Nature-based learning as a context for the development of multiliteracies in Late French Immersion:
Réflexions sur une pratique enseignante

by
Susan Owens
B.A., University of British Columbia, 1978

Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts

in the Curriculum and Instruction Foundations Program Faculty of Education

© Susan Owens 2014
SIMON FRASER UNIVERSITY
Fall 2014

All rights reserved. However, in accordance with the Copyright Act of Canada, this work may be reproduced, without authorization, under the conditions for “Fair Dealing.” Therefore, limited reproduction of this work for the purposes of private study, research, criticism, review and news reporting is likely to be in accordance with the law, particularly if cited appropriately.
Approval

Name: Susan Owens
Degree: Master of Arts
Title: Nature-based learning as a context for the development of multiliteracies in Late French Immersion: Réflexions sur une pratique enseignante

Examining Committee:
Chair: Danielle Arcand
Associate Director OFFA (Faculty of Education)

Dr. Cécile Sabatier
Senior Supervisor
Associate Professor

Dr. Danièle Moore
Supervisor
Professor

Dr. Allan MacKinnon
Internal/External Examiner
Professor
Faculty of Education

Date Defended: November 6, 2014
Partial Copyright Licence

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the non-exclusive, royalty-free right to include a digital copy of this thesis, project or extended essay[s] and associated supplemental files ("Work") (title[s] below) in Summit, the Institutional Research Repository at SFU. SFU may also make copies of the Work for purposes of a scholarly or research nature; for users of the SFU Library; or in response to a request from another library, or educational institution, on SFU’s own behalf or for one of its users. Distribution may be in any form.

The author has further agreed that SFU may keep more than one copy of the Work for purposes of back-up and security; and that SFU may, without changing the content, translate, if technically possible, the Work to any medium or format for the purpose of preserving the Work and facilitating the exercise of SFU’s rights under this licence.

It is understood that copying, publication, or public performance of the Work for commercial purposes shall not be allowed without the author’s written permission.

While granting the above uses to SFU, the author retains copyright ownership and moral rights in the Work, and may deal with the copyright in the Work in any way consistent with the terms of this licence, including the right to change the Work for subsequent purposes, including editing and publishing the Work in whole or in part, and licensing the content to other parties as the author may desire.

The author represents and warrants that he/she has the right to grant the rights contained in this licence and that the Work does not, to the best of the author’s knowledge, infringe upon anyone’s copyright. The author has obtained written copyright permission, where required, for the use of any third-party copyrighted material contained in the Work. The author represents and warrants that the Work is his/her own original work and that he/she has not previously assigned or relinquished the rights conferred in this licence.

Simon Fraser University Library
Burnaby, British Columbia, Canada

revised Fall 2013
Abstract

This study explores the development of literacy practices, through an interdisciplinary nature-based context, in Grade 6 Late French Immersion. It examines how multiple literacies are constructed in a second language setting through the interactions of Grade 6 students and their teacher using a nature-based approach to learning. It provides a literature review on content-based language teaching, literacy and multiliteracies, and the interdisciplinary approach to learning in nature. Through narrative inquiry, it allows for reflections on a teaching practice in a Grade 6 Late French Immersion class and on the development of emerging multiple literacies in language, science, art and social responsibility, through various nature-based activities, during the first term of class. Each skill set or competency constitutes a way to navigate in a particular discipline and therefore represents a form of literacy that illustrates how a rich interdisciplinary context of nature-based learning in Late French Immersion fosters multiple literacies.

**Keywords:** Late French Immersion; nature-based learning; interdisciplinary learning; multiliteracies; content-based language teaching
To my students, past, present and future, for your curiosity, sense of wonder and infectious enjoyment of learning.
Acknowledgements

First, I would like to acknowledge my parents, Bev and Einar Carlson, who emphasized the importance of education, enrichment and ethics. My father, a retired architect, designed many schools and public buildings during his career and taught us to try to leave the world a little better than it was when we came into it. My mother worked in housing at SFU for 25 years and was twice recognized for her contribution to SFU’s community. It was not at all unusual for her to drive to the airport to pick up international students and take them to SFU to settle them into their room, and then drive back home to North Vancouver, even in the middle of the night. She attended the thesis defense of many students over the years, and was pleased to attend this one.

Secondly, I would like to acknowledge my son, Sean Owens, daughter-in-law, Veronica Owens, and daughter, Rosemary Owens, who, together with their friends, have been encouraging, supportive and helpful. Rosemary graduated from SFU with a BA in Public Administration and French, including an Honours designation in Political Science, as I was beginning my Masters program, and graciously sent me off after her ceremony so that I wouldn’t miss class!

Many educators have mentored me over the years. Heike Sasaki hired me for my first teaching position and remains a valued mentor. Mary Wright entrusted me with significant leadership roles and was a pro-active administrator, who exemplified compassion, collaborative decision-making, and an inexhaustible work ethic. I also respect and appreciate the staff at my school, and my colleagues throughout the North Vancouver School District. Lyse Guay first suggested I teach Late French Immersion, for which I am grateful. Kate Keogh guided me through the planning of a French Immersion experience at North Vancouver’s Cheakamus Centre. Dr. Joanne Robertson, Director of Instruction, mentors and motivates me with every conversation. I appreciate my professors and the helpful staff members at SFU, particularly my supervisor, Dr. Danièle Moore, and my senior supervisor, Dr. Cécile Sabatier, for their wisdom and guidance.

Finally, I would like to thank my husband, Peter Owens, for providing me with thoughtful feedback, a loving moral compass, and a good breakfast every day.
Table of Contents

Approval .................................................................................................................. ii
Partial Copyright Licence ......................................................................................... iii
Abstract .................................................................................................................... iv
Dedication ................................................................................................................... v
Acknowledgements .................................................................................................... vi
Table of Contents ....................................................................................................... vii

Chapter 1. Introduction ............................................................................................ 1
1.1. Context: Grade 6 Late French Immersion ......................................................... 2
1.2. Research Question ............................................................................................... 11
1.3. Outline ................................................................................................................ 12

Chapter 2. Conceptual Framework ......................................................................... 14
2.1. Learning In, About and For Nature .................................................................. 14
2.2. From Literacy to Multiple Literacies to Multiliteracies ..................................... 21
  2.2.1. Science Literacy ......................................................................................... 26
  2.2.2. The Arts and Literacy ................................................................................. 30
  2.2.3. Social Literacy ............................................................................................ 34
2.3. Reflective Practice ............................................................................................... 36

Chapter 3. Methodology ......................................................................................... 40
3.1. Research Methodologies .................................................................................... 40
3.2. Narrative Inquiry ............................................................................................... 43
3.3. Application of Narrative Inquiry to This Study ................................................. 49
3.4. Data and Analysis in This Study ....................................................................... 54

Chapter 4. Findings ............................................................................................... 56
4.1. Narrative of the First Term: Reflections on Teaching a Grade 6 Late French Immersion Class ............................................................................................................. 57
4.2. Analysis of the Narrative ................................................................................... 72
  4.2.1. Oral Language ............................................................................................ 75
  4.2.2. Creating Community ................................................................................. 76
  4.2.3. Multimodal, Multisensory Learning ......................................................... 77
  4.2.4. Scaffolding and Gradual Release .............................................................. 78
  4.2.5. Multiliteracies ........................................................................................... 80

Chapter 5. Conclusion ............................................................................................. 84
5.1. Summary ........................................................................................................... 84
5.2. Discussion .......................................................................................................... 87
References .................................................................................................................................. 91

Appendix A. Summary of nature-based activities from term 1, listed by day and date ........................................................................................................................................ 98
Appendix B. Goal for term 1: .................................................................................................................. 99
Appendix C. L’habitat des animaux ..................................................................................................... 100
Appendix D. Les parties d’un arbre à feuilles caduques et d’un conifère ......................................... 101
Appendix E. L’arbre est dans ses feuilles ......................................................................................... 102
Appendix F. Les insectes qui volent et les insectes qui ne volent pas ......................................... 106
Appendix G. Mon drôle d’animal – Grille d’évaluation .................................................................. 107
Appendix H. Je vais à l’école verte et dans ma valise je vais mettre: ............................................. 108
Appendix I. L’École Verte: l’itinéraire ............................................................................................ 109
Appendix J. Qui suis-je? - La toile de connectivité ......................................................................... 112
Appendix K. La chasse aux trésors de la nature .............................................................................. 113
Appendix L. Évaluation de la composition “Ma saison préférée” .................................................. 114
Appendix M. Évaluation du projet d’intérêt sur un animal ............................................................. 115
Appendix N. Sample day plan ........................................................................................................... 116
Appendix O. Sample lesson ............................................................................................................... 117
Chapter 1.

Introduction

What is the effect of nature-based learning on the development of literacy in Grade 6 Late French Immersion? This study originates from my curiosity around the effect of nature-based learning on my Grade 6 Late French Immersion class. Through my teaching experience, I have developed an increasing appreciation for the interdisciplinary approach that is inherent to both nature-based learning and Late French Immersion. In describing nature-based learning and Late French Immersion as interdisciplinary, I refer to the potential for combining curricula from more than one subject area, lending multiple perspectives to learning, and fostering the development of literacy in more than one discipline.

By literacy, I refer to a socially constructed phenomenon that researchers (Gee, 1996; New London Group 1996; Cope & Kalantzis, 2000) define as locally situated through the actions of members of a social group who interpret and construct texts together. It goes beyond the traditional view of the ability to read and write out of sociocultural contexts; it focuses on a complex set of social practices. These practices are context-specific. This definition underlies that literacy consists of words, gesture, attitudes, ways of speaking, writing, reading, valuing, a way of being in the world (Gee, 1996). It acknowledges there are multiple forms of literacy and considers multiple literacies rather than a singular notion of literacy. Literacies then can be seen as the reading of texts embedded in social and language practices. Texts here are defined according to a very broad meaning (Sabatier, Moore & Dagenais, 2013) which implies that nature is text and to interpret it, students and teachers need to develop a full range of literacy practices.
According to this perspective and implemented in Late French Immersion, a nature-based approach of learning combines literacy and the development of a second language with being outdoors, connects students to nature and underlies that students and teachers are reading the world through multiple literacies and multiple literacy practices combining curricula from more than one discipline.

1.1. Context: Grade 6 Late French Immersion

This year, 2013-14, there are 29 students in my Grade 6 Late French Immersion class, with a virtually even balance of fifteen boys and fourteen girls. They are bright-eyed and curious. They range in ability, from those with identified learning disabilities to the gifted, and their personalities are diverse. They come from seven different schools within the School District, in order to participate in the Late French Immersion program. The majority of them have interests outside of school, and participate in various activities, including sports, dance, music and theatre. When asked why they chose to be in Late French Immersion, their responses make it clear that they are interested in learning a new language, and in meeting new people. They are engaged and friendly. The trait they have in common is a willingness to put themselves in a new situation, outside of their comfort zone, in order to learn a new language, in a new setting. That new setting is the Late French Immersion program.

The French Immersion program, begun in Quebec in 1965, grew substantially in Canada following the adoption of the Official Languages Act in 1969, adding French to English as an official language in Canada (Canadian Council on Learning, 2007). French Immersion was developed as a way to teach French through using it as the language of instruction across the disciplines. While French Immersion does not generally lead to native-like fluency, its goal is for students to become functionally bilingual: “Research demonstrates that students who successfully complete a French Immersion program attain functional bilingualism while doing as well as, or better than, their unilingual peers in the content areas of curriculum, including English Language Arts” (British Columbia Ministry of Education, 2014); “immersion students have multiple skills and sufficiently advanced functional proficiencies in French” (Government of Canada, 2014, Other myths). According to the Canadian Council on Learning, bilingualism benefits the
individual economically, cognitively and culturally. The economic advantages pertain to increased job opportunities and employability. The cognitive benefits are seen to be in problem solving and information processing. The cultural benefits refer to the ability to function more fully in Canadian society, where there are two official languages (Canadian Council on Learning, 2007, p. 2; 2008, p. 2-5). The Canadian Government considers that bilingualism is central to Canadian identity and contributes to Canada’s opportunities as a nation: “Canada’s two languages are part of our history and our national identity...They offer enormous economic, social and cultural opportunities and have helped to establish Canada’s strong place in the world” (Minister of Canadian Heritage and Official Languages, 2013, p. 1). Bilingualism is so highly valued by the Government of Canada that, in support of bilingualism, it produced The Roadmap for Canada’s Official Languages 2013-2018. This document resulted from the Canadian Action Plan for Official Languages, adopted in 2008. The mandate of the Roadmap for Canada’s Official Languages 2013-18 is “to protect, celebrate and strengthen our official languages across Canada”, supported by a 1.1 billion dollar investment by the Canadian Government (Minister of Canadian Heritage, 2013, p.1). With such an emphasis placed on bilingualism, French Immersion is a valued educational program option, in which a twelve percent increase in enrolment in Canada was documented over the four-year period between 2006-2007 and 2010-2011 (Minister of Canadian Heritage, 2013, p. 2).

The French Immersion program is also supported provincially, and is offered in all ten provinces (Statistics Canada, 2008), and in four cities in the territories (Fédération Franco-Ténoise, 2014). In British Columbia, the Ministry of Education policy supports the French Immersion program and the goal of “providing the opportunity for non-francophone students to become bilingual in English and French” (British Columbia Ministry of Education, 2014). The rationale or purpose of the policy is to benefit “the cognitive and social development of students, as well as their opportunities for career advancement” (British Columbia Ministry of Education, 2014), which echoes the benefits described by the Canadian Council on Learning cited in the previous paragraph. Furthermore, the rationale states that students who successfully complete the program “attain functional bilingualism”, and that they do “as well as, or better than, their unilingual peers in the content areas of curriculum, including English Language Arts”
Late French Immersion is one of two options for French Immersion; Early French Immersion begins in Kindergarten or Grade 1, while Late French Immersion typically begins in Grade 6, (British Columbia Ministry of Education, 2014). For students who did not enrol in Early French Immersion, Late French Immersion is an option to consider. The average age of students entering Grade 6 Late French Immersion is eleven years old. At this age, students have already acclimatized to learning in a school setting and are old enough to have participated in, if not led, the decision for them to enter the Late French Immersion program.

L’élève qui s’inscrit au programme d’immersion tardive a fait un choix, soit de son propre chef, soit encouragé par ses parents ou par ses enseignants. En général, il s’agit d’un élève qui manifeste une certaine motivation ou le goût des défis (British Columbia Ministry of Education, 1999, p. 3).

This level of motivation tied to the decision to enter the Late French Immersion program is important, as the students face the challenge of learning the Grade 6 curriculum in the target language.

The students entering the Late French Immersion program have little or no prior knowledge of French. The program objective is to teach French by using it in the teaching and learning of grade-appropriate curriculum across the disciplines:

Le programme de Français – immersion tardive est conçu pour des élèves qui ne connaissent pas ou qui connaissent peu cette langue au moment de leur admission. Il vise l’acquisition du français par le truchement de matières enseignées dans cette langue, en principe toutes les matières (British Columbia Ministry of Education, 1999, p. 2).

The Late French Immersion program while teaching introductory language skills, must also provide the curriculum for Grade 6: “Les énoncés des résultats d’apprentissage représentent les normes de contenu du programme d’études provincial. Ils précisent les connaissances, les idées de fond, les concepts, les compétences, les attitudes et les enjeux pertinents à chaque matière” (British Columbia Ministry of Education, 1999, p.
The intent in Late French Immersion is that the curriculum should parallel the curriculum of its English language counterpart: “French Immersion programs must parallel the regular English program in structure and content. The content of French Immersion programs must parallel that of the regular curriculum as set out in the Required Areas of Study in an Educational Program Order” (British Columbia Ministry of Education, 2014).

The British Columbia Ministry of Education, during this 2013-14 school year, has proposed significant changes to the provincial curriculum from Kindergarten through to Grade 12. The guiding principle behind the changes is to promote the teaching of skills and abilities more than finite content. This is also the intent in Late French Immersion. While some content and elements of language are learned, it is the ability to transfer skills to different contexts that allows students to work toward using the language unscripted: “L’apprentissage du français en immersion tardive donne à l’élève l’occasion... d’acquérir les connaissances, les processus d’apprentissage, les capacités, et les attitudes nécessaires pour communiquer en français de façon efficace et avec assurance” (British Columbia Ministry of Education, 1999, p. 1). The emphasis on competencies in the proposed new curricula is clearly communicated on the British Columbia Ministry of Education web page “Rethinking Curriculum”, which highlights the focus on “literacy and numeracy foundations” and “core competencies” (British Columbia Ministry of Education, 2013). Competencies are also fundamental in Late French Immersion, as skills are transferable and allow students to make meaning in varied contexts. Expectations are expressed in terms of what the student will be able to do: “Les énoncés des résultats d’apprentissage...commencent tous par l’expression: ‘On s’attend à ce que l’élève puisse...’” (British Columbia Ministry of Education, 1999, p. III). The emphasis on competencies in Late French Immersion relates primarily to skill development for communication and the making of meaning:

En immersion tardive, l’élève apprend la langue à mesure qu’il communique ses expériences, ses sentiments et ses pensées, et lorsqu’il cherche à comprendre le monde et l’information qui l’entourent. Il est amené à explorer ce monde en français, au moyen de diverses stratégies, notamment: observer, interroger, formuler des hypothèses, évaluer, exprimer des opinions, résoudre des problèmes et s’informer. La pédagogie est centrée avant tout sur l’élève et elle s’articule autour d’activités d’apprentissage coopératif où les élèves sont encouragés à
interagir, à négocier le sens et la forme des messages et à mettre en œuvre des stratégies de communication en français (British Columbia Ministry of Education, 1999, p. 2).

The skills described by the Ministry of Education are strategies for communication that contribute to the development of literacies. Because literacies are developed through communication across multiple curricula, an interdisciplinary, or cross-curricular approach, such as that taken in Late French Immersion, leads to the development of multiple emerging literacies. This concept of developing literacy through multiple disciplines is articulated by Moore and Sabatier: “La philosophie de l’éducation en CB encourage l’intégration des matières et...le développement littératié est conçu de manière transversale et intégrée et est considérée comme le cœur de tout apprentissage” (Moore & Sabatier, 2010, p. 642).

Because the students in Grade 6 Late French Immersion learn the prescribed curriculum for Grade 6 in French, through the disciplines, the language teaching is primarily content-based. This means that the target language plays a dual role. It is learned together with curriculum content, and is at the same time, the means for learning curricular content. The language is “à la fois un outil dont on se sert 1) pour nommer les objets, les décrire, expliquer leur fonctionnement, mais aussi 2) pour interagir avec autrui en formulant des questions et 3) pour s’exprimer soi-même.” (Sabatier & Dezutter, 2014, p. 128-129). Because the language is used to name, describe and explain things, and also to interact with others, it is not only a discipline to be studied but also a skill that facilitates learning and communication. Students in French Immersion learn French by using it and while using it, and using the language helps students to learn the language. The multiple prescribed curricula, learned in French, provide content and purpose for use of the target language, and language skills are improved in the process.

This contextual approach to teaching language, which is fundamental to French Immersion, is explained in the manual L’immersion en français au Canada: Guide pratique d’enseignement, prepared for the Canadian Association of Immersion Teachers and edited by Thora Bajard in 2004. This manual provides a detailed perspective on French Immersion. In chapter 14, Parler sciences, parler art...parler français, it explains
that language learning is effective when applied to real communication situations that are rich in meaning and in which the content answers a need for information:

L’apprentissage d’une langue est efficace lorsque celle-ci est utilisée dans des situations réelles de communication, riches de sens et dont le contenu répond à un vrai besoin d’information... L’immersion doit une grande partie de son succès au fait que les matières autres que le français offrent constamment de telles situations. Que ce soit la musique, les sciences ou l’éducation physique, toutes ces matières et bien d’autres exigent à divers moments l’interaction orale, la lecture et la rédaction de notes et de rapports. Étant donné qu’une maîtrise considérable de la langue est indispensable à l’apprentissage de ces matières, l’élève est plongé dans un milieu d’input linguistique riche, varié, nuancé et rempli de sens (Bajard, 2004, p. 123).

In this chapter, the point is made that whether it be in music, science or physical education, the need for real communication is inherent, and skills involving conversation, reading and writing are required. Because a level of mastery of the language is indispensable for communication, the student is immersed into a language-learning situation that is rich, varied, nuanced and meaningful: “Il ne faut jamais oublier que si l’immersion produit d’excellents résultats, c’est bien parce qu’elle donne aux élèves l’occasion de communiquer en français dans le contexte de la matière” (Bajard, 2004, p. 125).

Because language instruction is integrated within the content, the French Immersion program is, by nature, interdisciplinary. At the minimum, every curricular area is combined with French language studies, which means that at least two disciplines are intertwined. Topics of study that are developed across multiple curricula, such as a science unit taught through language arts and visual arts, provide an interdisciplinary way to develop multiple emerging literacies. The teaching of language through content is sometimes referred to as Content-Based Language Instruction and, according to Lyster and Ballinger (2011), should be the focus of second language studies research: “content-based instruction is the future of language teaching” (Lyster & Ballinger, 2011, p. 279). Represented by the acronym CBLT, Content-Based Language Instruction is “an instructional approach in which non-linguistic curricular content such as geography or science is taught to students through the medium of a language that they are concurrently learning as an additional language” (Lyster & Ballinger, 2011, p. 279).
Teaching the target language *through* curricular content implies making “subject-matter content comprehensible to learners, whose knowledge of the language of instruction is only partial, without simplifying the curricular content to the point of short-changing students” (Lyster & Ballinger, 2011, p. 283). The British Columbia Ministry of Education articulates the importance of this connection between learning the French language while learning the curricula across the disciplines in French: “Il est primordial que les élèves continuent d’apprendre le français durant l’étude des autres matières, et que le cours de français serve de soutien aux besoins des élèves dans ces matières. Les stratégies d’enseignement doivent faciliter à la fois l’acquisition de cette langue et l’atteinte des résultats d’apprentissage dans chaque matière” (British Columbia Ministry of Education, 1999, p. 2). In order to make it possible for the students to develop in both the language and the discipline, it is essential to provide appropriate support, or scaffolding, for the students. Lyster and Ballinger emphasize the importance of scaffolding students by structuring lessons in a cyclical rather than linear sequence, which implies exploring content “from multiple perspectives” (Lyster & Ballinger, 2011, p. 283). These multiple perspectives contribute to the emergence and development of multiple literacies. Setting language in a context, particularly an interdisciplinary context, such as nature-based learning, as in the case of this research, necessitates the ability to make meaning in multiple ways and fosters the development of multiple emerging literacies, such as in the target language, science, art and social responsibility.

Cormier and Turnbull further elaborate on this correlation of content and language development, referring to a science lesson: “qui permet de mettre un accent plus important sur le développement des capacités langagières des élèves, tout en travaillant simultanément et de façon importante le contenu scientifique” (Cormier & Turnbull, 2009, p. 819). The role of this combination of literacy development and knowledge acquisition in the context of a discipline, in this case, science, also allows for engagement on the part of the learner: “Notre approche littératee permet d’engager les élèves cognitivement en sciences tout en les soutenant dans leur niveau linguistique” (Cormier & Turnbull, 2009, p. 824). As Day and Shapson point out in their article “Studies in immersion education”, “the way teachers shape the curriculum of the science class will also shape the curriculum of the language class” (Day & Shapson, 1996, p. 84), which refers to the integration of language into science and science into language.
The disciplines involved in a lesson are reflected in each other. The section “Integrating Language and Science in Immersion Classrooms: a Case Study Approach” refers to “a teacher who can glide into a succession of teaching interludes to the benefit of both science and language learning” (Day & Shapson, 1996, p. 81). The benefit to learning in science and language can be further extended through the integration of the subject matter across additional disciplines such as art and drama, leading to the development of multiple literacies through such an interdisciplinary approach.

