## FISHING FOR MEANING: CREATING A NATURE THERAPY GUIDED FLY-FISHING PROGRAM FOR STUDENTS IN THE LEARNING SUPPORT CENTER AT PRINCE GEORGE SECONDARY SCHOOL

by

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#### Abstract

Developing high school curriculums that promote positive mental health by fostering connection and meaning is an important undertaking. This project explores the role that Nature Therapy and trauma informed practice can play in guiding curriculum development. To do this the contextual realities the Learning Support Center at Prince George Secondary School are explored and a brief literature review on the topics of Nature Therapy and adolescent based Trauma counselling is completed. The final component of this project is the completion of a School District 57 Board Authorized Course Template that integrates elements of Nature Therapy, trauma informed practice and school connectedness with curricular content.

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#### **Chapter One**

#### Introduction

The role of schools in addressing mental health issues is evolving. In 2018, the BC government reported that school connectedness was the number one determinant of child and youth mental health. Drawing on this theme, the BC government in conjunction with the Pan-Canadian Consortium for School Health created a connectedness strategy that focuses on strengthening relationships, maintaining positive emotions and enhancing resiliency (Pan-Canadian Joint Consortium for School Health, 2016). Within this strategy, schools are encouraged to develop programs that foster positive emotions, engagement, relationships, meaning and achievement (shown by the acronym PERMA) (Pan-Canadian Joint Consortium for School Health, 2016). Table 1 shows the core tenants of the PERMA strategy as outlined by the Pan-Canadian Consortium for School Health (Pan-Canadian Joint Consortium for School Health, 2016).

Positive Emotion	Feeling Good; Experiencing positive emotions such as joy, gratitude, interest and hope.
Engagement	Being completely absorbed in activities that use our strengths, yet challenge us
Relationship	Being authentically connected to others and having positive relationships
Meaning	Belonging to and serving something greater than ourselves.
Achievement	Experiencing a sense of accomplishment, success and mastery.

Table 1.1 PERMA 5 step education model for enhancing school connectedness.

Mental health education is also being addressed through BC's redesigned curriculum.

This curriculum focuses on curricular as well as core competencies. The BC Ministry of

Education (2019) outlines that Core Competencies are intellectual, personal, social and emotional proficiencies that students develop over a lifetime. The shift towards formally recognizing Core Competencies means that BC teachers are expected to plan, teach and report on a wide range of wellness related content. For instance, the Personal and Social Competency outlines curriculum pertaining to the development of personal awareness, self-regulation and well-being. The goal for BC teachers is to use the process of learning as a vehicle to move beyond content and into the processes and practices that promote holistic well being. This shift opens the door for increased education investment into classes that emphasize wellness based pedagogies.

The intention of this project is to design a course that will enable the most vulnerable students at Prince George Secondary School (PGSS) to engage with the outcomes outlined in the PERMA strategy and supported by BC's new curriculum. In order to do this a Nature Therapy lens will be applied to a curriculum that tightly weaves fly fishing content and core competency based experiences.

#### **Significance of Project**

Located in the inner-city portion of Prince George BC, Prince George Secondary School (PGSS) provides services for students coming from some of the provinces more vulnerable neighborhoods. In a 2012 report by the BC government, the Youth at Risk Composite Index for the City of Prince George ranked as the 12<sup>th</sup> lowest in BC (2012). Students from PGSS come from a variety of neighborhoods within the city, including some of the more impoverished ones. The Veterans Land Act (VLA) area is one such neighborhood. 2016 data for Statistics Canada shows that in some areas of the VLA poverty rates for children (0 to 17 years of age) were as

high as 70%. Research has linked low socioeconomic status to a wide range of behavioral and cognitive impacts in adolescents (Letourneau, Duffett-Leger, Lavac, Watson, 2011). Among these impacts researchers found that students from lower socioeconomic households demonstrated increased rates of depression, delinquency and aggression (Letourneau, Duffett-Leger, Lavac, Watson, 2011).

The Learning Support Center (LSC) at PGSS was designed to help mitigate the impacts of poverty on successful high school completion. LSC students typically score 3 to 5 grade levels behind their peers on tests that measure literacy and numeracy, and present with a variety of behavioural needs that are difficult to manage within traditional classroom settings. As a program, LSC is designed for learners from a variety of cultural backgrounds. This being said, approximately 80 percent of LSC students are of Aboriginal ancestry. For this reason, the LSC program works closely with the Aboriginal Education Department as well as Aboriginal Education Workers and Aboriginal Social workers. The LSC department has developed layers of support that are designed to assist students with cultural, academic and social needs.

Culturally, PGSS is built in Lheidli T'enneh territory, this being said LSC families come from all over central and Northern BC. Students come from the Tahltan, Gitxsan and Wet'suet'en territories of the North West and the Dekelh territories closer to Prince George. Although many LSC students reside in Prince George's VLA neighborhood, their families come from communities such as Takla, Tachet, Gitsegukla and Fort Babine. Drawn to Prince George for a wide range of reasons, many LSC students are living away from home. This disconnection adds to their vulnerability and the difficulty that they experience when trying to connect to the PGSS community. Engaging adolescents in the therapeutic process is challenging. Many mental health counsellors identify that work with adolescents requires practitioners to step outside traditional practice in order to develop engaging therapeutic experiences (Hannah et al 1999; Malkoff 2014, Hill 2007). Nature Therapy, which draws on people's natural fascination with nature is one such method. Berger and Lahad (2013) describe Nature Therapy as a process that occurs within nature and considers nature to be an active participant in the therapy process. This method of therapy draws on the idea that encountering the healing and recuperative resources inherent to nature can promote parallel processes within people (Berger & Lahad, 2013). Nature Therapy is particularly enticing for therapists working with adolescents as it draws on people's natural propensity to engage with natural environments and provides a framework that promotes freedom and flexibility within the therapeutic relationship.

In summary, LSC students face an uphill battle when comes to building meaningful connections to PGSS. In order to apply the PERMA strategy LSC staff need to work on developing intentional therapeutic practices that meet the diverse needs of LSC students. My hope is that a Nature Therapy framework focused around a curriculum of fly fishing will be able to blend the elements of therapy and education necessary to be successful.

#### **Project Parameters**

My goal for this project is to create a grade 12 board authorized course about freshwater fishing. Using the new BC curriculum that emphasizes core competencies (in particular: communication, positive personal and cultural identity, personal awareness and responsibility, and social responsibility) and the PERMA strategy, I integrated therapeutic elements directly into the curriculum document. Seeking board authorization for the class will enable LSC students to use it for graduation credit and will provide a working document for other teachers to use if they want to develop similar classroom practices.

#### **Personal Location**

I was drawn into teaching in my mid-twenties while working as a forestry consultant. I loved working outside and enjoyed the science of forestry but was drawn to working in school because they provided an opportunity to work with disadvantaged youth. My first teaching job was in the Northwest Territories community of Fort McPherson. It was in this job that I first took students outside. More accurately, the students took me outside, bringing along to me to the school's winter culture camp where they set up a canvas tent, melted snow to make tea and spent the day visiting with elders. In subsequent trips, knowledgeable locals helped use set and pull the schools fishing net under the ice of the Peel River. During these trips I acted as a facilitator and observer. Although I valued these times in nature, I never really stopped to think about why they might be important or what they meant to my students. My experience in the Arctic led me to train as a special education teacher and over the course of the next eight years I immersed myself in numeracy and literacy intervention. Although I have always had fond memories of my time "on the land" with my students in Fort McPherson it wasn't until recently that they really started to bubble up and demand my attention.

