think critically and explore creative solutions that adapt to changing conditions where our natural resources are concerned. The Water Experience courses provide a positive blending of GYPSD's educational goals and objectives with Parks Canada's goals of informing more people about responsible use of the National Park's natural setting to foster ethical citizenship in future generations.

Rationale

The Water Experience courses have been developed in partnership with GYPSD#77 and The Palisades Centre, located in Jasper National Park, within the Grande Yellowhead Public School Division. This course provides students with the opportunity and background knowledge to safely experience firsthand, the natural water resources they have available to them in their own local communities. It enables students to experience local terrains and explore new opportunities. The objectives of this course are to provide students with a variety of water related experiences, develop an understanding of watershed ecosystems, and enhance leadership skills within a context of critical thinking. The progressive pedagogy of this course includes physical activity in the natural world as a means to enhance learning and activate ethical citizenship.

Learner Outcomes

Water Experience 15 embodies the principles of place-based education. It has been developed for implementation at the Parks Canada Palisades Stewardship Education Centre in Jasper National Park. Students following this course will be engaged in video-conference team teaching and learning provided by the expertise of the Palisade's Educational Director and his staff as well as their GYPSD teacher. They will be required to participate in and complete instructional material prior to their immersion experience. There will also be post immersion activities and course material to complete prior to receiving credit for the course. Students will gain greater understanding of water safety/ risk management, paddling techniques, ecological impacts of waterways. They will work collaboratively to share their knowledge and skills with a diverse audience and identify innovative problem solving approaches that apply to the sustainability of our most precious resource.

During the Immersion component of this course, to encourage a culture of teamwork, empathy, and ethical citizenship, youth will share meals and communal living spaces. They will be expected to work collaboratively in an effort to build caring, cooperative and respectful relationships that value diversity. They will initiate discussions that lead to genuine interaction and encourage innovative ideas that demonstrate diverse perspectives.

The pre, immersion and post elements of this course are delivered in partnership with GYPSD#77, The Palisades Centre staff from Parks Canada, as well as other local community organizations.

General Outcomes

1 Students will demonstrate understanding of potential hazard awareness and mitigation in mountain recreation activities.

2 Students will understand and communicate ecological integrity as it relates to the long term functioning of protected lands and watersheds.

3 Students will recognize the historical importance for Alberta and Canada of the Rocky Mountain natural region.

4 Students will apply a variety of specialist technology and/or equipment to understand, collaborate, communicate and increase skill development.

5 Students will develop an understanding that demonstrates an appreciation and value for the mountain parks environment.

Specific Learner Outcomes

1 Students will demonstrate understanding of potential hazard awareness and mitigation in mountain recreation activities.	**15-3 25-3 35-3**
1.1 Demonstrate basic hazard awareness including hypothermia, foot entrapments, creek crossings, river features, etc.	X
1.2 Demonstrate how to mitigate identified hazards, including the use of PFDs, appropriate clothing, weather forecasting, route planning, throw bags, etc.	X
1.3 Develop responses to emerging situations.	X
1.4 Understand how to calculate risks and develop viable ways to mitigate these risks.	X
1.5 Show competence with basic rescue and safety equipment.	X
1.6 Demonstrate appropriate use of safety equipment (PFD, throw bag, etc.)	X
1.7 Demonstrate hazard awareness including hypothermia, foot entrapments, lake features, etc.	X
1.8 Demonstrate how to mitigate hazards, including the use of PFDs, appropriate clothing, weather forecasting, route planning, throw bags, etc.	X
1.9 Select resources and develop confident responses to emerging situations.	X
1.10 Work collaboratively to calculate risks and develop viable and appropriate ways to mitigate these risks.	X
1.11 Under the supervision of trained guides, use all of the safety knowledge on extended paddling trips.	X
1.12 Demonstrate hazard awareness including hypothermia, foot entrapments, creek crossings, lake features, etc. and how to mitigate these hazards, including the use of PFDs, appropriate clothing, weather forecasting, route planning, throw bags.	X