A contributing factor to this development is the implied use of multimodal techniques across the integrated disciplines. Multimodal techniques refer to the “use of manipulatives, graphic organizers, multimedia resources” that support literacy development through “reading comprehension strategies, oral practice activities, academic vocabulary development” and “opportunities for peer interaction” (Lyster & Ballinger, 2011, p. 285). Multimodal techniques used in Grade 6 Late French Immersion classrooms facilitate learning through multiple pathways, accommodate diverse learning styles, and encourage student engagement. A multimodal strategy leads the student to explore the world by and while using French, through varied means and using varied skills:

Il est amené à explorer ce monde en français, au moyen de diverses stratégies, notamment: observer, interroger, formuler des hypothèses, évaluer, exprimer des opinions, résoudre des problèmes et s’informer. La pédagogie est centrée avant tout sur l’élève et elle s’articule autour d’activités d’apprentissage coopératif où les élèves sont encouragés à interagir, à négocier le sens et la forme des messages et à mettre en œuvre des stratégies de communication en français (British Columbia Ministry of Education, 1999, p. 2).

Multimodal supports and strategies may include “livres, cahiers, affiches, cartes, cassettes audios et vidéos, jeux, ordinateurs, télévision, iPods, etc.” (Moore & Sabatier, 2010, p. 668).

A multimodal approach contributes to student learning and the development of literacies by engaging multiple pathways to language acquisition.

Moore and Sabatier describe the use of varied literacy practices in French Immersion classes as: “une riche palette de pratiques de littératie” (Moore & Sabatier,
While they refer to primary classes, the principle of literacy teaching also applies to Grade 6 Late French Immersion, where the students are beginners at learning French. They note the development of literacy through varied content: “le développement littératié... se construit en symbiose avec l’acquisition de la numératie et le développement des autres savoirs fondamentaux... par le biais des arts plastiques... des chants, ou encore d’activités qui constituent le quotidien des salles de classe” (Moore & Sabatier, 2010, p. 662). In her preface to Moore and Sabatier’s research, Cicurel refers to the French Immersion class as an educational space where other subjects than the language are taught in the target language: “espace éducatif où les matières autres que la langue sont enseignées dans la langue cible” (Cicurel in Moore & Sabatier, 2012, p. 7). The students in French Immersion are initiated to language and its application through other disciplines, a process through which they both learn the subject matter and develop literacy: “les élèves s’initient au langage et à son fonctionnement par le biais des matières, et par l’intermédiaire du langage (oral et/ou écrit) ... ils abordent les matières et entrent dans la littératie” (Moore & Sabatier, 2012, p. 76).

Through an interdisciplinary approach to nature-based learning in Grade 6 Late French Immersion, students develop multiple emerging literacies by learning language through the disciplines. The discipline provides a meaningful context for the language learning: “Language learning can be made more effective when it is contextualized. That is to say, effective language learning can take place almost as a by-product of the child’s interaction with meaningful content. The underlying assumption is that children are more interested in content than in the form of what they learn” (McLaughlin, Rossman & McLeod 1983). This engagement in learning through curiosity around the content is articulated by Safty: “In the French immersion methodology, the primary focus is not the learning of a second language but rather the learning of academic content through the medium of a second language” (Safty, 1991, p. 478). Safty further identifies the essence of what motivates learners:

The underlying assumption is that learning a language is learning to use that language. The goal is to produce students who are ‘functionally bilingual’ (Beatens and Beardsmore, 1982), i.e., able to use the second language in a variety of authentic situations (Safty, 1991, p. 478).
This use of language in a variety of authentic situations contributes to the development of multiple literacy practices. Learning in a nature-based context, through multiple lenses such as science, art and social responsibility, requires students to engage multiple literacies concurrently with using French as a new language. The multiple literacies are interwoven and interdependent, within an engaging context.

1.2. Research Question

The purpose of this research is to explore how the interdisciplinary context of nature-based learning contributes to the development of multiple literacies in Grade 6 Late French Immersion. Both nature-based learning and Late French Immersion imply an interdisciplinary approach. Late French Immersion students develop literacies in multiple disciplines, including French language but how are these multiple literacies constructed in a second language setting, through the interactions of Grade 6 students and their teacher, using a nature-based approach to learning?

Much research has been conducted on immersion programs over the years (Bajard, 2004; Beatens and Beardsmore, 1982; Cormier & Turnbull, 2009; Day & Shapson, 1996; Lyster & Ballinger, 2011; McLaughlin, Rossman & McLeod 1983; Moore & Sabatier, 2010; Moore & Sabatier, 2012 ; Sabatier & Dezutter, 2014; Safty, 1991), but the development of multiple literacies in Late French Immersion through the interdisciplinary context of nature-based learning is still under-researched.

Drawing from a review of existing literature around nature-based learning, interdisciplinary learning, literacy and content-based language teaching, to examine the link between developing science and language literacies in a nature-based context, I will explore this connection through a reflection on my own teaching practice and observations of the development of literacies in my Grade 6 Late French Immersion students. Through this research, I hope to ultimately better understand the link between the interdisciplinary context of nature-based learning and the development of multiple emerging literacies in Late French Immersion. My findings will inform my practice as a teacher and will guide my planning in ways that enact my beliefs about multiliteracies, multimodality and the use of the nature-based approach in teaching a second language.
1.3. Outline

This study comprises five chapters. This first chapter, the Introduction, in section 1.1, Context: Grade 6 Late French Immersion, sets the context for the study, which is my Grade 6 Late French Immersion class in the first term of the 2013-14 school year, and provides a background on French Immersion and Late French Immersion. In describing the context of Late French Immersion, it provides characteristics typical of the program and contains references from existing literature on the interdisciplinary approach, multimodal strategies and content-based language teaching. It then identifies the research question, in section 1.2, Research Question, which is how the interdisciplinary context of nature-based learning contributes to the development of multiple literacies in Late French Immersion, and finally, in this section, 1.3, Outline, it delineates the plan for this study.

The second chapter, Conceptual framework, provides the conceptual framework for this study, beginning, in section 2.1, Learning In, About and For Nature, with nature-based learning as an experiential, interdisciplinary context for the development of multiple literacies. Nature-based learning is considered from the perspectives of learning in, about and for nature. This background on nature-based learning is followed, in section 2.2, From Literacy to Multiple Literacies to Multiliteracies, by a review of literature around interdisciplinary learning and literacies in nature-based learning. Section 2.2.1, Science Literacy, provides a review on literacy in science, Section 2.2.2, The Arts and Literacy, provides a review on literacy in the arts, and Section 2.2.3, Social Responsibility, provides a review on social literacy. Chapter 2 concludes, in section 2.3, Reflective Practice, with a discussion of the reflective practice, conducted through reflection on extracts from my daybook and teaching notes.

The third chapter, Methodology, describes the methodology for this research. It begins in section 3.1, Narrative Inquiry, with a definition and discussion of narrative inquiry, its risks and advantages, and the rationale for using narrative inquiry as a methodology, and describes, in section 3.2, Application of Narrative Inquiry to This Study, narrative inquiry and its application to this research, which takes the form of a narrative based on selected excerpts from my daybook, teaching notes and observations.
for the first term of Grade 6 Late French Immersion, which provide a source of data for analysis and reflection, as described in section 3.3, *Data and Analysis*. This section describes the process for the thematic analysis of my professional practice linked to my research question on nature-based learning as an interdisciplinary context for the development of multiple literacies, with reference to both the literature reviewed and the reflection on my narrative inquiry.

The fourth chapter, *Findings*, is comprised of two sections. Section 4.1, *Narrative of the First Term: Reflections on Teaching a Grade 6 Late French Immersion Class*, is a narrative based on my teaching practice in the first term of Grade 6 Late French Immersion, in the 2013-14 school year. It is presented chronologically, beginning on the first day of school and ending at the end of the first term. It provides annotated excerpts from my daybook and reflections on those excerpts. The second section, 4.2, *Analysis of the Narrative*, is an analysis of the narrative and its connection to the development of multiple literacies in Late French Immersion, through the interdisciplinary context of nature-based learning. The analysis is comprised of an introductory overview, followed by sections on specific aspects of the narrative: Section 4.2.1 *Oral Language* discusses the role of oral language, 4.2.2 *Creating Community*, the social and community building component to the narrative, 4.2.3 *Multimodal, Multisensory Learning*, discusses the gamut of ways of learning reflected in the narrative, 4.2.4, *Scaffolding and Gradual Release*, the essential element of support and appropriate release to independence in the learners, and section 4.2.5, *Multiliteracies*, discusses the progression from emerging literacies in science and the target language to multiple literacies including also literacies in art and social responsibility, and finally to multiliteracies.

The fifth and final chapter, *Conclusion*, is a summary and presents a discussion of this research. In it, I review the narrative of my practice, the connection to pertinent existing literature on content-based teaching in French Immersion, nature-based learning, and literacy, and my findings, based on reflection and analysis of my narrative. I consider this with respect to what I have learned through the narrative inquiry of my research question on nature-based learning as an interdisciplinary context for the development of multiliteracies in Grade 6 Late French Immersion.
Chapter 2.

Conceptual Framework

The framework for this research on the development of literacy in Late French Immersion, drawing from social constructionism, is comprised of three core concepts: First, it is important to understand the concept of nature-based learning, as an experiential, interdisciplinary context. This context is considered for its influence on the development of emerging literacies in a second language setting as it implies multiple literacy practices. Next, it is important to have a common understanding of the concept of literacy and multiliteracies and of some specific examples of literacies, which are fundamental to this research, in science, the arts and social responsibility, to examine in what ways a teacher (myself) implemented multiple literacy practices and the nature based approach. Finally, the concept of the reflective practice is examined, because reflection on experience and practice is essential to this narrative inquiry.

2.1. Learning In, About and For Nature

Nature provides a rich and powerful context for interdisciplinary learning. The slogan of the David Suzuki Foundation talks of connections and interdependence:

Our mission is to protect the diversity of nature and our quality of life, now and for the future. Our vision is that within a generation, Canadians act on the understanding that we are all interconnected and interdependent with nature (David Suzuki Foundation, 2014).

Exploring nature through the lens of multiple disciplines, and building on an understanding of our interconnectedness and interdependence with nature, capitalizes on an engaging and pertinent context. According to David Suzuki, “Unless we are willing to encourage our children to reconnect with and appreciate the natural world, we can’t
expect them to help protect and care for it” (Suzuki, 2013). Using nature as an interdisciplinary context allows us to encourage our students to connect, or reconnect with, and appreciate nature, while developing literacy in disciplines such as science, art, social responsibility and language. “Outdoor education is not a subject area; rather it is an instructional tool that can be used to enhance instruction in a variety of disciplines” (Broda, 2007, p.11).

Nature-based teaching and learning, also referred to as learning in nature, or environmental learning, encompasses ways of connecting nature and education. Looking at nature and the environment through a variety of lenses provides a way to enrich understanding across the disciplines and to naturalize the environment as a context for learning. To combine the perspective of science, art, language and social responsibility is to add depth to each discipline and to the appreciation of nature.

Nature can provide a context, subject matter and purpose for learning. It may be the place in which learning occurs, the thing being studied or the reason for learning. As the context for learning, it increases the students’ sense of place or connection with their physical environment. When nature is the thing being studied, the connection is more overt. When appreciation of nature and the environment is the focus of learning, the students develop a greater sense of the importance of the environment, which may contribute to a sense of stewardship. Nature-based learning may refer to learning in nature, about nature and for nature. In his work Rediscovery: Ancient pathways, new directions: Outdoor activities based on native traditions, Henley describes the value of learning in nature: “By teaching environmental principles within an experiential framework, Rediscovery not only rekindles a childlike sense of wonder in the natural world, it allows for much deeper understanding of it” (Henley, 1996, p. 168). The experiential framework he refers to is powerful, and compatible with Late French Immersion, which also tends to be experiential in nature.

A detailed portrait of learning in nature, referred to as outdoor learning, is laid out in Gilbertson’s Outdoor education: Methods and strategies:

Using the outdoor environment as an educational location not only facilitates diverse learning opportunities, it also implies the use of
specialized knowledge and skills... For Priest, outdoor education is comprised of six primary points (1986, 13): 1. It is a method for learning. 2. It is experiential. 3. It takes place primarily outdoors. 4. It requires the use of all senses (it is holistic) 5. It is based upon interdisciplinary curricula. 6. It is about relationships involving people and natural resources... Outdoor education has been described as a place (natural environment), a subject (ecological processes), and a reason (resource stewardship) for learning. It has been called a method (experiential), a process (sensory), and a topic (relationships) of learning (Priest, 1990, 113). From another perspective, outdoor education is a method of teaching and learning that emphasizes direct, multisensory experiences; takes place in the outdoor environment; and uses an integrated approach to learning by involving the natural, community, and individual environments. Through the use of the outdoors, outdoor education programs strive to elevate the physical, emotional, cognitive, social, and spiritual levels of the individual...Outdoor education often focuses on three primary subject areas: ecological relationships, developing physical skills, and interpersonal relationships (Gilbertson, 2006, p. 4-5).

This synthesis points out the multisensory, interdisciplinary quality of outdoor learning. It details the multifaceted benefits of learning in nature, as a method, a process and a topic leading to the learner’s development in multiple domains, or disciplines. These disciplines each imply a form of literacy. Nature-based learning provides an interdisciplinary context for the development of these multiple literacies. Setting Late French Immersion in an interdisciplinary nature-based context provides an opportunity for the development of multiple literacy practices in the form of literacies in each of the disciplines involved, including, for example, as in the case of this research, science, art, social responsibility and French language.

A further expansion on nature-based learning as a source of content, method and context is identified in Moving the classroom outdoors: Schoolyard-enhanced learning in action: “The outdoors was emerging not only as a source of content but also as a teaching tool” (Broda, 2007, p.3). Broda elaborates on the multiple educational benefits to nature-based learning:

According to the National Environmental Education and Training Foundation, environment-based education has the following characteristics:

- Integrated learning across disciplines
- Problem-solving
• Decision-making
• Independent and group learning
• Issues-based instructional activities
• A balanced variety of perspectives (Broda, 2007, p.8).

This range of characteristics lends itself well to Late French Immersion, where students experience integrated learning across disciplines, are called on to solve problems and make decisions independently and as a group, and are encouraged to consider a variety of perspectives and sometimes even simple issues-based instructional activities. This range of characteristics also illustrates the inherent potential of interdisciplinary nature-based, teaching for the development of thinking and learning skills, interpersonal skills, leadership skills and for considering an idea from multiple perspectives. Problem-solving, decision-making, group learning, issues-based activities and a balanced variety of perspectives are essential components of literacy in the area of social responsibility. All of the characteristics listed contribute to learning skills that in turn contribute to the development of multiple literacies and illustrate a way in which nature-based teaching is effective. In a later work, Broda articulates the potential of nature-based teaching in multiple curricular areas: “outdoor instruction needs to be viewed as one of many instructional options that teachers can use to develop and reinforce curricular concepts” (Broda, 2011, p. 3). Nature-based learning is an effective option that contributes to the development and reinforcement of curricular concepts, and provides a context for interdisciplinary learning and engagement which facilitates the development of multiple literacies.

Nature provides a sort of text, or learning context, which requires the mobilization of specific literacy skills. Just as in Sabatier, Moore and Dagenais, on the urban space as a text, nature, too, requires a relevant contextual perspective:

L’espace urbain, par le biais de son paysage linguistique et culturel, est un contexte qui permet d’étudier les voix de la ville (Calvet, 1994) en lien avec les questions d’écologie linguistique et culturelle...de littératures multimodales, ou encore de rapports au et de pouvoir par le biais de la visualisation (ou l’absence) des langues (Sabatier, Moore & Dagenais, 2013, p. 138).
Furthermore, they refer to the metaphor of the city as a text to be decoded, consumed and interpreted and to the city as "un contexte d'apprentissage privilégié...[qui] permet en effet d’embrasser une approche située et écologique de la littératie et de ses multiples pratiques" (Sabatier, Moore & Dagenais, 2013, p. 138). This applies similarly to nature, which is a privileged context that lends itself to a specific, situated practice of multiple literacies.

The value of nature-based learning has long been acknowledged. The Canadian Education Association, in 1969, described the connection between nature-based education and interdisciplinary, experiential learning and the development of diverse skills for problem-solving and adapting to life conditions. This capacity for problem-solving and adapting might also be expressed as multiliteracies or kinds of literacy. Building on this sense of multiliteracies as ways of problem-solving and adapting to life conditions, and of nature-based teaching as interdisciplinary, the following statements made as long ago as 1969 by the Canadian Education Association remain pertinent:

(1) Education in the out-of-doors creates a learning situation for all ages in which actual experience leads to self-inquiry and discovery in a variety of disciplines. (2) Outdoor experience provides a real-life situation for problem-solving and developing those skills necessary to adapt to changing life conditions (Canadian Education Association, 1969, p. 9).

Nature-based learning provides the opportunity to develop skills for problem-solving and adapting in part because it is experiential: “Outdoor education is really a subset of the more general concept of experiential learning. The major elements of experiential learning—using authentic experiences and learning by doing—are also integral parts of outdoor teaching” (Broda, 2007, p.6). Experiential learning also contributes to social literacy: “through direct structured experience in the outdoors, people learn about nature, themselves, and their place in the community” (Gilbertson, 2006, p. 14). This connection between nature, a sense of self and a sense of community underpins the reason for the development of multiple literacies, which are in essence the ability to perceive and produce messages, make meaning, and to navigate and read one’s world.
At the heart of nature-based learning is student engagement and connectedness in learning and in their world: “Although there are many good reasons for taking students outside—educational, social, aesthetic, recreational—I have to admit that one of my most compelling reasons is to provide opportunities for kids to experience that sense of wonder... both a sense of wonder and subsequent feelings of responsibility and stewardship” (Broda, 2007, p.3). Engagement and motivation which are evident in nature-based education are also pivotal in learning a second language: “I am more convinced than ever that the best use of time occurs when kids are actively engaged in motivating learning activities and environments, either indoors or beyond the walls of the classroom” (Broda, 2007, p. 1). Engagement and motivation provide a powerful pre-condition to learning. Broda summarizes the value of nature as an educational context: “many educators are embracing the growing body of research that clearly shows that experiential learning does make a difference” (Broda, 2007, p. 2). Setting Late French Immersion in the experiential, engaging and motivating context of nature-based education contributes to student learning and the development of their literacy in a second language.

The British Columbia Ministry of Education advocates an interdisciplinary approach to environmental learning, as is evident in the title of its publication: Environmental learning and experience: An interdisciplinary guide for teachers. This guide encourages teachers to “integrate environmental learning by connecting diverse subject areas for students from kindergarten to post-secondary levels” (British Columbia Ministry of Education, 2007, p. 6). It provides the rationale for building connections: “Facilitating environmental education in the learning of all subjects, rather than isolating it, models for students how the environment is connected to their daily lives and relationships within their communities” (British Columbia Ministry of Education, 2007, p. 6). This same connection between context, community and subjects, or disciplines, is echoed in Late French Immersion. Nature-based learning lends itself well to the challenge in Late French Immersion of creating an authentic environment for students in which they may be actively engaged as they learn the target language through multiple disciplines: “Le défi, en immersion tardive, consiste à créer une ambiance authentique qui permette à l’élève de participer à la vie de la classe, tout en apprenant le français et les autres matières scolaires” (British Columbia Ministry of Education, 1999, p. 3).
The social-emotional learning that takes place through an interdisciplinary approach is noted in Waite: “particularly strong contributions to the citizenship curriculum came from cross-curricular work” (Waite, 2011, p. 117). Some of the possibilities, beginning with the affective domain, and proceeding to the many facets of the learner that are developed through this approach are identified in A teacher’s handbook for study outside the classroom: “Enthusiasm for learning: Learning occurs in many dimensions, and the teacher attempts to arrange the teaching situation so that multi-dimensional learning will occur... Learnings include attitudes, physical and mental skills, conceptual developments, and many other facets” (Brehm, 1969, p.92). The essence of nature-based interdisciplinary teaching and learning lies in the response to the question: “What value do we place on a landscape?... To teach and learn in such environments requires an approach that accepts this complexity and a cross-curricular approach supports this. To subdivide such learning into subject areas is to miss the point” (Waite, 2011, p. 109). To look at nature through the lens of a single discipline would be limiting. To look at nature through the lens of multiple disciplines allows for a better understanding of its complexity. Likewise, to use language in nature, across multiple disciplines, allows for a richer and more complex experience, which contributes to the development of literacies. This epitomizes the reason for nature-based learning as an engaging and effective interdisciplinary context for learning in Late French Immersion.

An interesting clarification made by Mansilla, Miller and Garner is in considering interdisciplinary and multidisciplinary teaching: “many so-called interdisciplinary curricula are in fact multidisciplinary designs” (Mansilla, Miller & Garner, 2000, p. 33). They continue with their rationale for using a multidisciplinary approach: “A multidisciplinary approach can be very fruitful: it can provide students with rich perspectives around a particular topic or it can scaffold them toward further interdisciplinary understanding” (Mansilla, Miller & Garner, 2000, p. 33). They subsequently delineate the subtle difference between interdisciplinary and multidisciplinary studies, indicating that interdisciplinary studies use “the tools, arguments and approaches of more than one discipline at once”, whereas multidisciplinarity implies “the use of a number of disciplines one after another” (Mansilla, Miller & Garner, 2000, p. 43). This is interesting to consider in the context of Late French Immersion, as learning occurs through multiple disciplines both simultaneously and sequentially. For example, an inquiry into the similarities and
differences between coniferous and deciduous trees might include a nature-based science lesson followed by an art lesson, with both being conducted in French. In such a case, both inter and multidisciplinary approaches are involved. The science lesson in French would be an example of interdisciplinary studies, whereas the art lesson following the science lesson would be an example of multidisciplinary studies. For the purpose of this study, the broader term interdisciplinary refers to both simultaneous and sequential application of more than one discipline.

Both nature-based learning and Late French Immersion provide effective interdisciplinary contexts for fostering the development of literacy at school and beyond: Nature can be studied through a variety of lenses, including science, art, social responsibility and language. Late French Immersion, in which the disciplines are taught in French as a way to teach both the curriculum and French as a second or additional language, is also inherently interdisciplinary.

2.2. From Literacy to Multiple Literacies to Multiliteracies

The integration of nature as a learning environment in a curriculum where disciplines are taught in a second language provides a context where traditional print-based reading and writing practices have to be reconsidered to incorporate the multimodality of texts that demand multiple literacy practices.

A focus on multiliteracies (New London Group, 1996) emerges as “the notion of multiliteracies supplements traditional literacy pedagogy... A pedagogy of multiliteracies, by contrast, focuses on modes of representation much broader than language alone” (Cope & Kalantzis, 2000, p. 5). This new focus refers to the integration of significant multiple modes of meaning-making, where “meaning is made in ways that are increasingly multimodal – in which written-linguistic modes of meaning are part and parcel of visual, audio, and spatial patterns of meaning” (Cope & Kalantzis, 2000, p. 5).

Multiliteracies, or “the variability of meaning making in different cultural, social or domain-specific contexts” (Multiliteracies: Expanding the scope of literacy pedagogy, n.d.), are a natural outcome of an interdisciplinary approach to teaching. Students in
Grade 6 Late French Immersion develop emerging multiple literacies by making meaning in French and in nature, through the disciplines introduced in these contexts. Building on the definition of literacy as making meaning and of multiliteracies as making meaning in multiple contexts, the outcome is the development of ways of navigating or mediating one’s world: “I think about literacy broadly as all of the ways that humankind has for mediating their world” (Harste, 2010, p. 29). Applying this to Late French Immersion, literacy would be all of the ways that students have for mediating their learning world. Given that this incorporates multiple disciplines, literacy is broadened to multiliteracies. Likewise, in nature-based learning, multiple disciplines may be incorporated, leading to mediating or meaning making in multiple contexts, which become multiliteracies.