In many ways the past eight years of my career has been about chasing the idea of best practice. Much of my attention has been focused through a special education lens that has pushed me to find creative ways to administer empirically validated reading recovery strategies, with at risk students. This lens has allowed me to be empirical, systematic and structured and has enabled me to become a highly proficient reading intervention teacher. Although, I will always be passionate about reading instruction, recent experiences watching grade 10 and 11 student's dropout of school has impacted me. More than ever I feel the need to build therapeutic elements that help to foster meaning, enjoyment and belonging. When I think about these concepts, I am drawn back to the Peel River and my days spent on the ice with my students. I think about the amazing structures that my Gwitch'in co-teachers had skillfully crafted and I fantasize about how something similar might help my students at PGSS.

My experiences in the Arctic and my passion for nature has led me towards investigating the implementation of a fly-fishing program that would be based in the principles of Nature Therapy. As a teacher, I strongly believe that a large part of my job is being a proficient bureaucrat. I value this role and believe that my ability to navigate the paperwork and the procedures of the education system is one way that I can give back to the communities in which I work. My hope is that whatever I build within my classroom can become a vehicle for community engagement. As I navigate my career as a counsellor, I imagine that I will have a similar focus. What this means to me is that I will jump through the bureaucratic hoops involved in creating the structures, policies and practices and will then step back into the role of facilitator once community members immerge. The added benefit of working from a Nature Therapy lens is that Nature in and of itself is a valued therapeutic contributor. With this in mind, I hope have created a program that brings students in contact with nature and provides the context, structures and practices that promote community engagement.

#### **Project Overview**

The intention of this project is to build a curriculum document that will provide the context and rational necessary to start incorporating Nature Therapy into my classroom practice. In the first phase of this work I completed a literature review on the topic of the nature-based therapy. The second phase involved using my professional knowledge as a teacher to develop a curriculum package that can be authorized by School District 57. This process involved creating a draft curriculum plan that outlines competencies that the class will target as well as the rational for offering such as course. Once this draft plan was completed it went through two editing stages where district staff provided feedback. Once staff were satisfied that the curriculum document met district standards it was tabled to be presented at a district staff meeting. At this point, Fly Fishing 12 is tabled to be presented to District Staff at a meeting on January 21<sup>st</sup> 2020. If Fly Fishing 12 is supported by staff it will then be tabled to be presented at a School Board meeting on January 28<sup>th</sup> 2020. If Fly Fishing 12 is supported at the board level it will be sent to be BC government and will be assigned an official course code. Appendix 2 illustrates a flow chart that outlines the stages for approving a board authorized courses. Chapter 3 provides a detailed summary of the Fly Fishing 12 curriculum package.

#### Chapter 2

#### Introduction

My experiences in nature have led me to believe that there is therapeutic value related to time spent in the outdoors. It wasn't until recently, however, that I began examining my naturebased experiences through an academic lens. When I started this literature review, my intention was to examine core mechanisms that might explain the therapeutic qualities of nature. I wanted to summarize theories, principles and practices that might explain my beliefs about nature, and I wanted to spend time examining how nature and therapy can work together. This process quickly led to a barrage of questions that included:

- What are the traditions within the field of nature-based therapy?
- What are the therapeutic impacts of nature?
- What is the efficacy of nature-based therapy when working with adolescents?
- Can Nature Therapy be applied in a school setting?
- Can fishing be used as a theme for Nature Therapy?

And most importantly,

• How will I locate myself within this body of knowledge so that I can begin to authentically integrate it into my practice?

The intention of this short literature review is to summarize some of the literature that has helped me to begin to answer these questions.

#### Approaches to Nature Based Therapeutic Care

Searching for literature on the topic of nature and therapy quickly yields articles on a dizzying number of topics. Common approaches to nature facilitated therapy include: Wilderness Therapy, Adventure Therapy, Experiential Adventure Therapy, Recreational Therapy, Eco-Therapy and Nature Therapy. Each of these types of therapy seeks to promote growth by providing slightly different therapeutic experiences. Definitions for these terms can be difficult to manage because they can vary between resources and sometimes have overlap. Table 1 identifies some of the characteristics of several common nature based therapeutic approaches and provides a reference for articles related to each topic.

Approach	Description	References
Adventure Therapy	"Therapeutic approaches that use challenge and experiential learning in conjunction with other therapeutic techniques". These challenges often happen within urban environments and do not focus on nature based experiences (ex. Doing rock climbing at a local rock climbing gym)	Taylor, Segal & Harper (2010, p.77)
Wilderness Therapy	Therapy that involves attempts to change behavior through challenge based experiential activities that occur in the outdoors. These challenges may involve activities such as backpacking, white water rafting or rock climbing and are typically used to promote group orientation as well as self- empowerment.	Clem, Grace, Prost & Thyer (2015)
Eco-Therapy		Sackett (2010)

	Therapeutic interventions that seek to improve psychological wellbeing through the use of green spaces.	
	Eco-therapy focuses on the belief that connecting with nature can have healing impacts. Eco-Therapy can take many different forms but the focus is on spending time in green areas.	
	Nature Therapy suggests that nature has healing and recuperative properties and that spending time in nature can promote parallel processes within people.	
Nature Therapy	Nature Therapy includes four models of practice that include Challenge in Nature, Art in Nature, Home in Nature and Nature Conservation Therapy.	Berger & Lahad (2013)
	Unlike other forms of therapy Nature Therapy views Nature as an active participant within the therapeutic process.	

Table 2.2 Common terms used to describe approaches to nature-based therapy

For the remainder of this project I will be referring to Nature Therapy when writing about philosophical orientations and structural frameworks. I have chosen this approach because I identify with its core philosophical principles (nature as an active participant in therapeutic process and Nature as restorative). Additionally, there seems to be a supportive body of literature on Nature Therapy whereas other approaches, specifically Eco-Therapy, seem to be less defined.

### Theoretical perspectives on Mechanisms that Underlie Nature Therapy

Anecdotal evidence of nature's therapeutic qualities has existed for a great deal of human history but it wasn't until recently that the field of environmental psychology began to research the topic (Joyce & Dewitte, 2018). Research in the field of environmental psychology has found a strong link between time spent in nature and an increased ability to counteract stress and recuperate from mental fatigue (Joyce & Dewitte, 2018; Kaplan, 1995; Ulrich et al, 1991). Based on this link researchers have developed several theories that attempt to explain the mechanisms that underlie nature's therapeutic characteristics. The most common of these theories are Attention Rejuvenation Theory (ART) and Stress Reeducation Theory (SRT). Overall the field of environmental psychology is still in its infancy. With much of the work in this field coming in the past 30 years there is still much to explore. As a result, there is still debate as to whether SRT and ART can fully account for the healing aspects of nature. Although the debate continues the positive impact of nature on wellness is well established and ART and SRT provide two complementary theories shed light on some of the mechanisms that underlie Nature Therapy.