1.13 Students will work in groups and individually to select resources and develop confident and innovative responses to emerging situations.	X
1.14 While working in groups, students will calculate risks and develop consistently appropriate approaches to mitigate these risks.	X

2 Students will understand and communicate ecological integrity as it relates to the long term functioning of protected lands and watersheds.	**15-3 25-3 35-3**
2.1 Recognize the interdependence of watersheds.	X
2.2 Understand the importance of clean water.	X
2.3 Understand the ecological impacts of water being used for agriculture, domestic use, industries, and recreation.	X
2.4 Identify a perspective regarding ecological impact of water usage and justify their response in a clear, logical way.	X
2.5 Clearly demonstrate their understanding of water usage.	X
2.6 Clearly demonstrate their understanding of sustainability of clean water.	X
2.7 Through mentoring from scientists, explore water treatment processes.	X
2.8 Show understanding of the way plants, animals and humans need water for various purposes.	X
2.9 Use case studies to understand conservation issues.	X
2.10 Understand various viewpoints expressed through case studies.	X
2.11 Collaborate respectfully and communicate effectively to demonstrate their understanding of the complexity of water use issues on a local, regional and global scale.	X

3 Students will recognize the historical importance for Alberta and Canada of the Rocky Mountain natural region.	**15-3 25-3 35-3**
3.1 Understand and report on the significance of National Heritage Rivers.	X
3.2 Understand current uses of water.	X

3.3 Understand the historical human use of rivers and interpret their own beliefs and understandings.	X
3.4 Compare and contrast historical uses of rivers to our present day uses.	X
3.5 Explore the significance of hydrological apex in Jasper National Park.	X
3.6 Reflect on the historical human use of lakes.	X
3.7 Compare and contrast their own beliefs and understandings to our present day uses of lakes.	X
3.8 Reflect and report on the significance of Columbia Ice Fields.	X
3.9 Examine current uses surrounding the Columbia Ice Fields.	X
3.10 Reflect on the historical human use of glaciers (past, present, future).	X
3.11 Interpret their own beliefs and understandings regarding the Columbia Ice Fields.	X

4 Students will apply a variety of specialist technology and/or equipment to understand, collaborate, communicate and increase skill development.	**15-3 25-3 35-3**
4.1 Use maps, Global Positioning Systems, (GPS), Geographic Information Systems, (GIS) to plan paddling trips.	X
4.2 Demonstrate understanding of the specific terminology associated with water travel.	X
4.3 Demonstrate understanding for use of planning tools (i.e. gradient, volume, route cards, GPS waypoints, eddies, current, etc.)	X
4.4 Identify the uses of specific paddling equipment. Example: the difference between boat types, the parts of canoes and kayaks, paddles, clothing.	X
4.5 Show familiarity with basic rescue and safety equipment.	X
4.6 Demonstrate use of equipment appropriately (PFD, throw bag, etc.)	X
4.7 Demonstrate basic paddling skills.	X

4.8 Appropriately demonstrate turning, stopping, straight line, wet exits, etc. (See Paddling Passport for more information).	X
4.9 Demonstrate appropriate use of their gear.	X
4.10 Assist others to achieve group objectives.	X X X
4.11 Display their digital and technological fluency through the use of digital data loggers and water monitoring tools (temperature, turbidity, pH, dissolved oxygen).	X
4.12 Through field excursions identify and apply aquatic monitoring processes.	X
4.13 Demonstrate appropriate application of the specific terminology associated with water travel.	X
4.14 Demonstrate appropriate application of planning and monitoring tools (i.e. gradient, volume, route cards, GPS waypoints, eddies, current, etc.)	X
4.15 Further develop basic paddling skills such as turning, stopping, paddling in a straight line, wet exits, etc. (See the Kayaking Paddling Passport for specific skills to work on).	X
4.16 Take responsibility for their gear.	X
4.17 Integration of digital data for comparative ecology	X
4.18 Demonstrate their digital and technological fluency by efficiently navigating a variety of websites to gain better understanding of a variety of points of view.	X
4.19 Develop appropriate paddling skills such as turning, stopping, paddling in a straight line, etc.	X
4.20 Show familiarity with rescue and safety equipment and will use these appropriately (PFD, throw bag, etc.) in simulated emergency scenarios.	X