Anstey and Bull define the term multiliteracies: “The multi in multiliteracies ...broadly...refers to the range of literacies and literate practices used in all sectors of life and how these literate practices are similar and different.” (Anstey & Bull, 2006, p. 20) Anstey and Bull further delineate literacies and literate practices, including “specialized vocabulary” as one of the literacies under that definition. “Specialized vocabulary” might apply to language specific to the many varied curriculum content areas incorporated into nature-based studies and Late French Immersion. These content areas might include plant parts appearing in classification tables, language elements in an in-context grammar lesson, instructions in team-building activities, or design elements, such as line, texture and perspective, in an art activity. Such making of meaning, interwoven through an interdisciplinary approach, both requires and is evidence of the development of multiliteracies.

Unsworth, in *Teaching multiliteracies across the curriculum: Changing contexts of text and image in classroom practice*, cites the “distinctive literacies of subject areas” (Unsworth, 2001, p. 2) and the “differentiation of subject-specific literacy demands – curriculum literacies” (Unsworth, 2001, p. 10). The concept of literacies reflecting curriculum and being subject-specific is important in the context of education, of Late French Immersion and of this study. A further point to note is Unsworth’s clarification of the need to specify “the interface between a specific curriculum and its literacies rather than imagining there is a singular literacy that could be spread homogeneously across
the curriculum” (Unsworth, 2001, p. 11). This aligns with the concept of specific curricular literacies and therefore with multiple literacies associated with interdisciplinary teaching. Extending this, Unsworth refers to the genres of text that are predominantly associated with a curricular area, such as science: “explanations and procedures are very frequent in science” (Unsworth, 2001, p. 11). Multimodality is also inherent in teaching for the development of multiliteracies. Unsworth cites Lemke on the role of curriculum-specific semiotic modalities:

Lemke has also pointed out that in scientific texts, images like abstract graphs and diagrams on the one hand, and written text on the other hand, contribute differentially to the construction of meaning...’It is the nature of scientific concepts that they are semiotically multimodal in this sense, and this may well be true in other systems of semiotic practices as well’ (Unsworth, 2001, p. 10).

Unsworth sets his comments in the context of theory and practice around “changing contexts of text and image in the social construction of multiliteracies in classroom practice” (Unsworth, 2001, p. 3). The role of print as a means of communication of knowledge in education is accompanied by an increasingly diverse array of modalities: “In the twenty-first century the notion of literacy needs to be reconceived as a plurality of literacies” (Unsworth, 2001, p. 8). Unsworth identifies: “the distinctive literacy demands of different school curriculum areas, and the distinguishing among forms of reproductive and critically reflective literacy practices” (Unsworth, 2001, p. 8). Finally, he articulates the link from multimodality to multiliteracies relevant to curricular areas: “multidimensional, multiple literacies – multiliteracies” (Unsworth, 2001, p. 8).

Beyond school, multiliteracies imply skills for life in society, or “what a literate person needs to know and be able to do to operate successfully in the contexts in which literacy is used” (Anstey & Bull, 2006, p. 20). Teachers have the opportunity and the responsibility to equip students with literacy skills:

Literacy teaching can equip students for the changing world in which they live. With that goal in mind, teachers will need to help students develop the capacity to produce, read, and interpret spoken language, print, and multimedia texts. Likewise, students will need to acquire the skills, strategies, and practices they need for work and leisure; active citizenship; participation in social, cultural, and community activities; and personal growth.” (Anstey & Bull, 2006, p. 19)
In other words, teachers “need to help students ‘read the world’ in new ways (Provenzo, 2011, p. xxv).

In *Reflections on Literacy*, Norma MacFarlane examines literacy through a series of articles. Particularly relevant to the development of multiliteracies in Late French Immersion through its interdisciplinary approach is “The Four Resources of the Literate Learner” (MacFarlane, 2006, p. 12-13), in which the construction of meaning from a text, be it written, spoken, visual or multimodal is identified in four roles or phases. The first three of the resources or skills cited, “Code Breaker”, “Meaning Maker” and “Text User” are prevalent in the context of Grade 6 Late French Immersion, where students must break a code, make meaning and use information. All three of these practices are evident within the first few weeks of Late French Immersion. The fourth phase, “Text Critic”, is likely to develop later in the Late French Immersion learner’s education. Typical tasks identified are “enumeration/listing, time order/sequence, compare and contrast, cause and effect, problem-solution and description”. These are consistent with the kinds of tasks performed even very early by Grade 6 Late French Immersion students. An example of how such skills also apply to nature-based learning in Late French Immersion might be if students were asked to: list the parts of a tree, diagram its growth from a seed, make and label comparative illustrations of a deciduous and a coniferous tree based on observation, map or show the results of a forest fire and make a PowerPoint or poster to encourage campers to put out their campfires. Such activities would involve using simple language to accomplish tasks within a meaningful context and developing multiple literacy practices through the interdisciplinary approach to language, science, art and social responsibility.

The concept of multiliteracies also applies to expanded ways of making meaning from written text. Sabatier, Moore and Dagenais, in their article “Espaces urbains, compétences littératiées multimodales, identités citoyennes en immersion française au Canada”, define text in an expanded way:

Notre conception de la littératie ne se résume plus aux seules capacités de codage et de décodage de textes écrits imprimés; elle consiste à acquérir et posséder les pratiques sociales nécessaires pour situer, reconnaître et évaluer le sens et la signification d’un texte dans le
contexte de production et de réception qui est le sien (Sabatier, Moore & Dagenais, 2013, p. 139).

Here they make the point that literacy is more than producing and decoding written messages. It is also the ability to situate a message in its context, in order to fully recognize and assess its meaning and its significance. It means possessing the necessary awareness or social practices to understand the context. This too is a form of literacy. Multiliteracies refer to this contextual literacy applied across multiple disciplines. The text, therefore, is a multimodal representation inherently linked to its context: “le produit de pratiques sociales et culturelles dans lesquelles il a été pensé, écrit et donné à voir-lire” (Sabatier, Moore & Dagenais, 2013, p. 140). They expand on the traditional definition of literacy to acknowledge the linguistic and social significance it implies:

Élargissant singulièrement la notion traditionnelle de texte, et mobilisant des connaissances tant linguistiques que sociales, l’approche de la littératie comme pratique socialement située s’ancre désormais dans la multimodalité des langages parlés, écrits et visuels, perçus comme des systèmes de représentations qui construisent notre perception de la réalité et du monde qui nous entoure (Sabatier, Moore & Dagenais, 2013, p. 139).

Contextual literacy is a clearly significant aspect of multiliteracies. Numerous language tasks can be undertaken by the language learner working in context: “La construction des opérations cognitives fondamentales – par exemple trier des informations, catégoriser, argumenter – s’appuie sur le traitement raisonné des contenus et des formes linguistiques qui servent à les organiser dans des tâches scolaires ordinaires” (Gajo & Sera, 2000, n. p.). These tasks are possible through careful scaffolding of the learner with appropriate language tools: “les outils langagiers (en termes de vocabulaire et de structures phrastiques et syntaxiques) à fournir aux élèves pour parvenir à exécuter la tâche” (Sabatier & Dezutter, 2014, p. 129). With necessary vocabulary and language structures, the learner can execute the task and manage to participate in conversation: “Du point de vue communicatif, on peut observer la capacité de l’élève à gérer les interactions dans une conversation.” (Sabatier & Dezutter, 2014, p. 129). If scaffolded, students can accomplish various multimodal language tasks involving complex concepts. In a nature-based context, the students might read an article or pamphlet about trees or the environment, they might make a poster or pamphlet
containing facts about trees or promoting the protection of the forest, they might use an iPad to photograph the trees and show it to their classmates while telling them about the parts of the tree, they might play an interactive game to identify the connections between living organisms in the forest or they might sketch or paint what they see in the forest. Similar activities would apply at the beach or in a field. This ability to navigate and make meaning in multiple contexts implies multiple literacy practices.

An interdisciplinary approach in teaching blends together a variety of specific curricular contexts, each having specialized vocabulary and particular ways of organizing it. Each curricular context contributes to a learner’s skill set or literacy. Multiple literacies are interwoven and develop simultaneously. Many disciplinary combinations are possible in Late French Immersion, such as science, art and social responsibility, as well as nature-based learning. Each provides a particular context, which, according to Porquier and Py make up the set of circumstances and conditions for the acquisition of the new language: “l’ensemble des circonstances et des conditions d’acquisition/apprentissage d’au moins une langue non-maternelle” (Porquier & Py, 2004, p. 54). In the case of Late French Immersion, the disciplines through which French is learned provide the circumstances and conditions for the use and acquisition of the language. The domains of science, art, social skill development, and second or additional language studies, all lend themselves very naturally to the context of nature-based studies and proved circumstances and conditions for the use and acquisition of French in context. The making of meaning in these domains, interwoven through an interdisciplinary approach, is indicative of the development of multiple literacies.

The view of multiple literacies builds the framework that will guide this inquiry into how such literacies are developed by second language students, leading to a situated view of what counts as literacy in a nature-based approach to learning and teaching.

2.2.1. Science Literacy

A curricular context that lends itself well to nature-based studies, language learning and the development of multiple literacies, is science. Science is a subject that appeals to a learner’s natural curiosity: “science gives meaning and purpose to literacy
activities by providing a rich field of content that students are naturally curious about” (Thier & Daviss, 2002, p. 4). McKee and Ogle make the following observation: “when interesting science trade books and magazines are available, both boys and girls often lose themselves in the pictures and texts and don’t want to stop reading when independent reading time is over. Children’s interest in science is an important foundation for this book” (McKee & Ogle, 2005, p.1).

Science and language combine well as interdisciplinary contexts contributing to the development of multiple literacies:

Language literacy and science literacy can easily be linked to enable teachers to better achieve their goals and to adhere to standards within the time frame they have available. With such an integrated approach, teachers have endless opportunities to develop students’ language and reading strategies. Inquiry-based science experiences provide the context in which students learn to think critically and develop understanding from concrete activities and print materials. The natural culmination of this type of learning is that children learn to share their discoveries in written and oral form (McKee & Ogle, 2005, p.12).

The compatibility of science and language for interdisciplinary teaching is due to the skills in one reinforcing the other. Science may provide the context, meaning and purpose for using language, while language may provide the means for expressing the science:

Tremendous synergies are possible between the disciplines of science and language literacy because, in their essence, they seek to develop reciprocal skills in students—skills that complement and strengthen each other. It is possible to develop those skills in students through science or through language, but either challenge is simplified enormously when the resources of both disciplines are intentionally focused on the same tasks. Science strengthens literacy skills by infusing them with meaning and purpose. Setting language in an engaging context such as science inspires students to reach for the tools of language in order to uncover and internalize the secrets about the world that science can reveal to them. Literacy skills strengthen science learning by giving students the lens of language through which to focus and clarify their ideas, conclusions, inferences, and procedures. By integrating those groups of skills, teachers can improve students’ abilities and raise achievement levels in both areas at once, and do so more effectively and efficiently than if the two skill areas are taught separately (Thier & Daviss, 2002, p. 6).
Commonalities between science literacy and language literacy exist in ways of understanding, processing, organizing and expressing information. The skills implied in the activities listed below, while possibly referring to English as a first language, are common to both science and language and thus are also relevant to Late French Immersion: “one can see...that the two disciplines are based on a foundation of parallel or reciprocal processes. For example, a scientist at work on an experiment will

- note the details...
- compare and contrast...
- predict...
- sequence events...
- link cause and effect...
- distinguish fact from opinion...
- make inferences...
- use words...

Each of these skills is valid and integral to conducting and reporting on a science experiment or activity and to using language, be it a first or second language. These might be relevant in a Grade 6 Late French Immersion lesson on trees in a forest, where a teacher might ask students to compare and contrast coniferous and deciduous trees, predict density, size or age of trees, determine the sequence of events in the growth of a tree, link cause and effect of a new or dead tree, or of a new tree or fern growing out of a nursery log, a nursery log being a dead log serving as a substrate for a new plant, distinguish fact from opinion in a brainstorm on the cause and effect question, make inferences about occurrences in the forest based on their observations and use words and language to tell about their thoughts.

Hanauer links the combination of science and language literacy to a multimodal approach for developing scientific understanding and the development of multiple literacies: “the physical activities of scientific inquiry move through oral discourse and become written or visual multiliteracy representations. It is at the point of multiliteracy representation that they become scientific knowledge” (Hanauer, 2006, p.179).
Language skills form an integral part of this interdisciplinary approach that benefits from inquiry-based, multimodal instruction. “The process of learning science in a science inquiry classroom is a multimodal, multiliteracy enterprise. The physical, oral, written and visual modes of communication were seen... to work together to construct new understandings of scientific phenomena” (Hanauer, 2006, p. 187). As an example, Hanauer breaks the unit down into the kind of activities involved in developing science literacy, citing “a range of curriculum genres—socially recognizable sequences of actions that realized particular meanings or purposes for teachers and students...included the following curriculum genres:

- Dialogic read-alouds
- Hands-on explorations
- Journaling
- Semantic mapping
- Literature circles
- Drama
- Class mural
- Home project

Each of these activities supports scientific learning and literacy development, or multiple literacies. They are varied and valid language development activities that provide multiple and differentiated ways for students to demonstrate their understanding.

Varelas and Pappas echo this connection between the development of science and language skills:

As children engaged with texts, material objects, dialogue, ideas, and symbols in the various curriculum genres enacted in their classroom community, they were supported, bridging their own understandings and ways of multimodal communication with those of the scientific community. In doing so, children became learners of both science and literacy (Varelas & Pappas, 2013, p. 6-7).

They also reference the social development that occurs through inquiry-based learning that is co-constructed by the learners and the teacher: “Learning in classrooms is a
communal activity—knowledge is individually owned by children but is also collectively constructed by them and the teacher in a classroom” (Varelas & Pappas, 2013, p. 163). This inquiry-based, experiential development of knowledge and literacy involving science, language and social responsibility is an example of how multiliteracies develop through interdisciplinary studies.

2.2.2. The Arts and Literacy

Just as the connection between science and language development contributes to the development of multiple literacies, the arts also contribute to the development of multiliteracies. The arts provide a wealth of means of expression as well as a range of specialized vocabulary and a reason for communication. The following excerpt, although written in reference to the use of museums and art galleries as a context for literacy development, makes a strong case for the integration of disciplines including the arts in an interdisciplinary program and implies the development of multiple literacy practices. The principles are pertinent to interdisciplinary studies in general, and could be easily applied to the context of nature-based learning:

Studying subjects in small, disconnected time slots is not sufficient. Increasingly, educators are realizing that effective learning cannot take place if learning is compartmentalized into 40-minute slots focused on only one subject. Thus they are taking a closer look at integrating subjects so that learning is more meaningful for students. Claudia Cornett explains that ‘The arts play an integral role in integrating wholes and parts, and it is how literature, visual arts, drama, dance, and music interact with science, social studies, math, and the language arts to support learning about important life skills, concepts, and themes that is the goal’ (Cornett, 1999, p. 40). Cornett also argues that the arts provide another way of knowing that students can use to learn material and to achieve academic success (Floyd, 2004, P.9).

Floyd subsequently makes a strong case for the effectiveness of the arts in developing literacy: “Integrating the arts in a theme-based curriculum can make learning more relevant and thus provide students with a deeper understanding of what they learn” (Floyd, 2004, p. 10).

In Teaching Literacy Through the Arts, McDonald and Fisher affirm the importance of teaching literacy: “Every teacher is concerned with his or her students’
literacy development because literacy skills are foundational to everything we learn and know” (McDonald & Fisher, 2006, p. 10). The connection between literacy and the arts as a reason and means to communicate is also articulated in Carger’s reference to Gallas:

For Gallas (1994), linking art to literacy activities offered more than disembodied lessons on technique, media, or art history. Like Ernst, she saw art as ‘a creative process to offer children broad avenues for expression and understanding,’ in the language arts as well as in other content areas (Carger, 2004, p. 286).

The visual arts also contribute to visual literacy, as an additional skill to language and content area literacies: “All learning is language-based. Thus, children must be taught how to read, write, speak, listen, and view and how to use these literacy skills in other content areas” (McDonald & Fisher, 2006, p. 10). Harste draws the connection to the value of the visual arts in a bilingual education: “Carger (2004) reported on the positive influence that the visual arts have on learning for bilingual children” (Harste, 2010, p. 30). Harste further identifies some varied forms of literacy, which make the point that literacy applies to multiple domains: “there is a proliferation of literacies: oral literacy, visual literacy, computer literacy, mathematical literacy, geographical literacy, etc.” (Harste, 2010, p. 27). The enrichment to literacy skills provided by their application in multiple domains is referred to by Short in Carger: “Short et al. (2000) found that art, music, math, drama, and movement provided ‘multiple perspectives and points of connection that enriched students' talk about literature’” (Carger, 2004, p. 286).

Another art form that lends itself to literacy development is music. When experienced in nature, or sung about nature, music provides a further way to develop literacies, particularly emerging literacies, in Grade 6 Late French Immersion. François Leclercq, in “A comme...”, cites the value of song: “La chanson a surtout servi de prétexte à des récréations ou parfois à des constructions thématiques, et, pour les étudiants étrangers, à des exercices de compréhension” (Leclercq, 1978, p. 257). Songs represent both a discipline and an effective teaching strategy. McDonald and Fisher describe the power of song in language development:

Students actively use oral language, of course, every time they sing the words to a song. Furthermore, a child’s personal confidence in using
language is increased by his or her participation in the overall sound of group singing. Shy students will participate without the fear of being singled out. Much learning transpires as new words are learned and used through speaking and singing.

In the processes of learning words to songs (or poetry), students are constantly repeating words in both spoken and sung contexts. They may be reading and rereading the words aloud from charts, overheads, song sheets, and so on. Also, they may be experimenting with different ways to say and/or sing those words using various voice inflections, loud and soft, fast and slow, emphasized words, and other expressive techniques involved in successful communication through oral language (McDonald & Fisher, 2006, p. 20).

For these reasons, music is a very effective tool in Late French Immersion. It provides a way to scaffold student learning through a pleasurable activity and is both an important subject matter and a method. When applied to additional content areas, such as in the traditional folk song “L’arbre est dans ses feuilles”, found in Appendix E, students learn the parts of a tree through a traditional folk song, which contributes to their knowledge of French folk culture, science and nature, music and language, all while developing a sense of community through this social activity. This is a clear example of a simple nature-based interdisciplinary activity contributing to the development of multiliteracies.

Although intended to guide the teaching of visual arts by detailing the instructions for 30 art projects, the philosophy expressed by Josée Hémond in her introduction is relevant to the integration of fine arts in interdisciplinary teaching and to the development of multiliteracies. In discussing the co-construction of learning, Hémond states that the arts represent “une façon importante de résoudre et de comprendre l’univers de l’homme. L’élève qui s’applique à résoudre un problème de façon créative participe activement à son apprentissage” (Hémond, 2012, p. VIII). Hémond quotes Sir Ken Robinson: “nous devons reconnaître que le développement de l’humain n’est pas un procédé mécanique, mais plutôt organique” (Hémond, 2012, p. IX), which highlights the fact that the arts increase the ongoing desire to learn and to engage in the co-construction of learning. The arts can reinforce learning in other disciplines: “les enseignants... peuvent organiser des activités complémentaires à leur enseignement” (Hémond, 2012, p. 2). An example of this is the study of nature. Students learn much by observing and representing living things:
observer des arbres en plein air et réaliser une esquisse au fusain sur une tablette de papier blanc. Par la suite, expérimenter avec de l’encre de Chine sur un papier couleur sable, texturé, double format par rapport à l’étape précédente, en soufflant dans une paille pour pousser l’encre afin de reproduire les divisions des branches d’un arbre et les comprendre. Puis explorer, avec du papier de construction épais, la structure tridimensionnelle d’un arbre en tortillant le papier avec les mains afin de créer un tronc, puis des branches (Hémond, 2012, p. 8).

These three projects connect the study of nature to artistic development and vice-versa. The social-emotional development of the student is heightened by the pride experienced in seeing the finished product displayed, which allows for further observations “pour communiquer, encourager et valoriser les élèves, et renforcer leur estime de soi... il aperçoit son œuvre... à la vue de tous et cela éveille instantanément chez lui un sentiment précieux: le sentiment de fierté” (Hémond, 2012, p. 10). The arts provide students with an experiential way to observe and express their observations of the world and to feel pride in their creations.

The arts offer many opportunities for expression and interdisciplinary enrichment. The arts allow for differentiated ways to demonstrate learning and are beneficial to other aspects of education, as identified by Deasy, quoted in Albers and Sanders “‘well-crafted arts experiences produce positive academic and social effects’” (Albers & Sanders, 2010, p. 7). Furthermore, the arts gives students both a reason to communicate: “‘Art talk’ enabled and stimulated them to seek, share, and connect to knowledge in a school context” (Carger, 2004, p. 290) and differentiated ways to communicate.

Clearly, the arts provide powerful multimodal, interdisciplinary opportunities for the development of multiliteracies. They are pertinent and relevant, and have an inherent potential to evolve with the learner and the learner’s context. Albert and Sanders express the need for multimodal production and reception of communication: “in today’s world, much or our communication is multimodal and requires facility with new forms of composition and interpretation” (Albers & Sanders, 2010, p. 12).
2.2.3. Social Literacy

A very natural way to organize activities in both nature-based learning and Late French Immersion is through group and paired work. This allows for students to benefit from the zone of proximal development, "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86), and to develop multiple literacy skills through social interaction around the disciplines being studied. Steffen refers to Vygotsky in identifying the fundamental role of social interaction to co-construction between the learner and the expert: “L’apprentissage relève pour lui d’une co-construction entre novice et expert pour laquelle l’interaction sociale joue un rôle fondamental” (Steffen, 2011, p. 15). This also applies to the learning that occurs between peers who arrive at understanding and develop their skill sets at different times. Group and paired activities foster engaged participation, communication and cooperation. They are an important means of developing appropriate and constructive social skills. Freebody identifies how such social literacy develops: “It is in social mediation practices, collectively conducted, that students are inducted into ways of thinking and talking as they read and about what they have read... acculturated into forms of social responsibility, those relating to turn-taking and answering in classrooms” (Freebody, 2010, P. 47). A further point, “The most creative projects and the best ideas for cross curricular work develop out of brain-storming sessions” (Wilkinson, Clive & Blain, 2001, p. 107), refers to an activity that lends itself well to scaffolding shared understandings on existing knowledge, which can be a very effective strategy in Late French Immersion, and allows students to benefit from working together. The majority of the activities in Grade 6 Late French Immersion are interactive and social in nature. The students benefit from co-constructing their learning and from the effect of the Zone of Proximal Development. This leads to more students acquiring more skills than they would otherwise, and has the effect of increasing the number of literacy models for the students in the class.

A further important element in nature-based learning is the fostering of a sense of place in the learner. This sense of place lends itself to the development of a sense of
social responsibility, as described by Freebody: “This chapter (...) suggests that the term (social responsibility) be taken to lead educators toward reconsidering their students, their own practices, and their educational materials and assessments in two ways: across place... and through time” (Freebody, 2010, p. 41). Social responsibility developed through a sense of connection to place is paralleled through a sense of connection to community. In Late French Immersion, it is paramount to establish a sense of community right from the start, in order to foster communication and facilitate group work. Having a sense of place and time, and a connection to it, creates an environment in which the learner may flourish in the development of multiliteracies, of which social responsibility and social literacy are an important component.