Attention Rejuvenation Theory. ART was first popularized by Kaplan (1983). Kaplan's ART was built around the idea of voluntary attention that was first described by William James (1892) (Kaplan, 1995). According Kaplan (1995), directed energy is a form of voluntary attention that is necessary in order to focus. Kaplan (1995) explains that directed attention is susceptible to fatigue and is necessary in order to perform a wide range of cognitive tasks. Kaplan (1995) writes that not only is directed attention necessary in order to do cognitive tasks but it also impacts our mood, perceptions and overall thought processes. For instance, an individual who has no capacity for directed attention would not be able to step back from a problem in order to view the greater context of their situation. Kaplan (1995) writes that "this leaves the individual caught up in the demands of the immediate situation, unable to transcend momentary pressures and temptations" (p. 171). In another example Kaplan (1995) points out that individuals who lack directed attention become highly distractible which leads to "impaired perception of material that is not inherently engrossing" (p.171).

Berto (2014) writes that ART is based on a psycho-functionalist perspective and that humans are naturally drawn towards environments that would have traditionally enhanced their survival. Berto (2014) explains that according to ART people are drawn to nature by mental fatigue and that once they are in nature a series of factors promote recovery. Berto (2014) points to the idea of "soft fascination" (a state of effortless engagement), as a primary driver of the restorative processes within nature. Berto (2014) explains that when an individual experiences soft-fascination nature holds them in a state of engagement which gives their executive system a break. In other words when a person is engrossed in effortless attention, they are not activating the areas of the brain involved in regulating direct attention. As a result, these areas can rest and recuperate. Additionally, and perhaps more significantly, because the executive system is resting "pessimistic thoughts are blocked and negative emotions are replaced by positive ones" (Berto 2014, p.396).

Berman, Jonides and Kaplan (2008) reported that the link the positive impacts of nature on attention and memory are well documented (Berto,2005; Cimprich, 1992, 1993; Cimprich & Ronis, 2003; Faber Taylor, Hartig et al., 2003; Kuo, & Sullivan, 2002; Ottosson &Grahn, 2002; Tennessen & Cimprich, 1995). In their 2008 study Berman and colleagues sought to extend this connection by examining the impacts of walking in natural versus urban environments. Berman, Jonides and Kaplan (2008), had participants walk in natural and urban settings and used cognitive testing that emphasized direct attention. The study demonstrated that walking in a natural environment lead to significantly higher scores. The experiment also showed that the impacts of nature were limited to aspects of directed attention (versus general attention) and that they were not impacted by mood.

**Stress Reduction Theory.** SRT suggests that time spent in nature positively impacts affect. Berto (2014) writes that SRT is based on a "psycho-evolutionary" model that suggests because humans have evolved in natural environments they are psychologically and physiologically linked to them (p.396). Berto (2014) writes that research into SRT shows that natural settings have restorative impacts on "positive affect, anger/aggression, and fear" (p. 397). Much of the work in the field of SRT has been completed by Roger Ulrich. One of Ulrich's more well-known studies was completed in (1984) and found that the recovery rates of hospital patients could be impacted by the view they have from their beds (views of nature vs views of walls or parking lots).

Research on the impacts of nature on human cognition is widespread. In a literature review by Berto (2014) several studies are reviewed that link the presence of nature to a variety of outcomes. In one example research by Strife and Downey (2009) found that students who had access to naturalized schools' yards demonstrated improved cognition as well as physical functioning, attention and memory. Additional research points to the idea that recovery from stress occurs more rapidly in nature because of the activation of the parasympathetic systems (Berto, 2014). This research found that patients experienced parasympathetic based recovery within minutes when they were in natural settings where as in urban settings it took much longer (Berto, 2014).

Aspects of SRT can be measured using electroencephalograms (EEG). In a study by Aspinall et al (2013) researchers used a portable EEG to measure emotional activity as participants walked a route that included urban settings and green spaces. Figure 1 shows the results of the study by Aspinall et al. (2013, p.3). The graph created by the researchers clearly shows a drop in emotional arousal levels as the participants walked through the green space portion of their routes (Aspinall et al. 2013)



Figure 2.1 This figure shows some of the results gathered by Aspinall et al., 2013.

Additional studies seeking to clarify the relationship between nature and affect (SRT) have sought to measure positive and negative thought patterns. In one such study Berman et al (2012) had individuals walk through nature-based settings and urban settings and then used standardized tools to measure anxiety, rumination, and negative and positive affect. Figure 1.2 shows the results of their study. The study found that participants experienced greater increases in positive affect and substantial decreases in negative affect, rumination and anxiety when they walked in a natural setting versus an urban one.



Figure 2.2 Impacts of walking in a natural setting versus an urban setting on anxiety, rumination, negative affect and positive affect.

In trying to integrate the theories of ART and SRT I developed a personal thought exercise that I felt exemplified the core concepts of these theories:

Imagine that you have stayed at work until late into the evening. You have been working hard to meet deadlines, have skipped meals, slept poorly and summoned tremendous personal resources in order to direct your attention to small but important details. As you leave the office you are beyond exhausted. You may feel overwhelmed or even pessimistic, you're not done your tasks but you know that fatigue means that you aren't producing quality work. You decide to take a walk home along a beach and as you walk you are plagued by worries, frustrations and the mental haziness of exhaustion. On a whim you decide to stop by a tidal pool that you have recently visited before heading for home. When you get to the tidal pool the anemones are out and as you crouch down you notice a small fish dart out from behind some rocks. As your eyes adjust their focus, you slip effortlessly into a state engagement. The intricacies of the tidal pool hold you in the present and your thoughts of work slip away. Frustrations and worries are lost as

your attention is drawn to barnacles and sculpins. As you gaze into the tidal pool you lose track of time. Held in a state of soft fascination, the executive functioning centers in your brain relax and your reserves of cognitive energy slowly start to replenish themselves.

What I find interesting about this imaginary scenario is that it clearly shows how a natural feature such as a tidal pool can act therapeutically. In this sense, the tidal pool itself is no different than a counsellor, a yoga teacher or a mindfulness routine. As a teacher and a counsellor, I would love to invoke the elements of awe and beauty that drive soft fascination and enable effortless engagement. Many students live in a perpetual state of exhaustion and many of them retreat to the equally fascinating world of cell phones, social media and video games. Although these types of technology also promote effortless engagement they do not promote rejuvenation. Hard fascination, such as going on your phone will hold your attention when you are exhausted but instead of rejuvenating you it will draw you further into a state of emotional and cognitive depletion. As an educator working within a Nature Therapy framework may be as simple as valuing quiet moments in which students are immersed in nature. When these moments are designed into pedagogy nature becomes an active partner and brings with it the restorative characteristics of soft fascination.

#### Addressing Complex Trauma when Working with Adolescents

#### What is trauma?

The terms trauma, complex trauma and adverse childhood experiences (ACE) are becoming more and more common within literature. Although each of these terms means something slightly different, they are all related to the impacts that traumatic experiences can have on the on human development and behaviour. For the purpose of this paper I will use the term complex trauma when describing the role that trauma has played in the lives of LSC students.

Spinazzola et al (2005) describe complex trauma exposure as "the experience of multiple or chronic and prolonged, developmentally adverse traumatic event, most often of an interpersonal nature" and occurring with an early-life onset (p.1). Most authors describe the effects that complex trauma as being multifaceted. For example, Cook et al (2005) suggest that exposure to complex trauma leads to impairments in eight domains, including: attachment, biology, affect regulation, disassociation, behavioral control, cognition and self-concept. Given the broad nature of these domains, complex trauma is seen to have a global impact, affecting everything from neural development to self-concept.