5 Students will develop an understanding that demonstrates an appreciation and value for the mountain parks environment.	**15-3 25-3 35-3**
5.1 Reflect on the acquisition of lifelong active living skills.	X
5.2 Develop an appreciation for what this can mean for their future well-being.	X
5.3 Collaborate respectfully and communicate effectively to clearly demonstrate understanding of water stewardship and water rights issues.	X

5.4 Develop responsibility through teamwork in real world learning context.	X
5.5 Reflect and demonstrate the acquisition of lifelong physical literacy skills such as kayaking or canoeing.	X
5.6 Develop an appreciation for what the recreational activities can mean for their future well-being.	X
5.7 Collaborate respectfully and communicate effectively to clearly demonstrate understanding of water stewardship and water rights issues.	X
5.8 Take personal responsibility as environmental stewards.	X
5.9 Reflect on the acquisition of life -long physical literacy skills such as kayaking or canoeing.	X
5.10 Examine how these recreational activities could be continued after leaving the Palisades Centre so as to improve their personal well-being.	X
5.11 Value and show understanding of outdoor ethics such as the Leave No Trace philosophy.	X
5.12 Explain their role in advocating a sustainable balance between resource development and the well being of communities.	X
5.13 Reflect on the various careers connected to water.	X
5.14 Evaluate their interest in these careers.	X
5.15 Understand what next steps would need to be taken to embark on those career paths (biologists, raft guides, water treatment facility staff, canoe instructors, swimming pool operators, etc.).	X
5.16 Students will show effective trip leader skills.	X

Facilities or Equipment

Facility

This course had been designed to take place at the Parks Canada Palisades Stewardship Education Centre in Jasper National Park. It is a component of a multi-agency program and its successful implementation has required a significant investment in staff, facilities and equipment. The Parks Canada Palisades Stewardship Education Centre is a unique facility that affords this opportunity for Alberta youth.

Equipment

Specialist equipment required for this course includes a residential facility and outdoor equipment, such as canoes, kayaks, PFDs, paddles, rain gear, GPS units, GIS software and computers.

Learning Resources

Parks Canada Palisades Stewardship Education Centre
A major portion of this course has been designed to be delivered at the Palis Stewardship Education Centre in Jasper National Park. The Palisades has a multitude of resources that will be used, from maps to field guides to canoes paddles in an immersive multi-day experiential education setting. In addition available to assist with the delivery of this course on site during the Immersic component, the experts at the Palisades will be available to assist with the video-conference teaching and learning.

Palisades course-specific resource package for Water Experience 15. See http://www.thepalisadescentre.ca/index.php/2012-03-14-21-45-32/document ew/17-course-info-for-teachers/22-waterexperience

Texts & Multimedia

Eau Canada (2007), edited by Karen Bakker *(to be used in WE 15 and WE 2*

Map it First and other GIS software will be used, along with GPS units and a of student handouts and other resources.

Various websites and videos will be used during the course.

Others

Identification of Controversial or Sensitive Course Com

As with all GYPSD field trips, the program is covered under divisional insurance (see letter of support) and field studies policy AP260 guidelines are adhered to. Beyond GYPSD policy, the field components are operated inside Jasper National Park. We are therefore bound to meet or exceed custodial group regulations; this course meets or exceeds the highest standards of care.

Each year in Canada there are approximately 500 deaths by drowning. Education programs such as this contribute to hazard awareness and develop student's capacity to recognise risk and mitigate harm.

There is significant public interest in reconnecting youth to nature and custodial youth groups in outdoor environments. We believe that this program will contribute to the public dissemination and development of best practices in the risk managed context of certified guides, public safety response systems and predetermined terrain.