The context of multiple disciplines, multiple modes and multiple literacies is an important aspect to integrate into planning, teaching and curriculum, as outlined by Simpson and Walsh: “the need for policy makers to embed multiple modes and multiple literacies in the future design of curriculum and pedagogy” (Simpson & Walsh, 2010, p. 37). Furthermore, it is important to plan for such design in an interdisciplinary manner, as articulated by Freebody: “For literacy educators this means learning that establishes portable knowledge about interpretation and textuality across disciplines” (Freebody, 2010, p. 52). This reference to “portable knowledge (...) across disciplines” implies transferable skills or knowledge that apply to diverse situations and domains. An inherent goal of Late French Immersion is to equip students with skills that are transferable to multiple contexts. This is also true of nature-based learning, as it is a desirable outcome for learners to recognize connections and adapt their understandings to multiple environments. The ability to do this collectively is an asset to learners, as they are better able to communicate and are more effective environmental stewards when working together.

The development of multiliteracies is valuable, as skills are adaptable to alternate situations, as compared with finite knowledge, which is specific to its context. The British Columbia Ministry of Education reflects this pedagogical theory in its proposed curriculum, which places a much greater weight on competencies than on content (British Columbia Ministry of Education, 2013). Dewey refers to education as a process of living: “Education, therefore, is a process of living and not a preparation for future
living” (Dewey, 2009, P. 36). The development of competencies and multiliteracies might also be described as a process of living.

On reflection, these concepts emerge as fundamentally integral to my practice. My inquiry into how such literacies are developed by my students provides an understanding for exploring in what ways these practices are congruent with my beliefs about what counts as multiliterate practices and resources in my classroom and how this is demonstrated through my activity choices. This inquiry lays foundations for questioning my teaching practice and implicates reflective practice.

2.3. Reflective Practice

In thinking of how I go about teaching, I realize that I am a reflective practitioner. On both a conscious level and an unconscious level, I am constantly thinking about my practice and trying to refine it by finding effective ways to foster growth in my students and in particular, to help them develop multiliteracies. The reflection I do helps me to make adjustments to keep trying to improve my practice.

The concept of a reflective practice refers to the ongoing observation and fine-tuning of the practitioner, in this case of the teacher-practitioner, that results in an awareness leading to self-generated adjustment and improvement in practice. It embodies the notion of this awareness extending to one’s actions and their impact on others, in this case the students, and their learning. Donald Schön defined the reflective practice as "the capacity to reflect on action so as to engage in a process of continuous learning" (Schön, 1983, p. 102). Reflections “enable the informed examination of educational theory in the context of experienced teaching practices (PDP, 2009-2010, p.11)” (Sabatier & Dezutter, 2014, p. 128). In writing on the purpose of a reflective teaching practice, Warren describes it as being “for the joy, the wonder, and the true generosity my job enables me to experience” (Warren, 2011, p. 142). The reflective practice and its application to the classroom are further defined in Radulescu: “The concept of reflective teaching comprises any process that encourages in general an attitude of ongoing exploration and enquiry...choices made about the organization of activities in the classroom, and the use of techniques and materials etc.” (Radulescu,
This connection between awareness and choices governing the organization of activities, techniques and materials, confirms the value of the role of reflection in contributing to ongoing responsiveness and improvement. "Reflexive writing pushes researchers to take perspective and gain distance on their own knowledge and interpretation" (Luttrell, 2010, p. 425).

Raphaël Pasquini describes the value of stories in educational research: "ces récits peuvent être considérés comme des ‘récits exemplaires’, non pas parce qu’ils montrent des exemples à suivre, mais parce qu’ils représentent des exemples d’une pratique" (Pasquini, 2013, p. 6). He shares his observations of his own teaching experience that highlight the interactions between the learner, the teacher and the knowledge:

L’exemplarité dont il est question ici renvoie à la posture d’un enseignant engagé dans sa pratique, où il a puisé des événements considérés comme significatifs et susceptibles d’inspirer celles et ceux qui veulent en connaître les enjeux véritables (Desgagné, 2005). Ils racontent ce que peut être un moment de la vie d’une classe où cohabitent des élèves, un enseignant et un savoir en interactions permanentes, au cœur d’une complexité omniprésente dans laquelle l’action ne peut souvent pas s’improviser. Plus précisément, je parle de moments pédagogiques faisant tous référence à un aspect-clé de la profession enseignante (Pasquini, 2013, p. 6).

Like Pasquini, I refer to my teaching practice as one example from which to learn, just as every teacher can look to their own practice as a source on which to draw: “Je raconte un quotidien, non pas parce qu’il est à imiter, mais parce qu’il renvoie tout professionnel au sien” (Pasquini, 2013, p. 7). Perrenoud articulates the purpose of the reflective teacher: “Il réfléchit aussi pour savoir comment continuer, reprendre, affronter un problème, répondre à une demande” and the role of the reflection: “Sa fonction principale est alors d’aider à dresser un bilan, de comprendre ce qui a marché ou non, de préparer à la prochaine fois” (Perrenoud, 2006, p. 35). The practice of reflexivity is an ongoing component of a teacher’s development: “une pratique réflexive méthodique s’inscrit dans le temps de travail, comme une routine. Non pas une routine somnifère, mais...un état d’alerte permanent” (Perrenoud, 2006, p. 183). I believe that in recommending a permanent state of alert, Perrenoud is advocating for active engagement, reflection and growth on the part of the teacher.
The teacher has an important responsibility in student learning. The students also have a part to play in their own learning. Pasquini elaborates on the relationships between the three essential elements in education: the learner, the teacher and the savoir, meaning the knowledge or skill being learned. This combination of three elements or poles is sometimes referred to as a pedagogical or didactic triangle, as described by Jean Houssaye: “Toute situation pédagogique nous paraît s’articuler autour de trois pôles (savoir-professeur-élèves)” (Houssaye, 1992, p. 40). In elaborating on these three elements of the teacher, the students and the knowledge, Pasquini first refers to the positive attitude toward learning that the teacher must foster in the learner. Secondly, he emphasizes the importance of teacher mastery of content and objectives. Thirdly, he points out the mediating role of the teacher in the relationship between the students and the knowledge. In summary, he points out that the model is interactive and context-based.

Premièrement, une relation enseignant-élèves qui pose les bases chez ces derniers d’une attitude positive à l’égard de l’acte d’apprendre. Deuxièmement, une relation enseignant-savoir qui table sur la maîtrise des contenus et des objectifs de formation par le professionnel. Et troisièmement, une relation élèves-savoir fortement médiatisée par l’enseignant au travers de fréquentes interactions et de régulations appropriées. Le modèle d’enseignement-apprentissage auquel je me réfère est un système interactif, contextualisé et contextualisant (Pasquini, 2013, p. 12).

These relationships between the teacher, the student and the knowledge, are relevant in this study. The relationship between the teacher and students, between the teacher and the knowledge, and between the students and the knowledge, are each essential to the learning. Encouragement, motivation and scaffolding of the students are of primary importance. This is supported by the teacher’s awareness and careful integration of the learning objectives and by the mediating of the students and their knowledge and skill sets, as they learn. These relationships are essential elements that underpin and permeate the learning that takes place.

It is the teacher’s awareness of the students and their learning that both defines and serves as the impetus for a reflective practice. By reflecting on the teaching, learning and learning objectives, and on the relationship between the teaching style and
what is learned, reflective practitioners can be responsive to student learning needs and can constantly work at improving their practice and the effectiveness of various teaching strategies in given situations. The reflective practitioner is a self-observing, self-critical professional:

Reflexivity is enacted through the research writer’s instigating an examination of self or the research process, recognizing the biases, forces of socialization, assumptions, or any number of influences that make visible his/her place in shaping and controlling the work. Reflexivity may be woven through or alternate with the narratives, interpretive work, explanations of methodology, or review of literature (Schaafsma & Vinz, 2011, p. 74).

Reflexivity is an invaluable component of a teaching practice. By reflecting on their practice and also on the narrative of their practice, teachers can learn from their own experience and improve their practice. Reflexivity is fundamental to narrative inquiry and contributes to professional growth: “Inquiry into experience enables teachers to act with foresight. It gives them increasing control over their thoughts and actions; grants their experiences enriched, deepened meaning; and enables them to be more thoughtful and mindful of their work” (Johnson & Golombek, 2002, p. 6-7). Furthermore, narrative inquiry, the methodology for this research, described in the following chapter, acknowledges “the legitimacy of teacher’s experiences and the importance of reflection on and inquiry into those experiences as a mechanism for change in teachers’ classroom practices as well as a forum for professional development over time” (Johnson & Golombek, 2002, p. 2). The benefits of reflection and narrative inquiry are long-lasting, as the professional development they provide has the potential to improve a teacher’s practice continually: “Teachers’ stories of inquiry are not only about professional development; they are professional development. Narrative inquiry becomes a means through which teachers actualize their ways of knowing and growing that nourish and sustain their professional development throughout their careers” (Johnson & Golombek, 2002, p. 6). In the following chapter, the choice of narrative inquiry as a methodology and its application to this study are discussed in greater detail. The narrative inquiry in this study will focus in particular on the concept of the development of multiple literacies, including French language literacy, through interdisciplinary nature-based teaching, in Grade 6 Late French Immersion.
Chapter 3.

Methodology

The methodology I have selected for this study is narrative inquiry. In section 3.1, *Research methodologies*, I discuss the options I considered in choosing narrative inquiry as a methodology. In section 3.2, *Narrative Inquiry*, I describe and discuss this methodology. In section 3.3, *Application of Narrative Inquiry to this Study*, I discuss narrative inquiry and its application to this research, acknowledging the strengths and the challenges of this methodology, and the advantage to using this method. Finally, in section 3.4, *Data and Analysis in this Study*, I outline the specific application of narrative inquiry to this research and how it is conducted.

3.1. Research Methodologies

In determining the methodology that would best support this research, I first distilled my question. What was it I wanted to explore? I have observed in my practice an apparent correlation between nature-based learning and a development in literacies in the target language and in the disciplines taught in this context. My class is a Grade 6 Late French Immersion class, which is the first year of the Late French Immersion program. I have observed that even with minimal language skills, the students can learn appropriate science, art, social skills and language. My question is: how does the interdisciplinary context of nature-based learning contribute to the development of multiple literacies in Grade 6 Late French Immersion?

I reviewed existing literature related to language learning, nature-based learning, and multiliteracies. Each of these areas provided depth and context for my research. I looked for commonalities between them to see what kind of a thread might exist to connect them. There is a rich body of literature related to these areas. I could not,
Before settling on narrative inquiry as the methodology for this research, I considered various qualitative methodologies for exploring my research question. I focused on the five qualitative approaches to inquiry, namely narrative, phenomenological, grounded theory, ethnographic and case study research, as outlined by Cresswell in *Qualitative inquiry and research design: choosing among five approaches* (Cresswell, 2013, p. 69-110). I also considered portraiture, as defined by Lawrence-Lightfoot and Davis in *The art and science of portraiture* (Lawrence-Lightfoot & Davis, 1997). In the following paragraphs, I identify the strengths and weaknesses of these methods for this study.

Phenomenological research would allow me to examine the development of multiliteracies through the interdisciplinary context of nature-based learning in the first term of Grade 6 Late French Immersion as a shared phenomenon. However, it would mean treating this development as an event rather than a process. It would shift the emphasis onto the students’ consciousness of their experience, and imply that the phenomenon of multiliteracy development is essentially unique to each student. While they are diverse in their learning styles, and this would be an interesting process, I wanted to be able to explore this question from the viewpoint of my teaching experience.

Grounded theory research would also involve placing the emphasis on the students and their perceptions. It would mean ignoring my own perception of the development of multiliteracies through the interdisciplinary approach to nature-based learning and instead would seek a theory generated by the student experiences. This would have the potential to highlight different aspects of the learning situation, based on my students’ views and would involve them in generating a theory based on data collected from them. This, like phenomenological research, would shift the emphasis onto my students’ perceptions rather than allow me to explore my own observations of my teaching practice.

Case study research would involve the study of a specific case or entity, “within a real-life, contemporary context or setting” (Cresswell, 2013, p. 97). My class is an entity

however, find evidence of research into the combination of nature-based learning and Late French Immersion.
in a real-life, contemporary context. This method is generally used to illustrate a unique case or a problem. Each class is unique, (but not a problem). This method would allow for the identification of themes, such as the development of multiliteracies, and for the organization of the themes into a chronology, which could be applicable to my class. However, once again, the emphasis would be on the multifaceted case, being my class. What I truly want to explore is my own teaching practice, based on my own observations.

Ethnographic research would have me looking for patterns in behaviours, ideas and beliefs among my students, as a culture-sharing group. If I treated this as an autoethnography, it would allow me to look for patterns in my own work, by observing and reflecting on my students as a culture-sharing group. Generally, the culture-sharing group has “been together for an extended period of time, so that their shared language, patterns of behaviour, and attitudes have merged into discernable patterns” (Cresswell, 2013, p. 94). While my class develops discernable patterns over the course of the term and the school year, it is particularly the start to their experience in Late French Immersion that I was interested in researching. This approach would allow me to research the development of multiliteracies through the interdisciplinary context of nature-based studies in Late French Immersion, by having me focus on patterns observed among my students. It would rely on my observations, but also on an extensive range of data obtained through my students’ participation. This would require receiving research permission from Simon Fraser University’s Ethical Review Board. I did in fact obtain such permission, as this is a method I seriously considered pursuing. The end result would have been a cultural portrait, such as described by Lawrence-Lightfoot and Davis (1997). However, ultimately, I wanted to use my own story as my source of data. I wanted to observe, document, analyze and reflect on my own practice, by creating and analyzing a narrative based on my teaching experience.

I considered what I might use as a source of data. In particular, I wanted to consider my question from the perspective of my teaching experience. My daybook provided a chronological record of learning activities. This record, together with my notes on my observations of the first term, would serve as the basis for the story of my teaching experience. So, after careful consideration of a variety of methodological
options, each having potential applications to my teaching situation, I settled on narrative inquiry, based on a narrative, created from my experience and reflections on my teaching practice, focusing on the development of multiliteracies through the interdisciplinary context of nature-based learning, in the first term of Grade 6 Late French Immersion. A description and discussion of narrative inquiry follow, in section 3.2.

3.2. Narrative Inquiry

Narrative inquiry is a research methodology based on stories of lived experience. Clandinin and Connelly first explored narrative inquiry as a way to learn from their own experience. They describe in simple terms both narrative inquiry: “narrative inquiry is stories lived and told” and its essential purpose: “narrative inquiry is a way of understanding experience” (Clandinin & Connelly, 2000, p. 20). This is particularly suitable in education, as it provides a way to learn directly from one’s own teaching practice. Chase describes narrative inquiry and how it works as: “meaning making through the shaping or ordering of experience, a way of understanding one’s own or others’ actions, or organizing events and objects into a meaningful whole, of connecting and seeing the consequences of actions and events over time” (Chase, 2011, p. 421). This emphasizes the value of learning from experience through looking back on it, making meaning from it, and making connections between one’s practice and its effectiveness.

Clandinin and Connelly focus in particular on experience as the origin of narrative inquiry: “We came to narrative inquiry as a way to study experience...Our guiding principle in an inquiry is to focus on experience and to follow where it leads.” (Clandinin & Connelly, 2000, p. 188). They also identified experience as key in the writings of John Dewey, whom they cite as their major influence: “Dewey’s writings on the nature of experience remained our conceptual, imaginative backdrop” (Clandinin & Connelly, 2000, p. 2). Experience, in teaching, is lived with the students. In my practice, experience is lived in the classroom and outdoors. It is a combination of the strategies I use and of the many interactions that take place between myself, the students and the subject matter. Pasquini asserts that these represent three essential elements in
education: “au centre de l’action pédagogique trois éléments essentiels. Premièrement, une relation enseignant-élèves qui pose les bases chez ces derniers d’une attitude positive à l’égard de l’acte d’apprendre. Deuxièmement, une relation enseignant-savoir qui table sur la maîtrise des contenus et des objectifs de formation par le professionnel. Et troisièmement, une relation élèves-savoir fortement médiatisée par l’enseignant au travers de fréquentes interactions et de régulations appropriées” (Pasquini, 2013, p. 12). The relationship between myself, as the teacher, and my students builds in them a positive attitude toward learning. The relationship between myself, as the teacher, and the subject matter depends on my knowledge of the subject matter and of appropriate learning outcomes. The third point in this pedagogical triangle is the relationship between the students and the knowledge they acquire, with appropriate support and feedback. Each of these represents an important component of the equation for student learning, for which I am responsible.

My narrative relates my teaching experience in a particular context: that of interdisciplinary nature-based learning, and at a particular time, specifically, the first term of Grade 6 Late French Immersion. It tells of my life as a teacher in that context and time. I consider my research question through analyzing my story. Clandinin and Connelly also reinforce the role of context in narrative: “In narrative thinking, context is ever-present... Context is necessary for making sense of any person, event, or thing” (Clandinin & Connelly, 2000, p. 32). They further articulate that narrative revolves around experience and that experience is contextual:

*Experience* is a key term in these diverse inquiries... People are individuals and need to be understood as such, but they cannot be understood only as individuals. They are always in relation, always in a social context. The term *experience* helps us think through such matters as an individual child’s learning while also understanding that learning takes place with other children, with a teacher, in a classroom, in a community, and so on (Clandinin & Connelly, 2000, p. 2).

This makes the point that context and relationships are always factors impacting learning. Narrative provides a way to observe, describe and reflect on context. Clandinin and Connelly delineate the components of context in narrative inquiry: “temporality; the place and balance of theory, people, action, certainty, and context; and the place of the researcher” (Clandinin & Connelly, 2000, p. 188-189). In this research, I am the narrator.
and the researcher. My place is both in the narrative and outside of it, looking in. As such, the narrative serves as a mirror of my practice. It allows me to look closely at my practice, analyze it and learn from it.

In the prologue to Narrative Inquiry, Clandinin and Connelly define the methodology of “narrative inquiry” and its application to education. Their thinking on educational researchers resonates for me:

Educators are interested in life. Life, to borrow John Dewey’s metaphor, is education. Educators are interested in learning and teaching and how it takes place...Educational researchers are, first, educators, and we too are interested in people...our interest as researchers is lived experience (Clandinin & Connelly, 2000, p. xxii).

This articulation of the connection between education and life also describes my philosophical base, as an educator and as a researcher. The undeniable link between education and life encapsulates perfectly the thinking that motivates and informs my research. Teaching represents a substantial proportion of my life, and it certainly represents my professional life. Having so far spent thirty-four years teaching, I am still fascinated by it. The people in whom I am interested are my students. The lived experience in which I am interested is my teaching experience. In particular, I am interested in my experience of the development of multiliteracies in my students, through the approach of interdisciplinary nature-based teaching, in the first term of Grade 6 Late French Immersion. My teaching experience, actions and observations form the data, and therefore the starting point, for this research, as suggested by Clandinin and Connelly: “Experience is therefore the starting point and the key term for all social science inquiry” (Clandinin & Connelly, 2000, p. xxiii). They cite the opinion of John Dewey that “education, experience, and life are inextricably intertwined” (Clandinin & Connelly, 2000, p. xxiii), which is also reflected in experiential nature-based learning being both real life and educational. It is also consistent with the point that to study education through narrating lived experience is valid and worthwhile. They summarize the connection between experience, which is the substance of the narrative in “narrative inquiry” and education, which is what is learned from conducting the inquiry: “This attention to experience and thinking about education as experience is part of what educators do in schools” (Clandinin & Connelly, 2000, p. xxiv). This experiential learning
that teachers do echoes the learning that students do, as an extension of their experience. Just as students learn from experience, so do teachers.

A particularly resonant detail in Clandinin and Connelly’s explanation of how and why they focused in on narrative inquiry as a methodology, is in the description of Jean Clandinin seeing validity in her day-to-day work and wanting her reality to be reflected in her research:

Her intention was to do something related to what she spent her days doing. Because she was “living her life” as an educator among children and teachers, who were also “living their lives” in school, Jean wondered if it was possible to link the living with the studying of living (Clandinin & Connelly, 2000, p. xxiv).

I, too, wanted to delve into and learn from my day-to-day reality, in which I feel so constantly engaged. It must be possible, I thought, to validate what I know from experience, in an academic way, by observing and narrating it, first of all, then pursuing my research question through an inquiry into existing research and then delving into the narrative of my own experience. Would it be possible to distil it in such a way as to make clear the connection between teaching in an interdisciplinary nature-based context and the development of multiliteracies in Late French Immersion students? Could I illustrate the connection between my teaching and their learning? Chase affirms the role of narrative with respect to the narrator’s interest in life: “Narrative inquiry revolves around an interest in life experiences and narrated by those who live them” (Chase, 2011, P. 421). My interest in my teaching and in my students’ learning is effectively an interest in my life experience as a teacher.

Clandinin and Connelly summarize their intention to explore and pursue narrative as a valid and meaningful basis for research. For them it is relevant, interesting and informative. They therefore were motivated to pursue the link between narrative and research, and the use of narrative in research:

Our excitement and interest in narrative has its origins in our interest in experience. With narrative as our vantage point, we have a point of reference, a life and a ground to stand on for imagining what experience is and for imagining how it might be studied and represented in researchers’ texts (Clandinin & Connelly, 2000, p. xxvi).
Pasquini identifies narrative as a way of experiencing the world and of relating that experience to others, going back as far as our childhood, with an essential component to the story-telling being its context: “Nous baignons toutes et tous depuis notre tendre enfance dans un monde peuplé de récits, eux-mêmes inscrits dans une culture spécifique... Toute histoire est toujours racontée à partir d’une perspective particulière” (Pasquini, 2013, p. 2). Pasquini explains that stories provide a narrative reconstruction of the professional experience of the practitioner, within a particular context or culture: “[Les récits] expriment une reconstruction narrative de l’expérience professionnelle, saisie dans une culture” (Pasquini, 2013, p. 3).

Pasquini writes of the process of reflecting on the connection between theory and practice, with reference to Schön, who pioneered the notion of the reflective practitioner: “Chaque analyse donne donc une clé de lecture et de compréhension du moment pédagogique. Écrite en réalisant des allers et retours entre la situation et la théorie, elle offre un prolongement qui permet notamment de passer du singulier au général, et de développer une pensée réflexive (Schön, 1983)” (Pasquini, 2013, p. 9). Pasquini’s reference to the moment pédagogique, or teachable moment, reinforces the temporal nature of reflection on teaching. Each moment described is situated in a time and context. Each interpretation is also situated in a time and context. By referring back from practice to theory, it is possible to connect the two and to make valid inferences about one’s practice in general, by working from a specific example. Thus, by reflecting on particular learning activities in my narrative, I will be able to generalize on my practice.

McEwan also advocates reflection on practice, so that theory does not become too disengaged from it: “a story that represents both an attempt to explore the place of narrative in understanding teaching and an effort to bridge the gap that has grown between the practice of teaching and the practice of studying teaching” (McEwan, 1995, p. 166). He further insists on the importance of referencing practice in developing theory: “any effort to give a description of how teachers think must be rooted in the various practices in which teachers are engaged, rather than in some capacity that transcends teachers’ actions and aims to abstract it from them” (McEwan, 1995, p. 172).
This is similarly articulated by Clandinin and Connelly, but with a further layer to context being the specific reference to relationships contributing to the context:

It is often believed that narrative research is the collection and subsequent analysis and interpretation of stories. We wanted to convey a sense of wholeness of narrative inquiry from the living to the telling and to the retelling of experience in narrative research texts. Collecting and analyzing stories is only part of narrative inquiry. It is in the living and telling of experience that we locate what represents our sense of our experience as narrative inquirers. Although we discussed several issues, on reflection, we understand that relationship is at the heart of thinking narratively. Relationship is key to what it is that narrative inquirers do. Narrative inquiry is the study of experience, and experience, as John Dewey taught, is a matter of people in relation contextually and temporally (Clandinin & Connelly, 2000, p. 189).