Working within an LSC context, it is also important to develop an understanding of what the terms stress and traumatic experience mean. The definition of complex trauma outlines that traumatic experiences are often interpersonal in nature. This type of trauma is widely seen to include physical, sexual and psychological abuse as well as community violence (Briere & Lanktree 2012, Spinazzola et al (2005)). Although this type of trauma is certainly present within an LSC context it is also important to consider the role that poverty has on family systems and how this also contributes to the trauma that LSC student's experience. Pressley and Smith (2017) write that stress is particularly impactful to development when a child has to bear its physiological impacts without the "buffering protection of a supportive adult relationship" (p. 138). The authors write about the "vulnerability of caregivers striving to raise children in under resourced environments, with chronic poverty and unsafe neighborhood environments" (Pressley & Smith, 2017 p. 138). Pressley and Smith (2017) go on to explain that these factors limit the caregiver's ability to provide nurturance and emotional support. In other words, they struggle to be the buffering protective force that their developing children require. Although this type of chronic stress many not be as violent as interpersonal trauma it still has a significant impact on development and therefore needs to be included in any discussion stress and trauma.

#### How does Trauma Impact Adolescents?

Within an LSC classroom the impacts of trauma can be seen across multiple domains. For instance, LSC students are typically working 3 to 5 grade levels behind that of their age level peers. These same students have markedly impoverished language skills and struggle with vocabulary knowledge and well as expressive and receptive language skills. Rounding out the academic and cognitive impairments of many LSC students is a marked decrease in mental processing speed and working memory. These factors are commonly known within school settings and within an educational framework generally result in students who are termed to have borderline Intelligence Quotient (IQ) impairments. As a special education teacher I have read enough psychoeducational reports to know that the vast majority of my trauma students would score somewhere between 65 and 75 on tests designed to measure IQ (I acknowledge that IQ testing it contentious but it is a standard within the school system). This being said cognitive impairments are only the tip of the iceberg when considering the impact that trauma has on adolescents.

Blaustein and Kinniburgh (2010) explain that youth who have grown up in traumatic settings face increased difficulties when confronted by the challenges of adolescence. The authors note that traumatized youth are at greater risk of developing negative self-identity and that they often rely on immature or unhealthy means of coping with stress (Blaustein & Kinniburgh, 2010). For instance, traumatized adolescents are more likely to rely on "substance use, cutting, sensation seeking behaviours and sexual interaction" when confronted by stressors (Blaustein & Kinniburgh, 2010 p. 16). Additionally, adolescents who have a history of trauma often rely on "dissociative coping as well as depersonalization and derealization" (Blaustein & Kinniburgh, 2010 p. 16). Appendix 1 presents a table of information from Briere and Lanktree (2012) that provides additional detail on how trauma impacts adolescents.

#### Frameworks for Addressing Trauma

The wide range of impacts that complex trauma can have on adolescents means that building targeted programming and interventions can be challenging. Two frameworks that are sometimes used to address trauma are the Attachment, Regulation and Competency model (ARC) developed by (Blaustein & Kinniburgh, 2010) and the Integrative Treatment of Complex Trauma for Adolescents model (ITCT-A) created by Briere and Lanktree (2012).

Briere and Lanktree (2012) write that "the type and extent of the difficulties often vary as a function of the types of trauma the youth has experienced, when in the developmental process they occurred, and their frequency and duration, as well as other biological, psychological and social variables that might intensify or otherwise moderate the clinical presentation" (p.13). The authors go on to explain that the variability in how trauma presents itself demands that treatment be individualized and guided by assessment (Briere & Lanktree, 2012). The ITCT-A framework is built around continuous assessment of 17 potential problem areas. Therapists use clinical impressions, interviews and assessments to score a treatment flowchart. Once this process is complete therapeutic intervention is guided by whichever problem areas receive the highest scores. Briere & Lanktree (2012) have connected each of the 17 potential problem areas to possible intervention processes (see Appendix 2 for a chart that connects problem areas to specific interventions.). Following the ITCT-A framework therapists would reassess the

problem areas after approximately 3 months and would continue treatment based on the areas of identified need. A true framework the ITCT-A has too many possible interventions to list. A strength of this approach is that provides a structured sequence and process which can be filled in with any number of therapeutic interventions. Additionally, because it is designed for adolescents the authors provide an overview of how it could be adapted to be used in group settings and even in school settings.

Much like the ITCT-A model the ARC model is built to provide flexibility while maintaining a multidimensional perspective. Blaustein and Kinniburgh (2010) write that trauma focused interventions for youth happen in a range of settings. The authors explain that while a traditional one on one therapeutic setting are optimal, many youth access services through schools, shelters and residential programs. This variation in intervention delivery combined with the range of impacts that trauma exposure has means that "one-size-fits-all treatment models" are generally ineffective (Blaustein & Kinniburgh, 2010 p. 35). Figure 1 shows the building blocks of Blaustein & Kinniburgh's (2010) ARC program.



Figure 2.3 This image shows the 10 core components of the ARC model.

The authors describe ARC as a "framework designed to incorporate a core components model" (Blaustein & Kinniburgh, 2010 p.35). Figure 1 illustrates the ten core components of the ARC framework. These core components are organized into the themes of Attachment, Self-Regulation and Competency (ARC), with each theme occupying a different level within the framework.

It should also be noted that the authors view trauma experience integration as its own unique component. According to Blaustein and Kinniburgh (2010) processing trauma with children and youth who have experienced complex trauma requires special attention. The authors write that trauma can be processed through "the integration of thematic, or fragmented, self-states and associated early experiences" or through the "Processing of specific events" (Blaustein & Kinniburgh, 2010 p. 210). In this model the integration of thematic or fragmented states can be seen to mean linking the impacts of trauma with themes that have occurred as a result of childhood experiences. For example, a child might link their difficulty with emotional regulation to a theme of vulnerability or fear that stems from past experiences. Or to provide an example, a child would recognize that their aggressive outbursts may be linked to past events rather than present situations. This form of processing does not necessarily involve actively revisiting trauma but instead focuses on developing awareness and building emotional processing tools. By contrast trauma experience integration that involves processing specific memories and experiences and does delve into the explicit exploration traumatic memories and experiences.

The ARC and the ITCT-A models provide frameworks for ensuring that therapeutic processes are multidimensional but do not guide therapeutic pace. Although both models make

suggestions for altering content deliver for specific populations the tri-phasic model presented by (Herman, 1992) likely provides the best outline summary when it comes to sequencing therapeutic care. The tri-phasic model breaks the overall therapeutic process into three stages. Stage one focuses on safety and stabilization, stage two focuses on remembrance and mourning and stage three focuses on reconnecting and reintegration (Herman, 1992). Within each of these stages Herman (1992) lists a variety of themes that could be covered. The tri-phasic model doesn't provide themes that the ITCT-A or ARC programs lack but it does lay out a framework for how to move between stages. Within the tri-phasic model stage one, safety and stabilization, occurs first and then depending on the nature of the counselling setting and the needs of the client the therapy can move on to stage two or skip stage two entirely and move to stage three. In this way the tri-phasic model presents a way of doing trauma work that does not involve the integration of traumatic memories. Although the ARC and ITCT-A frameworks hint at ways of doing therapeutic work without actively processing traumatic memories the tri-phasic model provides a concrete methodology that insures that clients who are not ready to actively process memories can still access targeted therapeutic care. With this in mind a combination of approaches is likely a good option. For instance, an ITCT-A framework that is grounded in a triphasic model is likely a good place to start.