Identification of Safety Components

Risk Assessment
As with all GYPSD field trips, the program is covered under divisional insurance and field studies policy AP260 guidelines are adhered to. Beyond GYPSD policy, the field components are operated through the Palisades Stewardship Education Centre inside Jasper National Park. We are therefore bound to meet or exceed custodial group regulations; this course meets or exceeds the highest standards of care.

For specific information about the Risk Management Protocols for the Palisades Centre, see
http://www.thepalisadescentre.ca/index.php/2012-03-14-21-45-32/documents/cat_view/30-centre-of-excellence/35-quality-assurance

There is significant public interest in reconnecting youth to nature and custodial youth groups in outdoor environments. We believe that this program will contribute to the public dissemination and development of best practices in the risk-managed context of certified guides, public safety response systems and predetermined terrain.

Risks (Accidents, injury, forms of loss)

Physical injury could occur as a result of students engaging in outdoor activities.
Students could experience emotional difficulties as a result of being away from home.

Factors (vulnerability, dangers, hazards)

People
Youth may have limited personal exposure to outdoor lake and river environments.

Equipment
Equipment malfunctions could result in students exposed to danger from the elements.

Environment
Extreme weather conditions could lead to personal injury (such as hypothermia).

Normal conditions strategy

People
Participants will be lead by expert, professionals with qualifications and experience in leading recreation activities.
Students will be emotionally support by GYPSD and PC staff.
The screening process will ensure that all participants can swim with a personal flotation device.
Equipment
Careful maintenance and replacement of all specialist equipment will be practiced.

Environment
Daily whether check will be made, with alternate activities planned as necessitated by inclement conditions.

Emergency conditions strategy

People
Qualified first aid staff will be on site at all times. If necessary EMS will be summoned by telephone or VHF radio.

Equipment
Reserve back up equipment will be on hand, with trained professionals on site for recreation activities.
If necessary EMS will be summoned by telephone or VHF radio.

Environment
If needed the program will be suspended or rescheduled with students returned to the school.
If necessary EMS will be summoned by telephone or VHF radio.

Standards

Policies / Guidelines

GYPSD filed trip policy AP260 will be followed.
Parks Canada Custodial group framework will be followed.
Parents and students will be briefed.

Industry standards

Parks Canada custodial groups standards will be followed, certified personnel will be provided by Parks Canada as required.

Skills required by leaders / guides

GYPSD staff will assume a 'loco parentis' role with all specialist leaders and guides provided by Parks Canada.

Final Decision on implementing activity
Accept or reject?

Accept

Comments

This program carries with it an element of risk. Experts manage those risks in a professional manner. GYPSD does not consider the risks inherent in this program to be above or beyond the accepted norm for high school field trips.

GYPSD reserve the right to postpone or cancel parts of the program due to inclement whether or other factors at the discretion of the principal.

Significant Overlap with Provincial Curriculum

There are no significant overlaps. In the Science area, at the superficial level, there may appear to be some overlap. However, this course is distinct in its learning context and is delivered through the extensive use of outside expertise and practical application in real world settings. Further, it is the conceptual pluralism model of applied science and recreation that sets this program apart.

Assessment

A variety of assessment tools will be used to measure student achievement in this course.

- Pre-Immersion Assignments & Engagement: 30% of final mark
- Immersion Assignments & Engagement: 60% of final mark

(attendance & participation in activities mandatory)

- Post-Immersion Assignments & Engagement: 10% of final mark

These courses encourage and expose students to a variety of career and occupational paths. Through connection with role models from biologists, to public safety officers to recreational raft guides, students will develop an understanding of a range of job options. Those students who successfully complete the full program will gain a first aid certificate, Paddle Canada Bronze Tripping certification and Alberta White Water Association Paddle Passport

Course Evaluation and Monitoring

Implementation for assessment of this course will be administered through the Education Director, Palisades Stewardship Education Centre under the direction and guidance of the Assistant Superintendent for GYPSD#77.

Appendix I

1 Paddlesport Passport Rubric.pdf

2 Student Assessment Rubric.docx

3 WE summary sheet 2.doc

Appendix II

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