Lyons and LaBoskey summarize the purpose of narrative inquiry being to document, reflect, and be aware of one’s knowledge. Through narrative inquiry, the practitioner not only acts, observes and documents, but also, through narrative inquiry, reflects, learns and grows:

As inquiry, narrative involved an intentional reflective process, the actions of a group of learners interrogating their learning, construction and telling the story of its meaning, and predicting how this knowledge might be used in the future. We came to see that narrative was fundamentally an activity of mind, a way of gathering up knowledge of practice, simply, a way of knowing, and of knowing that one knew (Lyons & LaBoskey, 2002, p. 2-3).

Narrative inquiry is ultimately an effective tool for cognition and metacognition around the teaching experience. It is a methodology suitable for this study in that it allows me to observe my practice, tell about it in my narrative, analyze it and learn from it. Examination of the narrative of my teaching practice will allow me to document, reflect on and improve my practice. This is essential to professional development. It is only by becoming aware of my own actions within my practice that I will be able to consciously improve it. Litalien, Moore and Sabatier refer to this role of reflection in professional development: “L’analyse des activités de classe met aussi en évidence un savoir-faire qui, par delà la planification de l’enseignant de son action dans la salle de classe, relève d’ajustements en situation” (Litalien, Moore, Sabatier, 2012). In the following section, I will consider the application of narrative inquiry to this study.
3.3. Application of Narrative Inquiry to This Study

Narrative inquiry is the research methodology I have selected for this study. Creating a narrative of my experience allows me to look at my day-to-day practice, interactions and observations in an anecdotal, reflective and meaningful way. Schaafsma and Vinz identify the value of narrative inquiry: “Narrative inquiry is particularly useful for examining the day-to-day work of teaching and learning and in gaining multiple perspectives on the way we and others experience education” (Schaafsma & Vinz, 2011, p. 12). Among other questions with respect to the choice of narrative inquiry as a research method, they ask: “What about narrative is compelling to you?” (Schaafsma & Vinz, 2011, p. 33). Narrative is compelling because it allows me to examine my own story in a way that acknowledges the value of my experience, but pushes me to look at it more closely and critically than I would otherwise. The closer, more critical look makes me more conscious of my teaching practice and fosters growth and improvement. I value the development of multiliteracies in my students. If nature-based learning, through its inherently interdisciplinary approach, facilitates the development of multiliteracies, then my narrative may help me discover how, which will contribute to my professional growth and improvement in my practice, through my increased awareness. “Narrative inquiry helps us to see more carefully and completely” (Schaafsma & Vinz, 2011, p. 1). Narrative inquiry ties the theoretical to the practical. It allows me to make connections between what I have read and learned from existing literature, and what I have lived in my day-to-day practice. Shaafsma and Vinz pinpoint that “narratives have particular qualities and power that are useful for research projects in which the researcher wants to understand the details of why, what, and how something happens” (Schaafsma & Vinz, 2011, p. 51). I would suggest that the particular qualities and power of narrative that are useful for research projects lie in the familiarity to the researcher of the actions, interactions and observations described in the narrative, and in the direct application and pertinence of the research to the researcher’s work, in this case, mine. Through researching my own practice, I am ideally situated to direct the
learning activities, observe and document them and to apply what I learn back to my practice.

Narrative inquiry is not a method without risks. An obvious challenge is in the subjective nature of narrative: “All narrators are ultimately unreliable since perspective is always limited, but the task for a narrator/speaker includes convincing readers of reliability, sincerity, commitment to fairness, and honesty” (Schaafsma & Vinz, 2011, p. 106). Validity and the communication of validity are therefore important factors to consider. Furthermore, the objective documentation and retelling of detail must be as consistent and unbiased as possible: “When a researcher is in the field and a story is told or an event is narrated, we may well wonder about the basis of the story. Did the events described actually happen? How do we know?” (Clandinin & Connelly, 2000, p. 179). It is important, therefore, to relate back to the events in the narrative simply, factually and consistently in its accompanying reflection and discussion. In my narrative, I will document my observations carefully and discuss them truthfully, recognizing that I am limited by my own perceptions.

Because my study is a reflection on my own narrative, it focuses on my practice and its effectiveness. I refer to my students without identifying them, and focus particularly on my actions as a teacher. Ethical conduct is essential in teaching, and I am conducting this research ethically, however, I do not require permission from the Simon Fraser University Research Ethics Board for this study, as it is based on self-observation and analysis of my teaching practice.

While it is important to be aware of the need for integrity in the narrative, there are compelling reasons for choosing this method. First and foremost, the researcher must consider the research question and purpose of the study: “...it is important to ask, ‘What is at stake in choosing to work in this way?’...What do you hope your narrative work will accomplish? What do you want to learn and understand and why might your field of study find your understanding useful? How might narrative open the spaces for interrogating the relationship between the life lived and the life told?” (Schaafsma & Vinz, 2011, p. 28). The questions that Schaafsma and Vinz pose are essential. The researcher must recognize the risk in the method (“what is at stake”) but be guided by
the research objectives. The stories narrated (“the life told”) must relate to the reality experienced (“the life lived”). If the stories are based accurately and faithfully on lived experience, it follows that the narrative will be a valid source of data, and that the risk will be conscientiously reduced. In my narrative, I shall strive to be faithful to my lived teaching experience and accurate in the retelling of the details.

Ultimately, it is the combination of experience, its narrative and subsequent interpretation that gives value to the research and makes it informative: “What we can construct, if we keep notes and survive, are hindsight accounts of the connectedness of things that seem to have happened: pieced-together patternings, after the fact...It calls for showing how particular events and unique occasions, an encounter here, a development there, can be woven together with a variety of facts and a battery of interpretations to produce a sense of how things go, have been going, and are likely to go’ (Clandinin & Connelly, 2000, pp. 2-3)”. In my research, I will try to identify patternings through my hindsight accounts, and interpret what I observe so that I can learn from my practice and be informed by it for the future. Clandinin and Connelly refer to the growth that can occur through the process of narrative inquiry and reflection: “change in the world, change in the inquiry, change in the inquirer, change in the point of view, change in the outcomes” (Clandinin & Connelly, 2000, pp. 2-3). This research is shaping me. The acts of observing more intently, documenting significant teaching moments and analyzing them for connections to my research question are all pushing me to be more conscious of my practice and to learn from it.

If narrative is the telling of a story, the narrative in the case of this research is about my Grade 6 Late French Immersion class in their first term of French Immersion. The story is of my students developing multiliteracies while immersed in French, through the interdisciplinary context of nature-based studies. It is this story that forms the base for my research. This narrative is the data that I will analyze: “Stories are often the beginning of the inquiry. What can be learned from narrating or reading them? Research grows out of the telling, questioning, and rendering of narratives” (Schaafsma & Vinz, 2011, p. 3). Why narrative? McEwan, in discussing developments in the philosophical conversation about teaching, identifies the purpose succinctly as: “finding better ways to teach” (McEwan, 1995, p. 182). Ultimately, this is what drives me. The constant revising
and distilling of method and strategies has led me to view my teaching career and each
day in it as a narrative on which to reflect and from which to learn and to improve my
practice, as expressed by McEwan: “in addition to coming to understand teaching as a
narrative, we must come to practice it as informed by narrative and so come to see our
own pedagogic values and purposes as contingent and revisable” (McEwan, 1995, p.
180).

Pasquini refers to the stories in the narrative of one’s practice as “une forme de
miroir de sa pratique” (Pasquini, 2013, p. 3) and to the learning that comes from
reflecting on that practice as: “un savoir élaboré par l’enseignant à partir des
expériences qu’il a vécues” (Pasquini, 2013, p. 3). In this research, my narrative serves
as a mirror in which I can see myself as a practitioner. I can look more closely at my
teaching practice and learn from my experience. Pasquini clarifies the role of narrative
stories as being to provide an exemplar which is not definitive but which is
representative of particular moments in a particular practice in which the teacher is
engaged and from which others may also learn:

Ces récits peuvent être considérés comme ‘récits exemplaires’, non pas
parce qu’ils montrent des exemples à suivre, mais parce qu’ils
représentent des exemples d’une pratique. L’exemplarité dont il est
question ici renvoie à la posture d’un enseignant engagé dans sa
pratique, où il a puisé des événements considérés comme significatifs et
susceptibles d’inspirer celles et ceux qui veulent en connaître les enjeux
véritables (Pasquini, 2013, p. 6).

As such, the narrative provides a way for the practitioner to learn and also to
share with others, who may also find something to learn in the events described.

The excerpts from my daybook that inform my narrative represent my practice
and pertain to the specific aspect of nature-based learning, so that I may examine them
for connections to the development of multiliteracies. My narrative will help me to learn
and grow. As Pasquini puts it: “Tout enseignant peut apprendre d’un récit, qu’il soit en
formation, fraîchement diplômé ou très expérimenté” (Pasquini, 2013, p. 6).
Furthermore, the sharing of one’s narrative, and the reflection and learning that come
from it may also inspire others to reflect on their own stories: “Je parle en effet de mon
expérience, de mon rapport avec le ‘monde vécu’ de la pratique... Je raconte un
quotidien, non pas parce qu’il est à imiter, mais parce qu’il renvoie tout professionnel au
sien” (Pasquini, 2013, p. 8). Lyons and LaBoskey take the function of sharing in
narrative practices one step further, by acknowledging the development that can result
from it: “narrative practices not only provide opportunities to share what teachers,
prospective teachers, and teacher educators know; they also furnish the means and the
incentives for changing and developing that knowledge” (Lyons & LaBoskey, 2002, p.
191). Schaafsma and Vinz also describe the power of narrative to both represent
learning and to foster it: “the sources of narrative…construct and represent meaning in
the daily lives of educators. Narrative has the potential to represent complexities and
ways of acknowledging the influence of experience and culture on human learning and
knowledge construction” (Schaafsma & Vinz, 2011, p. 2). My narrative represents the
complexities around the development of multiliteracies through the interdisciplinary
context of nature-based learning in Grade 6 Late French Immersion. It represents my
observations of my students’ learning, which serves to help me learn from my practice. It
may inspire others to consider creating their own narrative, or it may have value on its
own for others to learn from. It is furnishing me with the means and the incentives for
changing and developing my knowledge, as articulated by Lyons and LaBoskey, above.

There is benefit to be derived not only from reflecting on one’s narrative, but also
from the act of writing it: “Ces fragments de vie professionnelle rendent compte d’un
premier état du savoir auquel s’ajoute un savoir second, fruit de la mise en mots de
l’expérience et du questionnement réflexif permis par le geste d’écriture” (Pasquini,
2013, p. 3). Thus, the writing of one’s story is worthwhile in multiple ways. Narrative has
value as a source of data and as a method: “narrative is both the phenomenon and the
method of the social sciences” (Clandinin & Connelly, 2000, p. 18). Narrative inquiry is
inherently useful, in that it fosters reflection, as referred to by Lyons and LaBoskey: “the
value of narrative practice in the fostering of reflection” (Lyons & LaBoskey, 2002, p.
192), and leads to improvement in practice. Reflection encompasses the many facets of
practice, including relationships, purpose, and objectives: “key areas that researchers
must learn to work through in their fieldwork—negotiating relationships, negotiating
purposes, negotiating transitions, and negotiating ways to be useful” (Clandinin &
Connelly, 2000, p. 63). The acts of narrative inquiry and reflection are clearly useful:
“The use of narrative in educational research is one way of investigating theoretical and
practical problems and illuminating human actions...From various paradigms and traditions, narrative researchers illuminate the complexities of examining and understanding human experience” (Schaafsma & Vinz, 2011, p. 30). The essential reason for choosing narrative inquiry as the method for this study is articulated in Lyons and LaBoskey:

Narrative practices are intentional, reflective human actions, socially and contextually situated, in which teachers...interrogate their teaching practices to construct the meaning and interpretation of some compelling or puzzling aspect of teaching and learning through the production of narratives that lead to understanding, changed practices, and new hypotheses (Lyons & LaBoskey, 2002, p. 21).

By constructing and reflecting on the narrative of my practice in the first term of Late French Immersion as it pertains to interdisciplinary nature-based teaching, I hope to better identify and understand its connection to the development of emerging multiple literacies and ultimately of multiliteracies. Such better understanding will provide an opportunity to improve my effectiveness in my teaching practice.

3.4. Data and Analysis in This Study

I will construct a narrative based on my observations and on excerpts from my daybook, selected for their pertinence to the development of French and science literacies through an interdisciplinary approach to nature-based teaching in the first term of my Grade 6 Late French Immersion class in the 2013-14 school year. The narrative will be presented in chronological order, to reflect the development over the term, of learners’ literacies through the interdisciplinary approach to nature-based teaching. My observations and comments will be interwoven through the narrative. The narrative will comprise the first part of Chapter 4, presented in section 4.1, Narrative of the first term: Reflections on teaching a Grade 6 Late French Immersion class. This narrative constitutes the data for this study. The second part of Chapter 4, presented in section 4.2, Analysis of the narrative, will provide an analysis of the findings of the narrative. This will be a thematic analysis of my professional practice, with reference to the themes of nature-based learning, French and science literacies, and reflective practice, discussed in Chapters 1 and 2. Finally, in Chapter 5, Conclusion, I will present a
discussion and conclusions to summarize what I have learned in this analysis of my teaching practice.

My narrative will be a detailed look at my teaching practice, telling the story of the term, with a focus on interdisciplinary nature-based teaching and the development of multiple emerging literacies in my students. I will describe what I observe of my teaching and my students’ learning. I will pay attention to the context and to the community we form. As Schaafsma and Vinz note: “Researchers in education who gravitate toward narrative inquiry are inherently interested in details, complexities, contexts, and stories of human experiences of learning and teaching” (Schaafsma & Vinz, 2011, p. 1). Through this detailed observation and analysis, I hope to gain insights on teaching and learning that will inform my practice, and perhaps be of interest to other people interested in such aspects of education as Late French Immersion, nature-based teaching, interdisciplinary teaching, emerging multiple literacies, and multiliteracies supported by the articulation of language and content-based teaching. The very exercise of documenting my practice, within this particular context, in a narrative form, will heighten my awareness of my practice and its effect.

In chapter 4, which follows, I present my narrative. It is written from excerpts from daybook selected for their connection to nature-based learning. Through creating this narrative, from selecting the moments I would tell about, to expressing them within my narrative, I have generated the data for this research, and have learned about my practice in the process. The subsequent analysis of my narrative is a more explicit articulation of what I have identified and observed through the narrative.
Chapter 4.

Findings

The first term is a particularly exciting time frame, as students are somewhat mature, being in an upper intermediate grade, and yet are new to the language they are now immersed in. They have previously had only minimal exposure to French through Grade 5 Core French, and are at this point absorbing and using as much of the new language as they can. Through using French in an interdisciplinary context, the students are motivated, and, with scaffolding and gradual release to independence, can experience some degree of success, even at this very early stage. I have selected excerpts from my daybook, to allow for a look at the development of nature-based studies and multiple literacies practices in a second language setting. A sample page from my daybook and an accompanying detailed lesson plan can be found in Appendices N and O.

The nature-based themes I have chosen for study centre, in particular, around trees, as there are several we can observe in the schoolyard and because we will go to Outdoor School, which is surrounded by forest, and around animals, as they are inherently interesting to students and because there are many interesting ways to learn about them. We are able to develop vocabulary and understanding through a variety of activities and disciplines, with French interwoven into the curricula. The students seem to connect personally with what they learn, as nature is important to them.

In section 4.1 is a narrative and anecdotal teaching notes based on excerpts from my daybook for my Grade 6 Late French Immersion class, which illustrate various nature-based learning activities and their relationship to the development of their literacies in French. The excerpts are preceded by the date and day count within the school year, to provide a frame of reference. A summary of nature-based activities,
organized by day of the term and date, can be found in Appendix A. The activities described take place in French. This narrative illustrates my experience teaching a Grade 6 Late French Immersion class in the first term of the school year, using an interdisciplinary, multimodal, nature-based approach.

In section 4.2 is an analysis of the narrative in section 4.1. It is comprised of an overview followed by a discussion of five pertinent themes found in the narrative, specifically oral language (4.2.1), creating community (4.2.2), multimodal, multisensory learning (4.2.3), scaffolding and gradual release (4.2.4), and ultimately multiliteracies (4.2.5). Each of these is a significant aspect of teaching evident in the narrative, which will help me better understand and learn from my own practice.

4.1. Narrative of the First Term: Reflections on Teaching a Grade 6 Late French Immersion Class

The school year begins on September 3, with beautiful, sunny weather. The Grade 6 students are a little nervous, as this is the beginning of their Late French Immersion experience, but they are curious and excited. They check each other out and are careful to pay attention and to keep up with each other. School is just an hour and forty minutes this first day, so my focus is on simple introductory vocabulary and expressions, to orient the students. The students have previously had one year of Core French, which is an exposure program, but the depth of the program varies from school to school, so we start with the basics, to ensure a solid foundation.

2013-09-03 – day 1

This is the very beginning of Late French Immersion. The class runs from 8:50 am to 10:30 am and is built around the basic vocabulary of school and classroom routines, the alphabet and songs.

My goal for the end of the first term is for the students to have developed multiliteracies sufficiently that they are able to make an oral presentation to the class, using a visual support, such as a poster or PowerPoint presentation, containing both images and text. This will involve students showing their learning in both the content area, and in the language. Therefore, right at the beginning of this first term, I aim to use
a variety of resources during literacy activities within the classroom in connection with the language and science curricula, to create opportunities for developing multiple literacy practices in a nature-based approach to these curricula. In doing so, at the end of the first term, my students should be able to a) locate and retrieve information in print and nature-based texts, and b) communicate information about nature, in French, both in writing, and orally, speaking either from memory or from notes, depending on their comfort level. They should also be able to listen to each other’s presentations and understand the main ideas, which shows their developing ability to be critical users, listeners and readers, when comprehending these texts. This goal can be found in Appendix B. This task will provide some evidence of the degree of emerging literacy development in Science and Language in particular, but will also show student literacy in the visual arts and social skills.

By the third day of school, everyone is much more comfortable, and friendships are forming. The students know how to ask permission to leave the room to go to the cloakroom, the washroom and the office. We sing simple songs every day and are developing a sense of community. There is an attitude of cooperation and of openness to a new experience and a new language. The focus is on vocabulary acquisition and oral skills in connection with nature. We practice the sounds of the letters of the alphabet, especially the vowel sounds, and manipulate new vocabulary by colouring, copying and categorizing it. Thematic word search puzzles are popular with the students, and they enjoy working on them together. They quickly learn the words as they search for them and colour them with their highlighter pens. They use highlighters for many different learning activities. This simple activity seems to increase their confidence and sense of control over their work. Reorganizing the vocabulary into categories gives the students a way to think about the words and make judgements, even with their minimal French skills.

2013-09-05 – day 3

This is the first time we do a nature-related activity. The students use their highlighter pens to complete a word search of animals and insects, then reorganize the names of the animals and insects by their habitats, and copy and illustrate them under the headings l’eau, l’air and la terre. The template for this activity can be found in Appendix C.
After our first weekend, it is helpful to review and re-orient the students, as they have been away from French for two days. By the afternoon, they have recovered and made new progress. Our afternoon activity combines language, science, art and movement, while further developing our sense of community. This multimodal cross-curricular approach appeals to the students, as there is enough variety to allow for greater connection with their strengths and interests. Furthermore, each discipline enhances the understanding of the others and reinforces what is being learned. The students have a sense of competence in classifying vocabulary as *similaire* and *différent*, and they really enjoy going outside to observe and draw what they see around them in the school's small forest. Together, the students and I build their awareness of the science concept of biodiversity and classification. We brainstorm together and co-construct the vocabulary they will need. They use their sketchpads to draw and label the trees. Their language skills increase, as evident in their labelled diagrams and their ability to answer questions in class. I coach them to observe the trees, their shape, proportion and texture, so their artwork is thoughtful and detailed. Being outside together, they develop a greater sense of themselves as a group. They begin together in the small clearing, so I can take a group photograph before they move off in smaller groups to find the tree they want to draw. They identify with each other as a group, develop social skills through their interactions, and build their sense of community. They are calm, focussed and engaged in their task, and cooperative with each other in identifying and sharing ideas for what they will draw. It is a very pleasant afternoon, in which their literacies in the domains of science, second language, art and social literacy are emerging.

2013-09-09 – day 5

The students diagram the parts of a deciduous and a coniferous tree, noting which parts are common to both, and which are not. In this way, they identify how they are *similaires* and *différents*. This is both a written and oral activity, using a drawing as a reference, rather than English. The students use a visual dictionary and a list of tree parts to guide their work. The student handout for this activity can be found in Appendix D. Through these multimodal activities, the students manipulate the vocabulary and quickly become familiar with the parts of a tree, using French to make meaning.

We then go outside to the back of the school, where there is a stand of trees running alongside the playing field. It is affectionately known as the
forest. The students take their sketchbooks, find a tree they like, and sketch it. Their instructions are to use their drawing pencils to experiment with shading, depth and texture. They are completely absorbed in their task and although there are 29 of them, the forest is quiet. There is room for them to spread out, but they are all close enough for me to circulate and check on how they are doing. There is a feeling of calm and focus. Their sketches show that they have observed carefully and paid attention to detail.

This is a wonderful activity for the students to develop a sense of community as a newly formed class, and a sense of place in nature at their new school. We are able to talk about the forest in simple sentences, such as *Qu’est-ce c’est? C’est une souche. Où sommes-nous? Dans la forêt. On marche sur le sentier. Elle dessine la fougère.* The students are able to add the words *la forêt, le sentier, la souche, la bûche, la fougère, la mousse, le champignon, la boue, l’étang* to the vocabulary they use to talk about nature. We also reinforce their vocabulary for colours, which they learned and practiced last week on days 2, 3 and 4. This combination of nature, science, art and conversation contributes to the development of emerging multiple literacies.

By Wednesday of the second week, the students are able to locate and retrieve information from the diagrams in their science books to study classification. They are able to develop their understanding of the concept by focusing on key words and the visuals in the book. Their understanding of the science helps their understanding of the language, and vice versa. Their study of French is integrated into their study of science.

2013-09-11 – day 7

Using their science book, *La diversité de la vie*, (Chrétien & Campbell, 2000), the students reproduce the classification tree *La classification des arbres*, from pages 10 and 11, onto large sheets of paper. They subsequently use their chart to identify 3 different leaves from the photographs on page 12. The students are able to successfully complete both activities. Their understanding of the science concepts and of the French is scaffolded by the photos and charts in their science book. This contributes to their development of multiliteracies.

They follow this activity with sketching leaves found on the ground in the schoolyard that they had collected at recess and brought indoors. They are focused on shading, depth and texture. This activity would be even more effective if we did the drawing outdoors, as the students would be working directly in nature to increase their awareness of nature as they
develop multiliteracies through art and language in context, thereby also increasing their sense of stewardship for nature.

By the fourteenth day of school, the students are able to learn the traditional song "L’arbre est dans ses feuilles". The lyrics to this song can be found in Appendix E. This is a cumulative song that repeats the parts of a tree and has a catchy tune and bluesy finish. The students pick it up very quickly. We sing it standing up, and do actions to mimic the parts of the tree as we name them, which contributes to the students’ understanding, engagement and memory.