#### Therapy, Curriculum and the Public School System

Perhaps the most challenging aspect of working with traumatized youth is understanding how trauma based practice can be implemented within a classroom setting. As a special education teacher and a counsellor I feel that this understanding ought to embrace some of the core values that are foundational to the education system. With these values in mind, therapeutic practice can be woven into classroom settings in a way such that school staff can feel empowered rather than directed and supported rather than burdened.

When reflecting on the core values of the education system, a question from my first interview as a teacher comes to mind. During the interview I was asked; "what is the purpose of the student teacher relationship?". Being a well prepared, I immediately knew that the answer was to enable the communication and instruction of curriculum. Although the question and answer are very simple they go a long way in illustrating the values and priorities of the education system. Instructing curriculum is what teachers do. Instructing curriculum is what teachers have a social license to do, what their employer expects them to do and what the School Act defines as their role. Schools by extension are inextricably linked to curriculum, which means that they are designed for the purpose of curricular instruction. With this reality in mind, the question becomes: how can trauma informed practice and therapeutic care be built into the curriculum? Encouragingly, the education system is moving in this direction. Content based assessment has been replaced with competency based assessment and the traditional silos academia are being challenged by more holistic cross-curricular instruction. In BC's new curriculum one of the cross curricular competencies, which is supposed to be introduced to every classroom is called Positive Personal and Cultural Identity. Within this competency and the ministry suggests learning outcomes that include statements like:

- "I understand I will continue to develop new abilities and strengths to help me meet new challenge"
- "I understand that my identity is made up of many interconnected aspects (such as life experiences, family history, heritage, peer groups)."

(British Columbia Ministry of Education, n.d., p.3)

Within the Personal Awareness and Responsibility domain of the new curriculum the Ministry provides an entire section on self-determination, self-regulation and well-being. Figure 2 shows sample I statements that the ministry provides to illustrate well-being based learning (British Columbia Ministry of Education, n.d.).

Students who are personally aware and responsible recognize how their decisions and actions affect their mental, physical, emotional, social, cognitive, and spiritual wellness, and take increasing responsibility for caring for themselves. They keep themselves healthy and physically active, manage stress, and express a sense of personal well-being. They make choices that contribute to their safety in their communities, including online interactions. They recognize the importance of happiness, and have strategies that help them find peace in challenging situations.



Figure 2.4 I statement's from the revised BC curriculum pertaining to wellbeing.

Within the new assessment model core competencies are valued alongside curricular

competencies and curricular content. Table 1 shows a mini curricular goal for a therapeutic fishing class.

Curricular Competency	Content Goal
Experience and interpret the local environment.	Identify fishing lures based on hatch cycle and fish species.
<i>a a</i>	

Core Competency

Participate in routines that promote connectedness to nature and aid in the transition from the urban world to the natural world. (Example take 2 minutes to sit by a stream before tying on a lure).

Table 2.3 Illustrates how curriculum, content and core competency can all work together to inform instruction and provide space for therapeutic practice.

You can see in table 1 that all three aspects of the curriculum (curricular competency, content goal and core competency) fit together. In order to develop a highly therapeutic class a teacher could start the planning process with the core competencies in mind and then layer on curricular competency and content. In this way, therapeutic practice and curricular content could be interwoven and embedded right into curriculum documents and course syllabus.

#### Fly Fishing, Nature Therapy and the Classroom

In my experience one of the most rewarding aspects of teaching is the creative process involved in planning and designing new curriculum. The process of finding your authentic connection to the content and then working to develop experiences that might help the students interact with themes and concepts is very rewarding. The idea of combining fly fishing, counselling and environmental science provides endless possibilities for creativity, learning and personal growth. In order to better understand how these ideas, fit together it is helpful to know what nature therapy is and what types of experiences and learning opportunities fly fishing provides.

#### Nature Therapy in the Classroom

Berger and Lahad's (2012) present a nature therapy version of the therapeutic triangle (figure 3). This triangle provides an excellent visual summary of what nature therapy is. At its core nature therapy views nature as an "active participant" in the therapeutic process (Berger & Lahad, 2012. Chapter 4). This means that nature itself can be viewed almost as a co-facilitator within the therapeutic process and that the therapist, client and nature all work together. Berger

and Lahad (2012) point out that this relationship allows for flexibility as the therapist can act passively, as a facilitator who enables a healing connection between nature and the client, or they can be more active using nature as setting and source of therapeutic material. Berger and Lahad (2012) note that switching between active and passive roles shifts the therapeutic frames of reference which can help the client engage with interpersonal and transpersonal themes. For example, Berger and Lahad (2012) write that the therapist can invite the client to "participate in direct interactions with nature's eternal aspects and cyclical characteristics" while remaining as a "witness who reinforces the meanings the individual received from the encounter" (Chapter 4). This passive role would enable nature and the client to work on transpersonal themes. By contrast, the therapist can work with the client to actively process the interpersonal themes that occur within nature or as a result of experiences in nature. Berger and Lahad (2012) note that these shifts can occur multiple times within a single session and are important as they "allow the client to shift from the interpersonal axis to the transpersonal axis, thus expanding her patterns and perspectives of the issue under scrutiny" (Chapter 4).



Figure 2.5 Graphic representation of the Three-Way Relationship between the client, therapist and Nature.

From a classroom perspective moving from passive to active roles makes perfect sense. Many teachers maintain a model of learning that involves designing experiences where ideas, concepts and themes interact with one another. In this way learning is thought to occur as the result of different ideas bumping into one another and being filtered through the subjective lens of each student. Modern pedagogy promotes this type of experiential learning and many education communities would embrace therapeutic experiences where students are given the space to discover their own truths. Interpersonal processing likely presents more of a challenge to many school administrators but when viewed as an element of the process rather than the process in its entirety they may be more supportive.

Connecting the triangular model of nature therapy to the BC wellness curriculum a teacher might design an experience around taking students to view the Stellako Sockeye run. Allowing students to spend time watching the female sockeye build and defend their redds (nests) is a moving experience that connects students to themes related to life and death, parenting, sacrifice, natural cycles, tradition and cultural identity. During these moments the teacher/therapist can step back and allow nature to play an active role in the therapeutic process. Switching gears, the teacher/therapist can then become more active and help students to process their experiences while using the salmon as a supplier of material.

#### **Trauma Informed Fly Fishing**

Fly fishing seamlessly blends physical, artistic and ecological experience. From connecting to the seasonal cycles of lakes and rivers to training the mind and body to cast the

perfect loop, fly fishing provides an immersive form of recreation that lends itself to both classroom and counselling settings. Key features of fly fishing that make it appealing to use within a nature therapy driven classroom are its endless connections to the natural world and its ability to connect students to their bodies.

**Therapeutic Connections to Physical Movement:** Various fields of research are beginning to emerge that support the use of body based therapeutic interventions for trauma survivors. Fly Fishing itself has been used for a number of years in the United States to help war veteran's transition to life after war and to process traumatic memories. One such program is Project Healing Waters Fly Fishing (PHWFF) which was developed in 2005 and initially offered through the Walter Reed Army Medical Center (Project Healing Waters Fly Fishing, 2019). Designed to encourage recreation based therapy through the use of fly fishing the program has since expanded and is now offered at military hospitals and veterans clinics throughout the US. There is little written information that specifically links fly fishing and adolescent psychotherapy; this being said, there is an ever building body of literature that supports the use of other forms of movement based therapeutic intervention.

Spinazzola et al (2011) write that chronic exposure to maltreatment and neglect can lead youth to relate to their bodies in ways that become destructive and dangerous. The authors write that dissociation and stifling somatic awareness occurs as a coping mechanism that enables the youth to endure bodily hardship such as hunger, physical pain and a lack of warmth and human contact. In a review of trauma focused yoga Spinazzola et al (2011) explains that the goal of the yoga program is to equip youth with alternative ways of processing the "physical manifestations of pain and distress" (p.436). Spinazzola et al (2011) write at the core of this type of "mindbody" intervention is an emphasis on breathing, meditation and rhythmic movement. The

authors explain that interventions that combine these three factors have been shown to reduce PTSD symptoms in children and youth (Spinazzola et al. 2011). Additionally, the authors note that interventions based on rhythmic movement alone have also been linked to beneficial outcomes for traumatized youth (Spinazzola et al. 2011). Spinazzola et al (2011) write that mastering specific movements can promote empowerment and the positive self-esteem while also activating the parasympathetic nervous system thereby enabling the client to feel safe and grounded.

Successful fly casting requires precise coordination, rhythmic timing and practice. In its simplest form fly casting is a readily achievable task yet a person can spend a lifetime improving upon their technique. And casting is only the beginning as the line then has to stripped back in a way that creates the correct presentation for each lure. In many instances the retrieval of the fly can involve counting, cadence and rhythm as the person fishing tries to emulate the swimming pattern of specific aquatic critters. Perhaps one of the most unique aspects of fly fishing is that these rhythmic movements occur within nature. For students and clients fly fishing provides a purposeful task and acts as a catalyst for the deeper meanings that lie in time spent in nature. In this way participants can be mindful of the themes presented by nature while simultaneously reconnecting with their own bodies.

#### Conclusion

More than ever schools are being asked to focus on providing services aimed at promoting positive mental health. One theme that has immerged from this focus is the idea of connectedness. Developing school connectedness around factors such as positive emotion, relationship and meaning are becoming important parts of educational practice and are even working themselves into the curriculum. With connectedness emerging as such an important factor, it is necessary to look at how vulnerable student populations will have access to programming that promotes wellness through school connection. Students within the LSC program at PGSS are chronically at risk because of a variety of factors including poverty and adverse home environments. For LSC student's school connection is vitally important and difficult to achieve. The PERMA strategy suggests that schools ought to address connection though developing programming that promotes positive emotion, engagement, relationship, meaning and achievement. As a teacher, counsellor and special education teacher I see these core PERMA tenants as inspiring and believe that schools have an obligation to design creative programming that is accessible to every student. With the needs of LSC students in mind, I have created a course based on a fly-fishing curriculum and designed around a trauma informed Nature Therapy pedagogy. The emphasis of this course is to help students:

- Understand the nature of emotion & experience the positive emotion associated with time spent in nature,
- Participate in deeply engaging activities,
- Foster meaningful relationships with self, nature and community,
- Explore personal contexts in order to gain insight, meaning and a sense of belonging.
- Gain a sense of physical mastery through learning to fly cast and emotional mastery through improving self-regulation skills.

Appendix 3 presents a PERMA inspired curriculum that was designed for LSC students. In designing this curriculum, it was my desire to build a class that would sit firmly within the world of curricular education while leaning as far towards therapeutic practice as possible. The result is a class titled "Fly-Fishing 12" that embeds therapeutic qualities of nature and psychoeducational aspects of Dialectical Behaviour Therapy (DBT) within the curricular content of aquatic ecology and fly-fishing.

#### **Future Considerations**

At this stage Fly-Fishing 12 is ready to be submitted to School District 57 (SD 57) in order to become a board authorized course. Becoming a board authorized course would make Fly Fishing 12 accessible to other schools within SD57 and would also enter it into a provincial database so that other school districts could apply to have it authorized for use in their districts. Although much of the design of Fly Fishing 12 is complete there is still a lot of logistical work that needs to be done. Course materials need to be purchased which means that grants need to be obtained and partnerships need to be forms. A concerted effort will also have to be made to develop the practices and procedures necessary to fully embrace a Nature Therapy inspired course. Taking students outside on a regular basis for extended periods of time is not a common practice and presents a range of logistical challenges (paying for busses, working around a school schedule, preparing for seasons in central BC...). Finally, teachers still must develop ways to incorporate local communities into the daily functioning of Fly Fishing 12. Although much work still needs to be done, the literature review and curriculum work completed for this project provides a good foundation from which to build.

#### Chapter 3

Board authorized courses are unique classes that schools offer. These classes have been vetted and approved by district staff in accordance with provincial guidelines. Although individual school boards have the ability to authorize courses the framework for authorization is overseen at the provincial level by the Ministry of Education. As a component of this major project I have completed a Board/Authority Authorized (BAA) template. This template is developed by the Ministry of Education (2019) and is designed to gather the necessary information about a course that is being proposed. The template provided here has already been edited by district staff and is ready to be presented at the next district staff meeting (January 21<sup>st</sup> 2020). This template provides detailed information about the content covered in the course and also provided elaborations on how content could be delivered and the types of learning activities that will be central to the teaching process.



# SD No. 57 Prince George, Board/Authority Authorized Course Framework Template

School District/Independent School Authority Name:	School District/Independent School Authority Number (e.g. SD43, Authority #432):
School District 57	School District 57
Developed by:	Date Developed:
Ryan McIndoe	
School Name:	Principal's Name:
PGSS	Kap Manhas
Superintendent Approval Date (for School Districts only):	Superintendent Signature (for School Districts only):
Board/Authority Approval Date:	Board/Authority Chair Signature:
Course Name:	Grade Level of Course:
Fly Fishing 12	12
Number of Course Credits:	Number of Hours of Instruction:
4	120

#### **Board/Authority Prerequisite(s):**

None

#### Special Training, Facilities or Equipment Required:

<u>Special Training</u>: None required, background in fishing and fly fishing would be helpful and familiarization with wellbeing based education would be an asset (familiarity with resources such as learning to breath, mindup, or other DBT of CBT based wellness programs).

Facilities: Space available outdoors to practice fly casting (large open area such as a field). Classroom for fly tying and lessons.

Equipment: Class sets of fly fishing rods and fly tying vices (including tools).

#### **Course Synopsis:**

Fly Fishing 12 is designed to be immersive, experiential and hands on. The intention of this course is to balance the delivery of academic content with wellness based therapeutic experience. A major emphasis of this course is to maximize time spent outdoors. Students will travel to local streams, rivers and lakes throughout the semester and will participate in a variety of outdoor activities. Students will have the opportunity to learn about aquatic ecology, fishing techniques, fly tying and habitat preservation while also exploring wellness based themes such as emotional awareness, self-regulation, grounding techniques, stress management and brain based psychoeducation.

#### **Goals and Rationale:**

#### **Rationale:**

The rationale for this course is to provide a safe and engaging space where a wide range of students can explore curricular content and core competencies. To do this, curricular content related aquatic ecology and fly fishing is examined through Nature Therapy inspired pedagogy that emphasizes time spent in nature and the expansion of personal awareness.

#### Goals:

- Foster connection to PGSS community
- Foster a sense of comfort within nature.
- Develop self-regulation skills (affect identification, emotional expression & modulation).
- Develop stress management skills (awareness, grounding, relaxation & problem solving).
- Develop fly fishing based holistic knowledge (invertebrate ecology, casting technique, fishing equipment).
- Integration of local indigenous knowledge related to harvesting and preserving fish.