2013-09-20 – day 14

I teach the students to sing “L’arbre est dans ses feuilles”, a traditional song, easily searched on the internet, that goes through the parts of a tree, from the tree and its leaves to a branch, and so on, to the love in the heart of the bird in the egg in the nest in the hole in the knot in the branch in the tree full of leaves. This song is effective because of its rhythm, repetition, actions and melody. The students easily learn the parts of the tree in the song. They enjoy it and we sing it often during the rest of the school year. The lyrics to this traditional song can be found in Appendix E.

Because the students now know the names of many animals, it is time to learn more details about animals. Using the strategies of brainstorming, webbing and categorizing, which are typical of those suggested in the British Columbia Ministry of Education Instructional Resource Package for Late French Immersion (http://www.bced.gov.bc.ca/irp/pdfs/english_language_arts/f_1999f_immer67.pdf), the students are able to sort the parts by what kind of animal they would belong to, the habitat the animal would be found in; la jungle, la forêt, la ferme, l’eau, la savane, etc., its way of moving; ramper, nager, marcher, voler, sauter, and its body covering; la peau, la fourrure, les poils, les écailles, les plumes. This builds further vocabulary awareness, within a context. The students simultaneously develop their understanding of the science concept of biodiversity and their ability to communicate in French, as these are interwoven in the activity. Their increased vocabulary allows them to have a more detailed understanding and conversation about animals.

2013-09-23 – day 15
The students learn the body parts of animals, using a dictionary and a visual dictionary, and classify them by where the animal might live, which has them practice new vocabulary while thinking about habitats. We then categorize the animals in different ways, by habitat, way of moving, number of legs and kind of covering (skin, feathers, hair, fur or scales). This activity allows for a varied conversation using a sentence model but replacing the pertinent detail for each animal considered.

By day 16, we are a week from our three-day trip to Outdoor School, L'École Verte at the North Vancouver School District’s Cheakamus Centre. The planning for this learning adventure began in July, when I drove up to the site to work with its co-director to plan our itinerary. Together, we identified suitable activities for an experiential approach to learning French in the context of nature, while also learning about nature and developing a sense of stewardship for nature. With the development of science, nature, art, language, physical and social literacies in mind, we built our timetable. We looked at ways the students can learn in, about and for nature, in French. I subsequently translated some of the existing Outdoor School activity materials into French, so they would be ready for us to use during our stay there. I learned that the combination of nature-based learning and Late French Immersion has not been done in quite this way, which surprised me, because it seemed like such a natural tie-in, but I was excited to try this experiential learning combination. I simplified and translated the job cards, scavenger hunts, predator and prey game, and the web of connectivity cards. Once the co-director and I had decided on our itinerary, I wrote it simply, in French, so I could give it to my students, in a green duo-tang, when it was time to prepare for L'École Verte. At the start of the school year, I completed the paperwork and protocols for the trip, and communicated the plans to parents in an evening meeting.

Together, the students and I spend the days leading up to our trip building student familiarity with vocabulary and concepts pertinent to nature and Outdoor School, through brainstorming, categorizing, scripted conversation, story time and written language arts activities culminating in an original story to read aloud to the class. This story demonstrates competences the students have acquired, which are aligned with the Prescribed Learning Outcomes as described in the British Columbia Ministry of Education Instructional Resource Package for Late French Immersion), such as “créer diverses communications personnelles et informatives, comme des histoires”
The competencies described throughout this document are evident in the many variations of communicative activities that are typical of the Late French Immersion program. This trip is a way to provide enriched communicative activities and opportunities for the development of multiple literacies through interdisciplinary learning in the context of nature.

We are all excited about our trip. A few of the students are a little apprehensive, but the mood is very positive.

2013-09-24 – day 16

The students brainstorm animals that they anticipate seeing next week at Outdoor School, L’École Verte. This involves practicing animal vocabulary, and predicting, by thinking about habitat.

2013-09-25 – day 17

The students make an alphabet des animaux trying to name an animal for every letter of the alphabet. It is one more way to practice animal names, in an entertaining and somewhat challenging way. Students team up with each other and negotiate animals for different letters, asking: “Quel animal as-tu pour la lettre K?” for example. Again, the students are able to use a language model and adapt it for their need, with minimal vocabulary changes.

The students practice insect names, by making a chart of insects that fly and insects that don’t fly. The students practice the vocabulary by sorting it into categories. The template of the chart for this activity can be found in Appendix F.

2013-09-27 – day 19

I read to the class from a simple book from our library Drôle d’animaux (Daignault, 2001). It describes an animal that is composed of parts of different animals.

We identify the language pattern for the description together and I write it on the board. I

*Voici mon drôle de __________.* Il/elle a les pattes d’un/une __________, le corps d’un/une __________, la queue d’un/une __________ et la tête d’un/une __________. Il/elle est
The students and I then complete a sample animal description together, and I write it on the board.

Voici mon drôle d’ours. Il a les pattes d’un écureuil, le corps d’un saumon, la queue d’une mouffette et la tête d’un ours. Il est brun, noir, blanc, argent et rose. Il est bizarre, n’est-ce pas?

As we work together, I explain the language elements of masculine and feminine articles, pronouns and colours simply. The students help to identify the language elements. This co-construction helps to guide the students and they are gradually released to invent and describe their own animal, imitating the language pattern modeled. They enjoy this, and smile at their funny animals. Some of the students start with the picture then describe it, while others start with the description, then draw it. I give them the choice to do it either way. When they have finished, they tell the class about their animal, aloud. Some students are able to do this from memory but the majority read it while showing their picture. The rubric used for evaluation of the written composition can be found in Appendix G. The criteria for the rubric were generated in a class brainstorming session.

2013-09-30 – day 20

Tomorrow we leave for Outdoor School. We brainstorm together the things we will pack in our bags, and prepare our green duo-tangs, our cahier vert de L’École Verte, with our itinerary for the three days at North Vancouver’s Outdoor School at Cheakamus Centre. A list the class and I generated together of what to pack for Outdoor School can be found in Appendix H.

2013-10-01, 02, 03 – days 21, 22, 23:

Learning in nature at Outdoor School, at North Vancouver’s Cheakamus Centre: The itinerary for our three days at Outdoor School can be found in appendix I.

Our class travels to Cheakamus Centre by tour bus. Over the next three days we spend time learning in, about and for nature. We walk in the forest, beside the river, over the meadow and around the farm. We observe birds, squirrels, farm animals and especially, spawning salmon. The salmon have come back to spawn in the streams and estuaries that feed the Cheakamus river, for which the centre is named. The salmon eggs are visible under the water of the shallow streams, where they look like little pink pills lying on the creek-bed. We see hundreds of salmon. They are in the water beside the pathways everywhere we walk. We observe the many plants and shades of green in the forest. The students
make water colour paintings of the salmon, and pastel pictures of plants that share a habitat. They work in groups to create a web of wonder, in which they each represent an organism or element, and explore how they are interconnected. (The vocabulary for this activity can be found in Appendix J.) The students do a night walk to practice heightening their sensory awareness. They listen to the sounds, smell the smells and feel the air on their faces. They go on a Nature Scavenger Hunt in teams and photograph their team with their findings using iPads borrowed from school. They show off their photos to the other groups and tell what the items are. (The items on the Nature Scavenger Hunt can be found in Appendix K.) They cross a stream on a steel cable and play team-building challenge games. In the evening, they sing and perform simple skits in the common room. We share our meals in the dining hall, looking out at the forest that surrounds us, and learn the names of the food we eat, and simple phrases suitable for the dinner table. The students are tuned in to the French they hear from me, the high school counsellors, who are also French Immersion students, and the other teacher with us. The students respond to us in simple phrases, with help from us, (their leaders and teachers), when they need it. I hear the students insert French words into their private conversations with each other. The students sing along with me as we walk from the conference centre to the dining hall, through the farm and on our forest walks. They are engaged and alert. Friendships are strengthened. We return with a heightened sense of place, community and accomplishment.

Our rich experience at Outdoor School provides many opportunities for subsequent learning that builds on the emerging multiple literacies developed at Outdoor School. We are able to work together to follow up on it once we are back at school, by brainstorming, writing, illustrating and talking about our experience. In looking back on this experience, there is little or nothing that I would change. It was one of the most positive and powerful teaching experiences I have had, and was worth every minute of the extensive preparation and time away from home.

2013-10-04 – day 24

Back at school, we talk about L’École Verte and the wonderful time we had. We brainstorm the food we ate and look at photos of our experience. The students make a comic strip, or BD, of themselves at Outdoor School, showing themselves in context in five different settings, doing five different activities.

The traditional song about a tree, “L’arbre est dans ses feuilles”, found in Appendix E, has become our song. The students know it well and sing it with confidence and conviction. It is a fun song to sing and it reinforces our awareness of trees, gained
by spending time in nature observing trees and representing them in different ways. The link between learning in, about and for nature with the development of emerging multiple literacies is evident. The students are empowered and enjoying themselves. The students are able to name the parts of a tree, to distinguish the similarities and differences between deciduous and coniferous trees, to sing about trees, draw them, paint them, name other plants and animals sustained by trees, to walk around and observe them and to classify them in a chart, while working cooperatively with each other. They are able to negotiate simple transactions with each other, using phrases such as Est-ce que je peux emprunter ton crayon rouge? Est-ce que tu sais la réponse? and Peux-tu m’aider? As I reflect on this, I am more than ever intrigued at the learning connections being made so soon in the Late French Immersion program. I notice even more engagement since their intensive three days together at Outdoor School, learning about nature in French.

2013-10-11 – day 29

We perform “L’arbre est dans ses feuilles”, found in Appendix E, for the whole school, at the Thanksgiving assembly.

The students are now able to hold conversations with each other, by working in context, using known vocabulary, supported by brainstorming of what they know, augmented by related new vocabulary, and using a planned structure with attainable objectives. It is fun to watch their confidence and enthusiasm as they play the guessing game Qui suis-je? They are engaged and enjoying themselves, but are also synthesizing and applying many of the language structures they know and much of their understanding of biodiversity, as it applies to animals, in their game.

2013-10-15 – day 30

We brainstorm questions for identifying an animal, and the students make notes to support them in a game of Qui suis-je? They must determine which animal their partner has assigned to them, by asking questions such as Est-ce que j’ai quatre pattes, Est-ce que j’ai des plumes?, Est-ce que j’ai des écailles / de la fourrure / des poils? Est-ce que je rampe / vole / marche / nage? Est-ce que j’ai un bec / une queue / une crinière? There are many possibilities for variations, using a basic pattern. The level of student engagement is high and their use of French is semi-scripted, but flexible. This is a very effective lesson, in which the students have co-constructed the questions they will need to ask, in order to be successful.
They are able to communicate with their peers without further teacher support. They have been scaffolded, then released to do the activity independently. The students are highly animated and engaged. It is easy to see their pride in being able to play this guessing game with success, using French effectively.

Increasingly, the students are able to comprehend and use technical language, as it applies to their learning. I realize that by using appropriate language in context, I model it for the students who are then able to use it appropriately themselves. For example, by talking about the tons, perspective and contours of their artwork, and giving examples on the board, the students are naturally able to use these words themselves. The criteria for their art activity of making a nature scene in pastels, for example, make them think about their technique, and stretch their vocabulary.

2013-10-16 – day 31

The students make a nature scene with pastels. We first discuss the criteria, as a class. They must use graded tones of a colour, show depth and perspective, and highlight their work with contour lines. We walk around the schoolyard and observe the plant life, for inspiration.

The students are able to read for information by focusing on key words and by using contextual clues. There is no requirement to follow a story line when reading non-fiction. Finding information in a text boosts their confidence and increases their knowledge. The dual objectives of language development and knowledge acquisition are interwoven, and the students' level of engagement seems to increase.

2013-10-18 – day 33

The students practice reading in a simple book for information about insects, and answer questions that require them to sort, illustrate and identify the appropriate characteristics (Davies, 2010).

Nature is all around us, even around the perimeter of the staff parking lot! It is worth taking the time to observe the beauty in ordinary things and places, before documenting them in our artwork.

2013-10-21 – day 34
We walk around the school grounds in the glorious fall sunshine, to observe the vibrant colours of the leaves. The students illustrate the colours they have seen, with pastels.

It is clear that by now, the end of October, and just over half way through the first term, the students have a sense of connection to the French language. They are able to communicate simply, when scaffolded and working in a context, and to have fun with it. Increasingly, they can take what they know and apply it, if the parameters are clear and guidance is provided.

2013-10-28 – day 38

We make an inventory of the songs we sing. Our list totals 21 songs! Singing is a great way to have fun, learn vocabulary and develop a sense of phrasing. Students have even quoted from their songs, on occasion, to ask me to speak more slowly plus lentement or to ask for something to go faster plus vite or to tell what they like j’aime. It is interesting to realize that part of the way the students have learned to communicate in other contexts is by using vocabulary and expressions they have learned in songs, and reapplying it to other contexts. L’arbre est dans ses feuilles, for example, is easily adapted to Le crayon est dans la boîte, or Mon livre est dans mon sac à dos. J’aime les pommes et les bananes is easily adapted to a writing activity based on the prompt J’aime______________.

The students write a guided composition about an animal they like, with an introductory sentence: J’aime le/la__________, followed by three details and a conclusion. This activity focuses on structured paragraph writing, with a focus on having an introduction, development and conclusion.

2013-10-29 – day 39

The students write a guided composition as part of the School-Wide Write. The topic builds on the topic practiced yesterday, but this time they write about a season they like: J’aime ____________ parce que ___________. They are permitted to use dictionaries or smart phone apps to look up words they need. They are to include a minimum of three details they like about the season they have chosen. The time they require varies from 20 minutes to an hour, but by the time they have finished, they have produced a piece of writing they are proud of, regardless of errors. The emphasis is on communication. The rubric used for evaluation, generated in a class brainstorming session, can be found in Appendix L.

All of the students are familiar with the Canadian environmentalist, David Suzuki. They are proud to be able to read the French translation of an article he wrote about
trees, and to understand the relevant and specific information contained in it. The article is scientific, informative and factual. The students feel that they are learning something worthwhile that supercedes language. In reading this relevant scientific article, they further develop their literacies in science, nature and French language.

2013-11-06 – day 44

The students take their highlighters to a photocopy of a page from the French version of a David Suzuki book on trees (Suzuki, 1986). They highlight every word they know or can guess at, and are amazed that most of the words are coloured, and a small minority remain black on white. They follow this up with comprehension questions that require them to search for key words in context. This is an effective reading comprehension activity that has the students search for information without being intimidated by unknown words.

The students love playing the guessing game *Qui suis-je?* with the class. They practice known language structures, but use them with a sense of purpose.

2013-11-12 – day 47

The students play an adapted version of *Qui suis-je?* by taking turns having the class guess which animal they are. Instead of asking questions about themselves and using the first person as they did on day 30, they must now ask in the second person, *Est-ce que tu as une queue*, for example, but using vocabulary that is familiar to them.

Increasingly, the students are capable of completing sophisticated tasks in French. There is minimal separation between the task, and the language used to accomplish it. The use of French is implicit in the completion of the task. French is used to teach and learn about science, and science is used as a context for developing skills in French. The requirement to write about a concept, talk about it, read about it and listen to others talk about it, as well as to develop the knowledge and skills inherent in the treating the topic, necessitates and develops the literacy skills of the students. They develop multiple emerging literacies as they learn, without separating their learning into curricular strands, but rather by using them in an interwoven manner, so that these literacies are a natural part of their tasks.
2013-11-13 – day 48

The students are given a list of 12 invertebrates, with the characteristics of each. From this, they are to construct a classification tree, grouping the invertebrates with like characteristics, using only the information on their handout. This is challenging because it requires them to apply their understanding in order to successfully classify the invertebrates they are given, but they have the necessary foundation to do the task, as they have by now learned the body parts listed for each of the invertebrates. This activity requires them to organize information logically, by using their knowledge. It is one more way to manipulate familiar vocabulary, with a different purpose. They may use as an example the classification tree of leaves from pages 10 and 11 of their science book *La diversité de la vie* (Chrétien & Campbell, 2000).

2013-11-14 – day 49

The students use laptop computers, as part of a multimodal approach to learning. In today’s activity, they look up the characteristics of 25 living organisms from a list, and then classify them into the appropriate one of five kingdoms or règnes. They work together with their peers and share information. This generates cooperation, discussion and leads the students to be successful, with very few errors. An interesting way to personalize this would be to have the students generate the list of organisms to classify or to have them independently find five examples from each kingdom.

The students continue to develop and use vocabulary for specific objectives even while making artwork. By having to meet criteria in their sketches, they have the words and concepts in mind, while working in a kinæsthetic and visual way. The integration of their senses and skills seems to enhance their learning.

2013-11-15 – day 50

We observe the trees on the school ground. Only the conifers are green. The trees outside our window have bare branches. The students make a pencil sketch of a bare tree of their choice. Some opt to include a conifer beside it, for contrast. They focus on form, depth and texture.

We alternate between creative tasks and technical work. The arts, language, observation and use of text allow for the consideration of a similar, contextual development of skills and knowledge, through multiple modes, and developing and employing multiliteracies through the integration of art, science, language, social and physical activities. The interdisciplinary approach is enhanced by multimodal learning.
activities, including experiential outdoor learning, reading of suitable texts, writing, drawing, painting, making lists, categorizing and sorting and using computer-based websites, which aids in developing multiliteracies, through the integration of art, science, language, social and physical activities.

2013-11-20 – day 53

The students make a classification tree of vertebrates, using the information provided on pages 22 to 25 in their science book, *La diversité de la vie*, (Chrétien & Campbell, 2000).

At this point in the term, after nearly three months of immersion, the students are ready to work in a more independent way, on a project of inquiry. The skills and knowledge they have built so far will support them in this endeavour, but they will have a little independence and will personalize their learning.

2013-11-25 – day 56

The students use laptop computers to research an animal of their choice. They must tell about the habitat, food, physical description, behaviour and one interesting fact. They will make a poster to show the class when they present their information in an oral presentation. They find it helpful to work from this list of criteria, which serves as a framework. The grid for evaluation can be found in Appendix M.

The students observe the bare trees on our school grounds, and make a picture of a bare tree on a stark pale blue background, using brown-black gouache paint and blowing on it through a straw, to create branches that extend from the trunk. The finished artwork is posted on the classroom walls, so that they see indoors reflects what they see outdoors.

In subsequent classes, the students continue with their research on the animal of their choice and make an oral presentation to the class, assisted by the visual aid of their poster. Their pride and confidence are evident. They put their posters up on the walls in the hallway and stairwell outside our classroom, for all the school to see.

2013-11-29 – day 60

First term report cards are sent home with the students. They are proud of their accomplishments in the first term of Grade 6 Late French Immersion, and so am I. They have developed their skills and knowledge in many areas through the multimodal, interdisciplinary approach we have taken. They are increasingly able to use French to understand and to use
their understanding to increase their ability to use French. They have developed increased multiliteracies.

As I reflect on this first term in Late French Immersion, I am slightly in awe at the emerging multiple literacies my students are developing. Their competencies are consistent with those described in the table of stages of language acquisition, Étapes de l’acquisition de la langue en Immersion tardive, for the period from September to December of Grade 6 in Late French Immersion, as described in the British Columbia Ministry of Education Instructional Resource Package for Late French Immersion, (British Columbia Ministry of Education, 1999, p. 5). It is gratifying to think that in September, they were beginners, with very minimal exposure to the French language, and that now, they have not only learned to communicate simply, with support, in French, but also to learn in French

4.2. Analysis of the Narrative

My understanding of teaching begins with my observations of my experience, as articulated by Cifali: “Chacun aborde une théorie ou une pratique, un enfant ou un adulte, selon un savoir qu’il s’est constitué au jour le jour, d’après ses observations...Il s’agira donc de mettre à la question l’ensemble des représentations autour desquelles une pratique se forge” (Cifali, 2004, p. 72). Beginning with my own observations, I then researched the literature to discover what other researchers have observed and how they have formulated their thoughts. I then constructed a conceptual framework based on other researchers’ work that is relevant to my own research, but using the narrative of my observations as my data. Cifali honours the importance of the researcher’s own thoughts and convictions but also puts them into perspective: “Vous savez et votre pensée, vos convictions sont importantes; vous ne pouvez certes pas rester accrochés à elles; alors confrontez-vous aux savoirs des autres, à ceux qui ont construit des hypothèses par leurs recherches” (Cifali, 2004, p. 73). This research then, is a combination of what Cifali identifies as objective knowledge and intuitive knowledge (Cifali, 2004, p. 73). The conceptual framework, or objective knowledge, supports the narrative, or intuitive knowledge. The narrative also provides support for the conceptual framework: “L’histoire racontée vient moins illustrer une parole théorique que la soutenir”
(Cifali, 2004, p. 81). The narrative communicates through the story, even without being explicit: “L’histoire racontée fait comprendre, sans avoir besoin de mots spéciaux” (Cifali, 2004, p. 80). This analysis identifies and articulates the concepts communicated through the narrative.

The hypotheses and research of others, the objective knowledge, is contained in particular in chapters 2 and 3, in the construction of the conceptual framework and the methodology for this study. In this chapter, I look at my own thoughts and observations, or intuitive knowledge, but with reference and deference to those who contribute to shaping my perceptions.

To situate my comments, it is perhaps useful to have an idea of my background. I have taught French, as all or part of my assignment, since 1980. I have worked at both the elementary and secondary levels, in Core French (FSL), library and French Immersion. I began to teach Late French Immersion in 2008. One thing I have observed consistently throughout my experience is that students from Kindergarten to Grade 12 want to be valued for who they are, and engaged in their learning. I believe that nature-based learning promotes a sense of self and place, and fosters engagement in learning. It provides an effective interdisciplinary context for learning a new language. In 2012, I became a school-level administrator. This has further broadened my perspective on teaching and learning, and reinforced my sense of the value of interdisciplinary studies, of nature-based learning, and of the potential that is created when they are combined.

My interest in nature-based learning as a context for language learning and the development of multiliteracies has grown since my first trip to the Cheakamus Centre, North Vancouver School District’s Outdoor School, in the fall of 2008. Building on that experience, I have developed an appreciation for the effectiveness of interdisciplinary teaching in a nature-based context. I have increasingly focused on interweaving nature, science, art, social skills and language, as a way to help students make learning connections. This study is an opportunity for me to look at my own teaching practice in the first term of a grade 6 Late French Immersion class, and the effect of nature-based learning as a context for the development of multiliteracies.
In deciding to explore teaching in an academic way, through a Master’s program, I wanted to focus on literacy as the essential objective in teaching, after ensuring that students feel safe and valued in their learning environment. I realized that I view literacy very broadly, in part through my experience as a teacher-librarian, a role in which I had to serve all students in the school, with their broad range of learning needs. In teaching a new language, I have found it very important to approach each concept through multiple modes, as students learn differently. Allowing for multiple pathways to learning accommodates their diverse learning styles and needs. Language is used in diverse ways across the disciplines. Therefore, an interdisciplinary approach allows for multiple sub-contexts for language use and manipulation, with a sense of purpose and meaning.