#### Aboriginal Worldviews and Perspectives:

#### This course will embed the following Declaration of Indigenous Principles of Learning

- Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).
- Learning involves recognizing the consequences of one's actions.
- Learning recognizes the role of indigenous knowledge.
- Learning involves patience and time.
- Learning requires exploration of one's identity.
- Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.
- Learning supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors: connecting with plants and the Earth is healing and rejuvenating, gardening adds to a sense of pride and self-sustainability, promotes land stewardship and conservation of outdoor spaces

#### **Declaration of Aboriginal Worldviews and Perspectives**

#### **Connectedness and Relationship:**

Relate learning to students' selves, to their families and communities.

#### **Emphasis on Identity:**

Embrace learner-centered teaching practice.

Acknowledge and celebrate the cultural identities of all students.

#### Local Focus:

Give learners opportunity to work with local resources

#### **Experiential Learning:**

Incorporate hands-on learning experiences.

Emphasize possible practical application.

#### Positive, Learner-Centered Approach:

Teacher as a facilitator of student learning. An emphasis on promoting student self-regulation. Extensive and frequent use of self-assessment activities.

The ability to nurture reflective learning.

#### Engagement with the Land, Nature, the Outdoors:

get students interested and engaged with the natural-world immediately available,

take instruction and learning outdoors

# **Course Name: Fly Fishing 12**

## Grade: 12

#### **BIG IDEAS** Fly casting and fly-Emotional processing Natural spaces have Recreational pursuits Holistic understanding restorative qualities tying are dynamic skills and personal such as fly fishing of aquatic ecology that help build activities that provide awareness are provide a context enhances angling fundamental parts of resiliency and endless opportunity for through which to strategy. well-being. wellness learning. explore nature and self.

# Learning Standards

	Content		
Students are expected to do the following	Students are expected to know the following:		
Well-being	Well-being		
<ul> <li>Demonstrate a curiosity about factors that contribute to personal wellness.</li> <li>Participate in activities designed to promote emotional de-escalation and relaxation.</li> <li>Identify and analyze aspects of daily life that are stressful or draining.</li> <li>Identify, apply and reflect on strategies used to manage feelings and emotions.</li> <li>Explore and describe personal strategies that promote perseverance and resilience.</li> <li>Create, implement and reflect on personal goals related to wellness.</li> <li>Develop understanding of the interconnections among aspects of internal experiences (sensation, feeling, thought, behaviour) (ARC manual p. 111).</li> </ul>	<ul> <li>Grounding techniques</li> <li>Affect identification</li> <li>Awareness of internal states</li> <li>Common coping mechanisms both positive and negative.</li> <li>Stress identification &amp; Reduction</li> <li>Bodily and neurological responses to stress and perceived stress.</li> <li>Anxiety based education</li> <li>Benefits of time spent in nature</li> </ul> Skills and Knowledge		
<ul> <li>Experience and interpret the local environment (Env Sci 12)</li> <li>Use knowledge of aquatic ecology to inform angling strategy.</li> <li>Apply first peoples perspectives and knowledge, other ways of knowing and local knowledge as sources of information (Env Sci 12)</li> <li>Interpret graphic information from a variety of sources to inform decision making.</li> </ul>	<ul> <li>Freshwater fish identification</li> <li>Invertebrate identification</li> <li>Knowledge of local hatch cycles</li> <li>Maintenance, use and care of equipment</li> <li>Construction of a variety of fly patterns</li> <li>Environmental stewardship</li> <li>Fish handling and care</li> </ul>		
<ul> <li>Processes and Participation</li> <li>Develop and demonstrate appropriate techniques for a variety of fishing activities.</li> <li>Communicate and collaborate effectively with others during outdoor and classroom sessions.</li> <li>Record and present personal reflections related to classroom experiences.</li> </ul>	<ul> <li>First Peoples traditional practices and ecological knowledge.</li> <li>Analysis of bathymetric maps.</li> <li>Processes and Participation         <ul> <li>Planning and preparation for time spent outdoors.</li> <li>Methods of food storage and preparation.</li> <li>Safety and etiquette related to fishing.</li> </ul> </li> </ul>		

Big Idea	as – Elaborations	Fly Fishing 12		
Recrea	Recreational nursuits such as fly fishing provide a context through which to explore nature and salf			
Sample	questions to support inquiry with students.			
oumpie	How does getting outside impact your personal thought patterns and emotions?			
0	What transpersonal themes connect a personal thought fishing to the ecosystem in which they are immersed?			
Holisti	c understanding of aquatic ecology enhances angling strategy.			
Sample	questions to support inquiry with students:			
0	How does time of year, species of fish and type of water body impact your decisions as an angler?			
0	Upon arriving at a lake or river what data can you collect that will help you determine fishing strategy?			
0	Discuss the features of a dry versus wet fly and explain how they are used differently in order to catch fish.			
Emotio	and pressing skills and personal everyoness are fundamental parts of personal well being			
Emotio	onal processing skills and personal awareness are fundamental parts of personal wen-being.			
Sample	questions to support inquiry with students:			
0	What are your natural coping mechanisms for dealing with stress?			
0	What strategies can you implement that might enhance your emotional resiliency?			
0	what is the relationship between emotions, thoughts and behaviours?			
Natura	l spaces have restorative qualities that help build resiliency and wellness.			
Sample	questions to support inquiry with students:			
o	What kinds of cognitive and emotional shifts can be attributed to time spent in nature?			
0	What natural places do you have a strong affinity for? How do these places make you feel?			
Fly casting and fly-tying are dynamic activities that provide endless opportunity for learning.				
Sample	questions to support inquiry with students:			
0	What does it mean to be a lifelong learner?			
0	What aspects of fly fishing make it engaging and meaningful for people of all ages and skill levels?			

## Well-being

#### **Emotions:**

Sample opportunities to support student inquiry:

- Activities designed to develop awareness of emotional states by increasing vocabulary, recognizing how emotions feel and what thoughts are associated with them.
- o Improving insight into personal emotional patterns through recording and reflecting on emotional responses.
- $\circ$  Developing personalized goals to help with emotional regulation.

### Anxiety:

Sample opportunities to support student inquiry:

- Developing awareness of personal experiences with anxiety.
- o Develop personalized insight into how anxiety and influences other areas of your life.
- Reflect on coping strategies meant to assist with anxiety.

## Strategies:

Sample opportunities to support student inquiry:

- Experience a variety of mindfulness practices in order to find ones that are personally effective.
- o Development of attainable wellness based goals.

## Skills and Knowledge

Sample opportunities to support student inquiry:

- Build collection of fly lures for local use
- Develop an invertebrate notebook citing location and date where different invertebrates were seen
- Use a hatch cycle guide to predict what invertebrates should be present in a specific location and a specific time.
- $\circ$   $\;$  Use a bathometric map to determine where good fishing spots might be.

## **Processes and Participation**

Sample opportunities to support student inquiry:

- Learn and practice the fundamental movements needed for overhead casting and roll casting.
- Create a field notes and visuals that will help to remember knots for attaching lines and lures.
- Keep a fishing log to track observations.
- Keep a journal to track experiences and log progress towards goals.
- Travel to various natural ecosystems around Prince George (different rivers, lakes, streams). Work with local elders and community members to gain insight into harvesting techniques and practices.