The year before I began this study, I was intrigued when, on September 21, less than three weeks into the school year, I was rattling away on the topic at hand, and a student at the back sang out “plus lentement”! He had learned this expression through a “repeat-after-me” song, in which the verse is repeated each time in a different style. Clearly, he understood what it meant, how to say it and how to use it effectively! This started me thinking more seriously about what engages students and how they make the transition between language use in a controlled way in class, and language use for communication. I distilled my experience down to the greatest learning curve I have observed, which is what happens when learning is set in a nature-based context. In particular I was fascinated by the learning that occurred in the first term of Grade 6 Late French Immersion. The students are relatively mature, being, on average, 11 years old, and having elected to be in the program. The positive attitude toward learning is a given. Because most students have had only minimal exposure to the French language in their Grade 5 year, it is helpful to start at the beginning, with the sounds of the letters in the alphabet and with very skeletal, essential vocabulary. How then, do students develop the language they need in order to interweave the Grade 6 curriculum into their language learning. The start-point, for me, as evident in the narrative in section 4.1 above, is in nature, through which context many pedagogical themes can be identified.
4.2.1. Oral Language

The foundational skill to literacy is oral language: “Oral language is the foundation for all other language learning” (MacFarlane, 2006, p. 28). This is the most natural place to start. Beginning on the first day of school and building from there, I focused on developing oral skills in my students. That meant teaching them the sounds of the language, beginning in particular with the vowel sounds and the alphabet. This is key to pronunciation and to developing their listening skills, too. Also in the first few days, I taught the students to ask permission to get a drink of water, to go to the washroom, to phone home, to go to the cloakroom. From there, I built up their repertoire by modeling simple questions and sentences and teaching them vocabulary to substitute into the models in order to adapt them according to their needs. This is evident as early as day 5, when the students use simple modeled sentences outside during the art lesson in the forest. They also use oral French in singing songs, beginning on the first day of school. By singing, they are able to imitate and internalize language patterns. By day 19, the students are able to read aloud to the class from their own imaginary animal story. The students’ oral skills are greatly expanded in the context of Outdoor School, on days 21, 22 and 23, just three weeks into the school year. Their science knowledge gained at school is put into context here, and they are able to use simple vocabulary to talk about it. Although their vocabulary is simple, it is meaningful to them here. As they develop the ability to negotiate with each other to borrow supplies, ask for help and work cooperatively, they also develop the ability to play an oral guessing game which, once again, relies on reusing newly-learned vocabulary, in the game “Qui suis-je?” which they play for the first time on day 30. Oral French is essential to the completion of most of the learning activities. They are increasingly able to manipulate the vocabulary and structures they know to make meaning. By day 47, they play a variation on “Qui suis-je?” with the whole class. This now feels like a recreational activity for them, even though it is intended to reinforce their ability to adapt a language pattern orally. By the end of the term, beginning on day 56, the students are able to make an oral presentation on a project of inquiry, in which they have researched an animal of their choice. Some students are able to present primarily from memory, although most rely on their notes. In spite of technical errors, their French is fluid, clear and meaningful. Clearly, their oral skills have developed from learning the sounds of the letters in the alphabet in the first
week of class, to making a coherent, informative oral presentation by the end of the term. Through working in this meaningful interdisciplinary context of nature-based studies, the students have developed a solid oral foundation. This fundamental literacy skill is well begun.

4.2.2. Creating Community

Oral language is an important foundation for literacy development. It obviously implies a social situation. The dynamics between the students and between the students and teacher are of paramount importance. In order for there to be an oral exchange, there must be a social setting and a sense of trust. In order to establish the sense of trust for social interaction, the teacher must facilitate the development of the class as a community. The fact that the students have all left the English program either in the same or another school, gives them a common experience to bond over. Immediately, on day 1, through simple, introductory oral vocabulary and song, the students begin to build trust with each other. They look for someone to sit with and to work with. They are a little nervous, but quickly see that they are in the same situation as everyone else, and begin to develop a sense of camaraderie. Their cooperation is encouraged through whole group and small group oral and written activities. They are taught to ask for help or to borrow something right away. They are encouraged to look out for each other from the start. The class becomes their world very quickly.

However, the weekend comes and they spend two full days in their familiar Anglophone world. On day 5, when they return to class, French seems foreign to them, and there is the need for a second start-up. Consequently, the morning is spent re-building their sense of community, primarily through oral activities and songs, with a little quiet time reinforcing their phonetic practice with a word-search puzzle, done in pairs. This time is well invested, as their sense of comfort and trust in this learning community supports their learning. By the afternoon, they seem to have recovered their confidence and familiarity with each other. Going outside to the school’s small forest in the afternoon builds on their comfort and trust. By the time we return to the classroom after exploring in nature along the pathway, naming the things we see and settling in so the students can sketch the trees of their choice, they have developed a sense of community which
remains with them from this day forward. They clearly relaxed in nature, and enjoyed the shared experience. Subsequent activities continue to build on their sense of community.

The students’ ability to work together as a group is helpful in planning for Outdoor School and in benefitting from the experience. Their sense of community is increased by being together for three days, without interruption, by sharing the sense of adventure in being away from home, by sharing meals and spending time together, and by their shared sense of wonder as we walk through the old growth forest, visit the farm with its baby goats, and walk alongside the tributaries to the Cheakamus River, that are teeming with spawning pink salmon. By the time the students get off the bus back at the school, they have shared something truly special that bonds them to each other. Learning in nature has contributed immeasurably to their sense of place, self and community. This contributes in turn to their subsequent learning. The benefits to learning that come from establishing the class as a community are well worth the time and care that go into providing opportunities for them to connect with each other and their surroundings, which empowers them and facilitates their learning.

4.2.3. Multimodal, Multisensory Learning

Establishing the class as a community, through oral and team-building activities and through time shared in nature, facilitates learning. Multiliteracies, or ways of making meaning in a variety of contexts, particularly through interdisciplinary learning, are the primary learning goal. An effective strategy for helping the students develop multiliteracies is to make use of all of their senses. One of the ways to do this is to introduce the visual element of colour, while engaging the kinaesthetic mode of having the students identify and highlight language elements such as vocabulary. Even a simple activity like a themed word search puzzle contributes to their construction of language elements, when it is used as a start point to a set of vocabulary around a theme and reinforced through reading, identifying, highlighting, reciting, illustrating and listening to the words. In a very quick, simple activity, they have used their sight, hearing and tactile senses each in different ways. They have listened to me, to themselves, and to each other. They have looked at the words and for the words, and then viewed them again in bright fluorescent colours. They have spoken the words, repeated the words and called
them out in a guessing game. They have used their arms and hands to highlight and illustrate the vocabulary. By day 5, the multimodal, kinaesthetic approach extends to the outdoors. The students are able to walk in our small school forest, to observe, touch, smell, listen to and name what they see in the forest. They then use their eyes and hands to make a sketch of what they see. They categorize vocabulary and information by making t-charts and classification charts. They sing songs with actions. They move around the classroom to play guessing games with each other. They read books, listen to music, and use web sites on the Internet. A significant experience in multimodal learning comes during the third week of school, when we go to Outdoor School, or L’École Verte, where the students walk, talk, ask questions, sketch, make pastel pictures of the forest and watercolour paintings of salmon, use iPads on nature scavenger hunts, present the iPad photos to their peers, sing songs, share meals and talk about the food, put on simple skits, and play games. All of these activities contribute to their development of multiple literacy practices but also of multiliteracies, expanding their language, nature, science, art and social skills interdependently.

4.2.4. Scaffolding and Gradual Release

In order to foster the development of multiliteracies in the students, it is necessary to support them. At their starting-point, they have minimal knowledge and French language skills, and require substantial support, as they work toward being able to work somewhat independently. This support functions as scaffolding. It may take the form of fundamental vocabulary teaching, brainstorming, language models, sentence starters, pictures, diagrams, charts, film clips or demonstrations. Scaffolding at the beginning of the year is very heavy. It is also most evident at the beginning of a unit, lesson or activity. Students need to be shown how, and given the tools to continue on their own. There is a continuum between their complete dependence and their complete independence. They spend most of their time somewhere in the middle, as they are scaffolded with the necessary base knowledge, vocabulary, structures and procedures, and then gradually released to do an activity or use their knowledge and skills independently. They go from having minimal or no literacy, to having multiliteracies for various contexts.
Scaffolding is evident from the beginning of the term. The students are scaffolded with word lists, visual dictionaries, and spoken and written models of language for communication. On close examination of day 3, for example, the students have a word search of animal and insect names, and a t-chart graphic organizer or template for categorizing the names by the animal or insect’s habitat. They practise saying the names by choral repetition, which they seem to appreciate, as they are not performing for anyone and don’t stand out on their own. They use posters and books to look for pictures of the animals and insects and then illustrate them in their t-chart. By the time they have finished, they are quite familiar with the names they have manipulated with the support of appropriate resources and modelling.

On day 5, the first Monday after school started, the students are scaffolded on our forest walk. Prior to going outside, we have reviewed the parts of a tree and looked at the trees out the window. Outside, the students have been scaffolded with the vocabulary and phrases necessary to talk about what they see. This reinforces the vocabulary learned inside the classroom earlier in the day. The students observe and draw a tree in the forest, of their choice. They are in this way scaffolded by examining real examples of what they are learning about in class. On returning to the classroom, the students draw a coniferous tree and a deciduous tree, with appropriate labels for their parts. They work from word lists of the trees’ parts, which provide them with further scaffolding. The interdisciplinary treatment of trees, as the object of a language lesson, an art lesson and a science lesson, also provides scaffolding, in that each discipline reinforces the others. On day 14, the students’ understanding of the parts of a tree is further supported when they learn the song “L’arbre est dans ses feuilles”, found in Appendix E. The multimodal interdisciplinary approach provides both overt scaffolding, in the form of a lesson or specifically taught vocabulary and modeling, and indirect scaffolding, through the reinforcement between the interwoven disciplines.

On day 15, the students are scaffolded in their mastery of ways to describe animals. They learn the vocabulary from visual dictionaries, books and word lists, and they co-construct the details about the animals in a brain-storming session that is documented on the board, so that they can work from it as they categorize the animals by their habitats. On days 16 and 17, the students are scaffolded to build on this activity
by creating an animal alphabet using phrase starters written on the board and books in the classroom, and by using a t-chart graphic organizer to sort the animals.

By day 17, the students build further on these activities, by brainstorming to co-construct a composition about animals. They are scaffolded by a library book about a strange animal composed of the parts of several different animals. This activity allows the students to be creative but they are still scaffolded by the example in the book, the notes on the board to help them with sentence structure and with sorting masculine and feminine nouns. This level of help, or scaffolding, provides them with what they need to create a composition within parameters so that they can be successful in their writing, even this early in the term. They further stretch this thinking on day 30 when they co-construct the phrases and vocabulary for playing the guessing game “Qui suis-je?” as a way to use the vocabulary they know to work semi-independently, but scripted with appropriate phrases, to choose an animal and work with a partner who must ask questions in French to guess the animal. This is a good example of the gradual release that follows a carefully scaffolded lesson. The students are able to complete the task successfully because they have been shown how to do it, have been given the language structures they need, and have had the opportunity to learn the appropriate vocabulary. The students are very engaged because they like animals, they have been able to choose their own animal, they have been shown how to do this activity, they are able to communicate with each other in French and they feel successful.

4.2.5. Multiliteracies

The narrative in section 4.1, constructed around selected observations and excerpts of the first term with my 2013-14 Grade 6 Late French Immersion class, is essentially a reflection on the development of multiple literacies through interdisciplinary nature-based learning. The curriculum content described shows that it begins simply, with names of animals, insects, habitats, and parts of trees. This simple beginning illustrates the development of emerging literacy in science combined with emerging literacy in French. From here it progresses to sentences about animals and then to questions and answers about animals and builds up to independent projects of inquiry and oral presentations. Songs, games and artwork are interwoven through the lessons
to reinforce the students’ understanding. The three days at Outdoor School show the students immersed in interdisciplinary nature-based learning, in French, and also include team-building exercises, which contribute to the development of social literacy.

Literacy development in science begins on day 3. The students learn the names for various animals and insects. They categorize them by broad categories of habitat, which raises their awareness of animal relationships to habitat and of habitats in the environment. By day 5, they go outside, into the natural environment of the forest to observe the trees and other plant life, such as moss, ferns, mushrooms and fungus, and to learn the names for what they see. They observe how a dead tree can support the life of the moss, ferns, mushrooms and fungus and they look for signs of insects and animal life. They sketch what they choose to of what they see and when they come back into the classroom, they categorize tree parts, observing what is similar and what is different about conifers and deciduous trees. These activities, even in the first five days of working in a new language, increase their ability to make meaning about science and nature, in French.

Day 5 also marks the beginning of these Late French Immersion students’ literacy development in art. They bring their sketchbooks and assorted pencils outside to experiment with tone, texture, shading, proportion and perspective. Before going outside into the forest, we have first talked about these words and what they mean. The students have been instructed to experiment with their different pencils to see what effects they can produce. It is relatively easy to teach relevant vocabulary and concepts to the students through the use of cognates, such as ton (tone), texture (texture), proportion (proportion) and perspective (perspective), and through demonstrations that illustrate the words. By the end of the afternoon, the students have seen, heard, written and said the words in choral repetition, then practiced these techniques while sketching trees outside in the forest, so that they have engaged their kinaesthetic learning, and made these words real. Their learning in art has reinforced their learning in science and in the French language. They have made meaning in art and this has added to their beginning repertoire of multiple literacies in Late French Immersion, through the interdisciplinary context of nature-based studies.
The students also begin to develop their social literacy immediately in Late French Immersion. On day 1, they introduce themselves and begin to learn each other’s names. They play oral games and sing songs together. They are encouraged to be inclusive and to look out for each other on the playground at recess and lunch. By day 5, when they go outside to observe nature and sketch together, they break off naturally into small groups but are very aware of each other and where everyone is in the forest. They seem closer coming back to class after this shared experience outside in nature. While working back in the classroom, they practice the phrases they were taught on day 1, such as: “Puis-je emprunter ta gomme à effacer, s’il te plaît?” when they want to borrow something. They share easily with each other. They also support and help each other in sorting the vocabulary for deciduous and coniferous tree parts as they draw and label them: “Qu’est-ce que c’est?” “C’est le cône?” “C’est partie de l’arbre à feuilles caduques ou du conifère?” “C’est partie du conifère”. Of course, they have first been scaffolded, by being taught these expressions for their conversations about their work. These expressions remain on the board during this activity of drawing and labeling a deciduous and a coniferous tree. While the expressions help them to use French effectively to talk about their science, they also provide them with a way to work cooperatively. In this way, their developing literacy in science is intertwined with their developing social literacy and French language literacy.

At Outdoor School on days 21, 22 and 23, the class makes significant progress in their development of social literacy. They share rooms, meals, activities and the whole experience with each other. They must help and depend on each other. This is put to a big test when they work on the stations specifically designed for team building. They must help each other to climb a wall or walk on a tightrope. They encourage each other as they cross the stream by walking on a steel cable. They quietly let me know when one of them feels hurt, upset or homesick. Clearly, they have developed a sense of trust and responsibility for each other. Their social literacy has increased through this shared experience. Their sense of community is now well established and continues to deepen through the term.

Throughout the development of multiple literacy practices is intertwined the development of French language literacy. In each context and each lesson, the
language-learning objective is an underlying constant. The students, beginning in the first week, focus on the sounds of the language, some core vocabulary and useful phrases. They progress to simple scripted questions and answers and then to semi-scripted questions and answers, in that they are scripted with the structures, but substitute their own content. Their language literacy development is present in all themes and lessons. Over the course of the term, the students have developed simple language skills for basic communication as well as basic, discipline-specific vocabulary. From day 1, with simple introductory phrases, greetings and introductions, to day 56, when students prepare to make oral presentations to the class based on research on their own projects of inquiry, to day 60, when they take home their report cards at end of the term, there is a big learning arc. They have learned the sounds of the letters, are able to decode and pronounce new words, can make meaning in context and can make themselves understood. The essential foundation for communication in French has been laid. They have developed fundamental French language literacy skills. The nature-based teaching approach has laid foundations for learning in French by giving access to a full range of literacy practices necessary to participate in socially and culturally appropriate ways. It makes visible how my beliefs about the development of multiple literacies, demonstrated through my activity choice, could enhance the development of an interdisciplinary approach based on multiliteracies.
Chapter 5.

Conclusion

5.1. Summary

I began this study because I noticed that my Grade 6 Late French Immersion students were very interested in nature and made good progress in their learning when it was set in an interdisciplinary nature-based context. Furthermore, I observed the development of emerging literacies through interdisciplinary learning and that student progress was interwoven through the disciplines. I was curious to explore the connection between interdisciplinary nature-based teaching and the development of multiliteracies in Grade 6 Late French Immersion. I focused on the first term, because that is when their language foundation is developed and because their learning happens quickly and is very noticeable at that stage, as they develop multiple emerging literacies.

An examination of existing literature on language teaching revealed a strong orientation toward teaching through subject matter. Content-based teaching proved to be a highly regarded and successful approach. The balance between the language and the content is an ongoing issue. The premise of Grade 6 Late French Immersion is that the language is taught through the curriculum for Grade 6 and that students should develop competencies in both the French language and in the Grade 6 curriculum. Teaching language through curricular content provides the opportunity for the emergence of multiple literacies.

The conceptual framework for an interdisciplinary nature-based approach in Grade 6 Late French Immersion is anchored in nature-based learning and in multiliteracies. Nature-based learning exists on three levels: learning in, about and for nature. Learning in nature refers to nature as a context or environment for learning.
Learning about nature refers to nature as the subject matter, or object of the learning. Learning for nature refers to the sense of stewardship that students develop through their increased appreciation for nature. Nature-based learning is inherently interdisciplinary. It implies learning from multiple perspectives and allows for natural connections to a range of disciplines, including science, art, social skills and language. Multiliteracies are the competencies that develop through the range of disciplines. The term multiliteracies refers to the development of multiple competencies and multiple ways of making meaning in a variety of contexts. It is essentially a question of fostering in students the abilities that will enable them to negotiate or navigate in multiple disciplines or subject matters. In Grade 6 Late French Immersion, these multiliteracies are emerging, but will continue to develop throughout their immersion experience, and potentially throughout their lives.

The multiple literacy practices examined in this study were centered on science, the arts, social responsibility and language. In learning science, students develop many strategies for gathering and processing information. These skills are transferable. Likewise, through the arts, students develop ways to convey meaning and ways to interpret meaning. They learn to make meaning involving a range of senses. Through the social interactions and group activities that are an essential component of Late French Immersion, students develop social skills. These forms of literacy combine with the language learning that is at the core of Late French Immersion, and contribute valuable competencies for multiple contexts. These emerging skills provide the foundation for the development of multiliteracies.

The reflective practice is an important part of the conceptual framework for conducting a narrative inquiry. The value of a reflective practice lies in its being conducted by the practitioner, who is closest to the situation, and leads to increased awareness of their practice, which allows for improvement in that practise. Reflection should be ongoing and thoughtful. Reflection involves observing one’s practise in detail and objectively recognizing merit and looking for ways to improve. It implies seeing one’s actions more closely, and carefully and thoroughly analyzing one’s practice to determine the effect and effectiveness of one’s actions in that practice. It fosters ongoing awareness, engagement and improvement.
The methodology of narrative inquiry allows for a thoughtful and thorough reflection on my practice. Using narrative as a form of data allows me to tell the story of my teaching experience and observe it in the context of my areas of interest, specifically, it allows me to examine my practice with respect to the development of multiliteracies in an interdisciplinary nature-based context in the first term of Grade 6 Late French Immersion. Learning from my own practice necessitates heightened self-awareness, through a professional lens. Creating a narrative based on selected references to my practice, selected for their relevance to nature-based learning, was an interesting and informative activity on its own merits. Analyzing that further added to and made explicit my awareness. It forced me to articulate what I otherwise would experience intuitively. Because of time constraints and the demands of the profession, it is usually most expedient to work intuitively. This exercise of creating and analyzing my narrative has caused me to deepen my awareness and understanding of my practice and its effect on the development of my students. Focusing on the development of multiliteracies in Grade 6 Late French Immersion, through an interdisciplinary nature-based context, has led me to better understand an aspect of my practice that is both engaging and essential.

Through the analysis of my activity choices and my interactions with my students and their interactions with nature, my narrative highlights elements of my practice centred around my beliefs about multiliteracies. These beliefs form the foundation of my practice. Literacy development, multiple literacy development and multiliteracies are priorities in my own practice. Given that, I realize particularly having conducted this study that I must reflect more on implementing in my practice what I have learned from my study of the theory surrounding multiliteracies.

This study is limited to my own observations of one class in one year, within the time frame of the first semester. I am particularly interested in the first semester, as it is the time when my students start French Immersion. While this is a limited scope, the first semester observed was typical of the first semester in the five years during which I have taught Grade 6 Late French Immersion. The activities sampled were also typical. However, given that I am prone to reflection on my practice, although usually only informally, I have increasingly made use of nature-based learning over the years,
culminating in this year’s trip to Cheakamus Centre, focused specifically around my class and their emerging multiple literacies. This was a deepened experience over previous years, in which French Immersion was only an incidental addition to a predominantly English language experience at Outdoor School.

I had initially intended to conduct this study based on samples of student work and survey questions. However, due to time constraints, I opted to shift to a more self-directed methodology, and in so doing realized that conducting a narrative inquiry would better enrich my practice. Ultimately, what I wanted to explore was the correlation between teaching in a nature-based context and the development of literacies, albeit emerging literacies, in multiple disciplines. Hence, emerging literacies led to emerging multiple literacies, which in turn led to emerging multiliteracies.

5.2. Discussion

Nature-based learning and Late French Immersion are both inherently interdisciplinary. These two intrinsically interdisciplinary studies combine easily and allow for a learning experience that develops literacy in multiple ways. Nature provides a context, medium, subject and purpose for learning, which makes language studies richer and more meaningful. Although there has been substantial research into nature-based learning, interdisciplinary learning, and content-based language learning, this research looks at the combination of the context of interdisciplinary nature-based learning and Late French Immersion. The combination is powerful. Learning in nature provides a rich interdisciplinary context for the development of emerging multiliteracies in Late French Immersion.

An interdisciplinary approach broadens the scope of language studies, and language studies add depth to the study of other disciplines. An interdisciplinary approach that includes language study therefore enhances the learning that occurs. This is the case in Late French Immersion. Examining topics with students in a cross-curricular way provides an opportunity to look at the world through multiple lenses and to recognize the connectedness in the world. This approach helps to foster the development of multiliteracies.
A significant element in learning is the making of connections: connections to each other, connections to our world and connections to what we already know. The essence of everything lies in relationships and interconnectedness. An interesting by-product of this way of teaching and learning is that students seem to increase in capacity and engagement. In looking at curriculum with our students we have the opportunity to look at the world through multiple lenses, to recognize the connectedness in the world and to provide them with multiple ways to relate to it. These multiple ways of relating are, in fact, fundamental to the development of multiliteracies. In Late French Immersion, just as in nature-based learning, the interdisciplinary approach facilitates the making of connections and meaning by learners, and fosters the development of multiple emerging literacies.

In reviewing the progression of these learning activities, in which nature is both the context and the object of learning, a portrait emerges of a vibrant community of learners, engaged in developing their ability to express their learning around nature. In nature, students develop ways of being, learning, knowing and sharing. This growth contributes to their social and emotional learning and to their academic development. They become more able to navigate in various contexts, represented by the interwoven disciplines through which they study nature. Their capacity to communicate in French is simultaneously increased.

It is very rewarding to work with young people who are dynamic, motivated and engaged in their learning. This is almost invariably the case in Grade 6 Late French Immersion. The challenge of starting from zero and building language skills by using language requires energy, creativity and perseverance on the part of the teacher and also on the part of the students. At their age, they are aware of how they learn and of what they like. It is up to the teacher to stimulate and feed their curiosity and to help them develop the language skills they need. By teaching in context, the purpose of the language being used is self-evident. When the context is nature, student engagement in the content already exists. Setting the learning in the context of nature allows the teacher and students to build on a pre-existing interest. Combining disciplines, and looking at nature from multiple perspectives, broadens and enriches the learning that is taking place, by facilitating the making of meaning and of connections.
When students have a need for language, they learn it with a greater sense of purpose and with a picture in their minds of what to attach it to. Having to know the parts of an animal in order to succeed at a guessing game makes the learning both fun and useful. Singing a song links lyrics to melody and allows students to function linguistically at a higher level than they otherwise would, particularly in the first term of Late French Immersion. To start learning a language with a sense of fun, authenticity and accomplishment allows for greater satisfaction, which in turn promotes greater engagement and the desire to learn more. Being part of a group of new language learners creates a situation in which students learn from each other, as well as from the teacher.