#### **Content Elaborations**

## Well-being

#### Emotion:

- Biosocial theory of emotional experience and control.
- Understanding of high emotional sensitivity and reactivity.
- Understanding of emotional reactivity graphs and reset times.
- Forms of emotional validation.
- Emotions as full system responses vs feelings.
- Purpose and role of emotions (motivation, information, and communication)
- Emotions and their links to automatic thoughts, urges and behaviours
- o 6 general emotions as a base for expanding emotional vocabulary (Anger, Happiness, Sadness, Fear, Love, Shame or Guilt).

#### Anxiety:

- Anxiety as a natural alarm system for your body
- o Measuring and classifying worry using scales
- Unhelpful tendencies that perpetuate worry and anxiety (thinking traps, over-generalizing, should statements, fortune telling...)
- o Sensing anxiety in your body (heart rate, nausea and upset stomach, dizzy, tight chest, numbness and tingling.....)
- Relationship between uncertainty and anxiety.

#### Strategies:

- Overwhelming emotion vs distress tolerance
- Dialectical problem solving.
- Mindfulness (Definition & purpose).
- Internal and external mindfulness.
- Wise mindedness (vs emotional mind and reasonable mind).

## **Skills and Knowledge**

- Identify common freshwater fish in BC (rainbow trout, bull trout, kokanee, steelhead...)
- o Identify various aquatic insects and invertebrates (stonefly, caddisfly, mayfly, leeches, chironomids, damselflies, dragonflies, waterboatman....)
- Matching lines, rode's lures and fish. (weight of rod, characteristics of line, type of lure and species of fish).
- Use fly tying tools to construct basic flys (bobbin, bobbin threader, vice, scissors, whip finisher, hackle plier)
- Use fly tying materials to construct basic flys (threads, dubbing, chenilles, beads, wire, glues and various types of feathers).

## **Processes and Participation**

- Packing essential items for time spent outside. (10 essentials, rain gear and sun protection)
- $\circ$   $\;$  Smoking and canning fish
- Local practice pertaining to resource extraction and food preservation

#### **Recommended Instructional Components:**

- Routine that involves pre-planned outings on a weekly basis.
- Extended periods of time where students can work to build lures.
- Extended periods of time where students can practice casting.
- Structured routines for time spent in nature (example mini lesson, individual time, group reflection and share)

#### **Recommended Assessment Components:**

• Individually developed portfolios demonstrating growth towards wellness goals.

- Journals and logs
- Rubrics to assess fly construction and casting.

#### Learning Resources:

- Class set of fly tying vices and tools
- Materials for fly construction
- Class set of fly rods
- Outer wear and clothing to supplement what students can provide (collection of rain jackets, fleeces, rain pants, boots, mittens, gloves).
- Additional winter fishing gear if doing winter trips (tents, ice fishing rods, heaters, warm jackets).

#### Text based resources for Teachers:

- DBT Skills Manual for Adolescents (Rathus and Miller)
- The Dialectical Behaviour Therapy Skills Workbook: Practical DBT exercises for Learning Mindfulness, Interpersonal Effectiveness, Emotional Regulation and Distress Tolerance (McKay, Wood, Brantley)
- DBT made Simple (Van Dijk)
- The Anxiety workbook for Teens (Schab)
- Treating Traumatic Stress in Children and Adolescents (Blaustein & Kinniburgh)

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# Appendix 1

## Briere and Lanktree (2012) Lasting Outcomes of Complex Trauma

Anxiety and depression	which may range from brief symptom states (e.g., panic attacks or depressed mood) to full-blown disorders
Cognitive distortions	such as extreme helplessness, hopelessness, and low self-esteem
Posttraumatic stress	including reexperiencing symptoms (e.g., flashbacks and nightmares), avoidance behaviors (e.g., avoiding people or situations reminiscent of the trauma) and numbing (reduced emotional reactivity or responsiveness), and autonomic hyperarousal (e.g., hypervigilance, sleep disturbance, and irritability)
Dissociation	including depersonalization, derealization, and disengagement (e.g., "spacing out")
Identity disturbance	including impaired self-awareness, boundary problems, and excessive susceptibility to influence by others
Affect dysregulation	involving a relative inability to tolerate and regulate painful internal states, leading to overwhelming affective experiences
Interpersonal problems	ranging from difficulties in forming positive, stable relationships to repetitive involvement in relationships that are psychologically or physically harmful
Substance abuse	often serving as a way to "self-medicate" or anesthetize trauma-related distress or to induce momentary positive states that briefly reduce underlying dysphoria
Self-mutilation	generally involving nonsuicidal, intentional self-harming behavior (e.g., cutting on the arms or legs, burning self, piercing body parts), as a way to reduce awareness of psychological pain through the distraction of physical pain
Bingeing and purging	either as discrete symptoms (i.e., excessive eating, purging through laxatives, or induced vomiting) or in the context of an eating disorder such as bulimia
Unsafe or dysfunctional sexual behavior	including indiscriminate involvement with multiple sex partners, unsafe sexual behaviors, and the use of sexual activities in the service of emotional avoidance (e.g., self-soothing, distraction from posttraumatic dysphoria)

Somatization	involving excessive preoccupations with bodily dysfunction, in some cases resulting in self-reported somatic symptoms that cannot be explained fully by any medical condition
Aggression	which may arise secondary to trauma-associated anger or that may serve as a way to externalize negative feelings
Suicidality	involving thoughts of killing oneself or actual suicidal behavior
Dysfunctional personality traits	especially involving "conduct disorder," "borderline," or "antisocial" symptoms or behaviors (including many of the problems and issues just listed), which may or may not be diagnosable as a formal personality disorder in older adolescents.

# Appendix 2

## Briere and Lanktree (2012) Problems to Components Grid

Problem (from ATF-A)	Treatment components that may be useful
1. Safety (environmental)	Safety training, system interventions, psychoeducation
2. Caretaker support	Family therapy, intervention with caretakers
3. Anxiety	Distress reduction/affect regulation training, titrated exposure, cognitive processing
4. Depression	Relationship building and support, cognitive processing, group therapy
5. Anger/aggression	Distress reduction/affect regulation training, trigger identification/intervention, cognitive processing
6. Low self-esteem	Cognitive processing, relational processing, group therapy, relationship building and support
7. Posttraumatic stress	Distress reduction/affect regulation training, titrated exposure, cognitive processing, psychoeducation, relationship building and support, trigger identification/intervention
8. Attachment insecurity	Relationship building and support, relational processing, group therapy, intervention with caretakers
9. Identity issues	Relationship building and support, relational processing
10. Relationship problems	Relationship building and support, relational processing cognitive processing, group therapy
11. Suicidality	Safety training, distress reduction/affect regulation training, cognitive processing, systems intervention
12. Risky behaviors and tension- reduction behaviors	Psychoeducation, safety training, cognitive processing, trigger identification/intervention
13. Dissociation	Distress reduction/affect regulation training, affect regulation training, emotional processing, trigger identification/intervention
14. Substance abuse	Psychoeducation, trigger identification/intervention, titrated exposure, distress reduction/affect regulation training
15. Grief	Psychoeducation, cognitive processing, relationship building and support
<ol> <li>Sexual concerns and/or dysfunctional behaviors</li> </ol>	Psychoeducation, trigger identification/intervention, titrated exposure, distress reduction/affect regulation training
17. Self-mutilation	Trigger identification/intervention, distress reduction/affect regulation training

## Appendix 3