The motivation for this research was to better understand the connection between learning in nature and the development of multiliteracies in Late French Immersion. In particular, I was interested in the first term, because students begin without language skills, and yet they have to use the language even while they are beginning to learn it. Connecting very fundamental language skills with learning, through a variety of disciplines, seems like it ought to be a daunting task, but by keeping it simple and working in context, the students are able to communicate successfully. Existing research shows the correlation of literacy development to content areas. There is evidence of literacy development through science, art, social skills and language studies. There is also evidence that learning in nature lends itself to a variety of disciplines which enrich both the nature studies and the disciplinary learning. Much research has been done on the effectiveness of content-based language teaching and learning. However, little has been done to connect a nature-based approach and French Immersion. It has been interesting to make a connection between these ideas. The potential that nature-based learning offers to interdisciplinary learning dovetails with the inherently interdisciplinary approach in Late French Immersion. By immediately launching into nature-based studies, the natural curiosity and affinity that students have for nature provides a compelling impetus for extending that to language studies through the lenses of science, art and social-skill-building activities. Beginning at a very simple level, it is possible to combine emerging science literacy with emerging language literacy. Adding art and social responsibility activities into the lesson and employing a multimodal array of activities including linguistic, semiotic, artistic, technological and social components.
deepens the experience for the students and increases the potential for their multiple emerging literacies to become multiliteracies.

Looking back on the experience of teaching Grade 6 Late French Immersion as a starting point to the development of simple science and French language literacy, to combining other disciplines and increasing the range of student literacies, to becoming multiple emerging literacies and ultimately working toward multiliteracies, the value of the connection to interdisciplinary teaching is reinforced. Looking ahead, I will continue to engage in a reflective practice through an ongoing inquiry into my own narrative of my evolving practice. The ultimate development of multiliteracies is a goal to attain, beginning with small steps in the realms of science and language literacy, in a nature-based context, and incorporating art and social literacy, using multimodal strategies toward emerging multiliteracies. From here, I anticipate incorporating still more disciplines as I look to the potential of adding social studies and health and career curricula into nature-based studies in combination with the curricula of science, language, art and social responsibility. The potential for my own professional growth leading to deepened student learning is intriguing and compelling.
References


Appendix A.

Summary of nature-based activities from term 1, listed by day and date

<table>
<thead>
<tr>
<th>Day of term</th>
<th>Date</th>
<th>Nature-based learning activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sept. 3</td>
<td>Intro. Vocab. And expressions</td>
</tr>
<tr>
<td>3</td>
<td>Sept. 5</td>
<td>Animal &amp; insect word search, chart of habitats</td>
</tr>
<tr>
<td>5</td>
<td>Sept. 9</td>
<td>Outside in forest – draw trees – diagram and label coniferous &amp; deciduous</td>
</tr>
<tr>
<td>7</td>
<td>Sept. 11</td>
<td>Classification chart, sketching leaves</td>
</tr>
<tr>
<td>14</td>
<td>Sept. 20</td>
<td>Song “l’arbre est dans ses feuilles”</td>
</tr>
<tr>
<td>15</td>
<td>Sept. 23</td>
<td>Animal body parts, habitat, covering – brainstorm, notes, oral conversation</td>
</tr>
<tr>
<td>16</td>
<td>Sept. 24</td>
<td>Brainstorm for Outdoor School – animals we might see</td>
</tr>
<tr>
<td>17</td>
<td>Sept. 25</td>
<td>Alphabet des animaux, les insectes qui volent / ne volent pas (chart)</td>
</tr>
<tr>
<td>19</td>
<td>Sept. 27</td>
<td>Read-aloud library book “Drôle d’animaux”, brainstorm co-constructed story, individual original stories to read aloud to class</td>
</tr>
<tr>
<td>20</td>
<td>Sept. 30</td>
<td>Brainstorm animals, prep. For Outdoor School</td>
</tr>
<tr>
<td>21</td>
<td>Oct. 1</td>
<td>Outdoor School</td>
</tr>
<tr>
<td>22</td>
<td>Oct. 2</td>
<td>Outdoor School</td>
</tr>
<tr>
<td>23</td>
<td>Oct. 3</td>
<td>Outdoor School</td>
</tr>
<tr>
<td>24</td>
<td>Oct. 4</td>
<td>ODS debrief, BD</td>
</tr>
<tr>
<td>29</td>
<td>Oct. 11</td>
<td>Sing “L’arbre est dans ses feuilles” for school assembly</td>
</tr>
<tr>
<td>30</td>
<td>Oct. 15</td>
<td>Brainstorm, oral guessing game “Qui suis-je?” in partners</td>
</tr>
<tr>
<td>31</td>
<td>Oct. 16</td>
<td>Nature scene in pastel</td>
</tr>
<tr>
<td>33</td>
<td>Oct. 18</td>
<td>Insects - reading for information, questions</td>
</tr>
<tr>
<td>34</td>
<td>Oct. 21</td>
<td>Fall colours in pastel</td>
</tr>
<tr>
<td>38</td>
<td>Oct. 28</td>
<td>Recap of songs, connection to language</td>
</tr>
<tr>
<td>39</td>
<td>Oct. 29</td>
<td>School-wide write – favourite season</td>
</tr>
<tr>
<td>44</td>
<td>Nov. 6</td>
<td>Suzuki article – trees</td>
</tr>
<tr>
<td>47</td>
<td>Nov. 12</td>
<td>“Qui suis-je?” with whole class</td>
</tr>
<tr>
<td>48</td>
<td>Nov. 13</td>
<td>Classification of invertebrates</td>
</tr>
<tr>
<td>49</td>
<td>Nov. 14</td>
<td>Classification - 5 règnes</td>
</tr>
<tr>
<td>50</td>
<td>Nov. 15</td>
<td>Sketches of schoolyard trees</td>
</tr>
<tr>
<td>53</td>
<td>Nov. 20</td>
<td>Classification - vertebrates</td>
</tr>
<tr>
<td>56</td>
<td>Nov. 25</td>
<td>Project of inquiry – animal of choice research project for oral presentation</td>
</tr>
<tr>
<td>60</td>
<td>Nov. 29</td>
<td>First term reports home</td>
</tr>
</tbody>
</table>
Appendix B.

Goal for term 1:

- Students will develop multiliteracies through nature-based learning. In particular, the students will develop multiliteracies in the disciplines of science, art, language and social responsibility.

By the end of the term, students will be able to

- Search for information on an animal, in French
- Make an oral presentation to the class, on an animal, in French
- Accompany their oral presentation with a visual
- Listen to, understand and appreciate the presentations of the other students

Evidence of multiliteracies:

- Students will use appropriate vocabulary to communicate information about animals in French, orally and in writing
- Students will provide appropriate visuals to support their presentation
- Students will demonstrate social responsibility through
  - working cooperatively in the preparation of the presentation
  - sharing computers, information and ideas
  - encouraging each other
  - showing appropriate support for each other’s presentations in the form of
  - listening to each presentation respectfully and attentively
  - asking appropriate questions about the presentations
  - applauding after each presentation

Assessment:

- Formative assessment:
  - continual observation and feedback to students as they work on their project both through comments to the class as a whole, and individual feedback on student research and writing
- Summative assessment:
  - using rubric co-constructed with the class
Appendix C.

L’habitat des animaux

Classe les animaux de la liste au tableau dans la colonne qui indique l’habitat:

<table>
<thead>
<tr>
<th>L’eau</th>
<th>L’air</th>
<th>La terre</th>
</tr>
</thead>
</table>

...
Appendix D.

Les parties d'un arbre à feuilles caduques et d'un conifère

1. Fais le dessin d'un arbre à feuilles caduques à côté d'un conifère.

2. Identifie les arbres : Un arbre à feuilles caduques, Un conifère.

3. Identifie les parties des arbres dans ton dessin.

<table>
<thead>
<tr>
<th>Un arbre à feuilles caduques</th>
<th>Un conifère</th>
</tr>
</thead>
<tbody>
<tr>
<td>le dessin</td>
<td>le dessin</td>
</tr>
<tr>
<td><strong>les parties similaires:</strong></td>
<td></td>
</tr>
<tr>
<td>un tronc</td>
<td>un tronc</td>
</tr>
<tr>
<td>l'écorce</td>
<td>l'écorce</td>
</tr>
<tr>
<td>un nœud</td>
<td>un nœud</td>
</tr>
<tr>
<td>une branche</td>
<td>une branche</td>
</tr>
<tr>
<td>une tige</td>
<td>une tige</td>
</tr>
<tr>
<td>les racines</td>
<td>les racines</td>
</tr>
<tr>
<td>une graine</td>
<td>une graine</td>
</tr>
<tr>
<td>(un bourgeon)</td>
<td>un bourgeon</td>
</tr>
<tr>
<td>(un fruit)</td>
<td>un fruit</td>
</tr>
<tr>
<td><strong>les parties différentes:</strong></td>
<td></td>
</tr>
<tr>
<td>une aiguille</td>
<td>une feuille</td>
</tr>
<tr>
<td>un cône</td>
<td>une fleur</td>
</tr>
</tbody>
</table>
L’arbre est dans ses feuilles

(chanson traditionnelle)

L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé

Et dans cet arbre il y a une branche
Dans cet arbre il y a une branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé

Et dans la branche il y a un nœud
Dans la branche il y a un nœud
Le nœud est dans la branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé

Et dans le nœud il y a un trou
Dans le nœud il y a un trou
Le trou est dans le nœud
Le nœud est dans la branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé

Et dans le trou il y a un nid
Dans le trou il y a un nid
Le nid est dans le trou
Le trou est dans le nœud
Le nœud est dans la branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé

Et dans le nid il y a un œuf
Dans le nid il y a un œuf
L’œuf est dans le nid
Le nid est dans le trou
Le trou est dans le nœud
Le nœud est dans la branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé

Et dans cet œuf ’y a un oiseau
Dans cet œuf ’y a un oiseau
L’oiseau est dans l’œuf
L’œuf est dans le nid
Le nid est dans le trou
Le trou est dans le nœud
Le nœud est dans la branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marlé
L’arbre est dans ses feuilles Marilon Dondé

Et dans l’oiseau il y a un cœur
Dans l’oiseau il y a un cœur
Le cœur est dans l’oiseau
L’oiseau est dans l’œuf
L’œuf est dans le nid
Le nid est dans le trou
Le trou est dans le nœud
Le nœud est dans la branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marlé
L’arbre est dans ses feuilles Marilon Dondé

Et dans le cœur il y a l’amour
Dans le cœur il y a l’amour
L’amour est dans le cœur
Le cœur est dans l’oiseau
L’oiseau est dans l’œuf
L’œuf est dans le nid
Le nid est dans le trou
Le trou est dans le nœud
Le nœud est dans la branche
La branche est dans l’arbre
L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé

L’arbre est dans ses feuilles Marilon Marilé
L’arbre est dans ses feuilles Marilon Dondé
Appendix F.

Les insectes qui volent et les insectes qui ne volent pas

Classe les insectes de la liste au tableau dans 2 catégories: les insectes qui volent et les insectes qui ne volent pas:

| Les insectes qui volent | Les insectes qui ne volent pas |
## Appendix G.

**Mon drôle d'animal – Grille d’évaluation**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Not Yet Meeting</th>
<th>Approaching</th>
<th>Fully Meeting</th>
<th>Exceeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect</td>
<td>Enter text for Not Yet Meeting expectations</td>
<td>Enter text for Approaching expectations</td>
<td>Enter text for Fully Meeting expectations</td>
<td>Enter text for Exceeding expectations</td>
</tr>
<tr>
<td>Illustration</td>
<td>Ne satisfait pas encore aux attentes</td>
<td>Satisfait aux attentes de façon minimale</td>
<td>Satisfait entièrement aux attentes</td>
<td>Dépasse les attentes</td>
</tr>
<tr>
<td>Il n'y a pas d'illustration!</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>La composition ne comprend pas de phrase d'introduction, de développement ni de phrase de conclusion</td>
<td>La composition comprend une phrase d'introduction et un développement mais pas de phrase de conclusion</td>
<td>La composition comprend une phrase d'introduction, un développement et une phrase de conclusion</td>
<td>La composition comprend une phrase d'introduction efficace, un bon développement et une phrase de conclusion</td>
<td></td>
</tr>
<tr>
<td>Les détails ne sont ni nombreux ni développés</td>
<td>Les détails sont pertinents</td>
<td>Les détails sont pertinents et intéressants</td>
<td>Les détails sont nombreux, pertinents et intéressants</td>
<td></td>
</tr>
<tr>
<td>Le vocabulaire est limité et les mots, surtout les adjectifs de couleur, ne sont pas tous bien épelés (masculin/féminin, singulier/pluriel)</td>
<td>Le vocabulaire est bien choisi mais quelques mots, surtout les adjectifs de couleur, ne sont pas tous bien épelés (masculin/féminin, singulier/pluriel)</td>
<td>Le vocabulaire est bien choisi et les mots, surtout les adjectifs de couleur, sont pour la plupart bien épelés (masculin/féminin, singulier/pluriel)</td>
<td>Le vocabulaire est bien choisi, varié, et les mots sont tous, ou presque tous, bien épelés (masculin/féminin, singulier/pluriel)</td>
<td></td>
</tr>
</tbody>
</table>
Appendix H.

Je vais à l’école verte et dans ma valise je vais mettre:

- un sac de couchage
- un oreiller (et une taie d’oreiller)
- un manteau
- un imperméable
- un chapeau ou une tuque
- une paire de bottes
- une paire de souliers
- un chandail
- trois chemises ou t-shirts
- deux jeans ou pantalons
- trois culottes (sous-vêtements)
- quatre pairs de bas
- un pyjama
- une serviette et une débarbouillette
- du savon
- une brosse à dents et de la pâte dentifrice
- une gourde
- une lampe de poche (facultatif)
- un animal en peluche (facultatif)
- des mouchoirs (facultatif)
Appendix I.

L’École Verte: l’itinéraire

le mardi premier octobre 2013

9h00 – départ de l’École

10h15 - arrivée à l’école verte

10h30 – promenade d’enquête/qui suis-je?

  – toile de connectivité

12h30 – déjeuner

13h30 – projet d’art / croquis

15h30 – pause

15h45 – promenades:

  – promenade à la ferme pour voir les animaux

  – promenade dans la forêt pour voir les vieux arbres

17h45 – dîner

18h30 – poster/collage/journal/poème

20h00 – chansons, saynète (répétition)

21h00 – collation, on se couche

21h30 – couvre-feu
le mercredi 2 octobre, 2013-09-17

7h15 – on se réveille (j’espère)

8h00 – petit déjeuner

8h30 – on range la salle à dîner et sa chambre

9h00 – les jeux d’équipe

11h00 – activité d’art

12h00 – déjeuner

13h00 – canot ou improvisation

15h00 – collation

15h30 – Boardwalk (une promenade sur le sentier en bois)

17h00 – on se rassemble dans la grande salle

17h30 – dîner

18h30 – les saynètes (répétition, présentation), chansons

 – promenade avec nos lampes de poche

 – soirée du cinéma en pyjama

21h00 – collation, on se couche

21h30 – couvre-feu
le jeudi 3 octobre, 2013

7h15 – on se réveille (j’espère)

8h00 – petit déjeuner

8h30 – on range la salle à dîner et la salle de jeux

– on range nos chambres, on fait nos valises

9h15 – jeu d’équipe : Prédateur et proie

11h00 – activité d’art/journal de réflexion

12h00 – déjeuner, promenade, chansons

13h00 – on recharge l’autobus

13h15 – on rentre
Appendix J.

Qui suis-je? - La toile de connectivité

La classe se divise en 2 groupes. Chaque personne reçoit une carte désignant un aspect de la nature, mais on ne la regarde pas. On peut être un animal, une plante ou un élément naturel. On doit poser des questions pour deviner “qui” on est. Ensuite, on passe une boule de ficelle en déclarant comment on est lié à la personne précédente. À la fin, tout le groupe est relié par la ficelle, qui ressemble à une grande toile.

Exemples pour deviner qui on est :

"Est-ce que je suis une plante?"

"Est-ce que je suis un animal?"

"Est-ce que j’habite dans l’eau?”...Etc.

Exemples pour la toile de connectivité:

“Je suis le saumon. Je nage dans l’eau.”

“Je suis l’aigle à tête blanche. Je mange le saumon.”

“Je suis l’air. L’aigle vole dans l’air.”....Etc.

Les cartes (une série de cartes pour chaque groupe):

<table>
<thead>
<tr>
<th>L’aigle à tête blanche</th>
<th>Le cerf</th>
</tr>
</thead>
<tbody>
<tr>
<td>La mousse</td>
<td>Le champignon</td>
</tr>
<tr>
<td>L’ours noir</td>
<td>La fougère</td>
</tr>
<tr>
<td>L’eau</td>
<td>L’écureuil</td>
</tr>
<tr>
<td>Le saumon</td>
<td>La fourmi</td>
</tr>
<tr>
<td>La feuille d’érable</td>
<td>Le soleil</td>
</tr>
<tr>
<td>La limace</td>
<td>Le conifère</td>
</tr>
<tr>
<td>L’arbre à feuilles caduques</td>
<td>L’air</td>
</tr>
<tr>
<td>Le cône</td>
<td>L’araignée</td>
</tr>
</tbody>
</table>
Appendix K.

La chasse aux trésors de la nature

La classe se divise en quatre équipes et part à la recherche des trésors de la nature. Chaque groupe reçoit une copie de la liste et doit photographier les trésors dans 10 catégories de cette liste. À la fin, les groupes montrent leurs photos à la classe.

Les trésors de la nature à photographier:

• 3 feuilles aux textures différentes
• 3 décomposeurs différents
• 3 signes qu’un animal a mangé quelque chose
• 3 traces d’animal différentes
• 3 tiges différentes
• 3 organismes qui se déplacent différemment
• 3 couleurs de sol différentes
• 3 surfaces de plante différentes
• 3 plantes de 3 couleurs ou plus
• 3 toiles d’araignée
• 3 champignons différents
• 3 trous d’animal différents
• 3 plantes utiles aux êtres humains
• 3 conifères différents
• 3 vieux organismes
• 3 jeunes organismes
• 3 sources d’eau pour un insecte
Appendix L.

Évaluation de la composition “Ma saison préférée”

Critères:
• Détails pertinents et intéressants : Quelle est ta saison favorite? Pourquoi?

Qualité du français:
• Le vocabulaire est riche
• Les verbes sont écrits correctement
• Les adjectifs s’accordent aux noms (m, f, s, pl)
• L’orthographe est précise

Structure du paragraphe:
• Introduction
• Développement
• Conclusion

<table>
<thead>
<tr>
<th></th>
<th>Ne satisfait pas aux attentes</th>
<th>S’approche aux attentes</th>
<th>Satisfait aux attentes</th>
<th>Dépasse les attentes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Détails</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualité du français</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Développement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conclusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impression globale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix M.

Évaluation du projet d’intérêt sur un animal

date: ________________________ nom: ______________________________

l’animal: ______________________________

La présentation orale est accompagnée d’...

• _____ un poster
• _____ une présentation médiatique
• _____ une autre représentation visuelle

<table>
<thead>
<tr>
<th></th>
<th>1-le travail n’atteint pas aux attentes</th>
<th>2-le travail s’approche aux attentes</th>
<th>3 – le travail atteint aux attentes</th>
<th>4 – le travail dépasse les attentes</th>
</tr>
</thead>
<tbody>
<tr>
<td>la communication</td>
<td>le message est difficile à comprendre</td>
<td>on peut comprendre le message un peu</td>
<td>le message est clair et facile à comprendre</td>
<td>le message est clair, facile à comprendre et efficace</td>
</tr>
<tr>
<td>les détails: les faits, les idées, les images</td>
<td>ce n’est pas détaillé</td>
<td>c’est raisonnablement détaillé sans images ou ce n’est pas détaillé mais il y a des images</td>
<td>c’est raisonnablement détaillé avec des images</td>
<td>c’est détaillé et bien illustré par des images</td>
</tr>
<tr>
<td>la présentation orale: la prononciation, la fluidité et le regard</td>
<td>ce n’est pas fluide, il y a beaucoup de fautes de prononciation</td>
<td>c’est un peu fluide, il n’y a pas beaucoup de fautes de prononciation</td>
<td>c’est fluide, la prononciation est bonne</td>
<td>c’est fluide, la prononciation est bonne et le regard est bon</td>
</tr>
<tr>
<td>la langue</td>
<td>il y a beaucoup de fautes et beaucoup d’anglais</td>
<td>il y a quelques fautes ou c’est copié (plagiat)</td>
<td>il y a quelques fautes mais c’est original</td>
<td>il y a très peu de fautes, c’est original et c’est bien écrit</td>
</tr>
<tr>
<td>impression globale</td>
<td>le travail n’atteint pas aux attentes</td>
<td>le travail s’approche aux attentes</td>
<td>le travail atteint aux attentes</td>
<td>le travail dépasse les attentes</td>
</tr>
</tbody>
</table>
Appendix N.

Sample day plan

Jour 30: le mardi 15 octobre, 2013

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>8h50-</td>
<td>Le réchauffement</td>
<td>On chante: “L’arbre est dans ses feuilles”</td>
</tr>
<tr>
<td>10h30</td>
<td>Le français/les sciences naturelles</td>
<td>“Qui suis-je?”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- On fait le remue-méninges de ce que nous savons sur les animaux:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Les élèves copient les notes au tableau.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Les élèves jouent à « Qui suis-je ? » (voir Appendix J) avec leurs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pairs, en partenaires</td>
</tr>
<tr>
<td>10h30</td>
<td>La récréation</td>
<td>:-) Les élèves sortent pour jouer.</td>
</tr>
<tr>
<td>10h50</td>
<td>Les maths</td>
<td>- On travaille sur les grands nombres :</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- J’écris 10 grands nombres au tableau, les élèves doivent les</td>
</tr>
<tr>
<td></td>
<td></td>
<td>prononcer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- J’écris 10 grands nombres en lettres, les élèves doivent les</td>
</tr>
<tr>
<td></td>
<td></td>
<td>écrire en chiffres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Les élèves travaillent en groupes de 3 pour montrer 3 grands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>nombres écrits en chiffres à leurs pairs, chacun à son tour, que</td>
</tr>
<tr>
<td></td>
<td></td>
<td>les 2 pairs doivent prononcer oralement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Les élèves font les exercices écrits sur les grands nombres aux</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pages 6 et 7 de leur cahier.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Nous les corrigeons ensemble.</td>
</tr>
<tr>
<td>12h00</td>
<td>déjeuner</td>
<td>:-) C’est le déjeuner chaud aujourd’hui!</td>
</tr>
<tr>
<td>12h50-</td>
<td>L’éducation physique</td>
<td>Les élèves passent l’après-midi avec Mme M. (Mme Owens travaille au</td>
</tr>
<tr>
<td>13h20-</td>
<td></td>
<td>bureau le mardi après-midi)</td>
</tr>
<tr>
<td>14h30-</td>
<td>Les sciences humaines</td>
<td>- éducation physique – le volleyball: le service</td>
</tr>
<tr>
<td>15h00</td>
<td></td>
<td>- sciences humaines – les noms des pays, le vocabulaire des formes</td>
</tr>
<tr>
<td></td>
<td>La santé et la carrière</td>
<td>géographiques</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- santé et carrière – les 4 groupes alimentaires</td>
</tr>
</tbody>
</table>
Appendix O.

Sample lesson

Day 30
Tuesday, October 15, 2013

Lesson: “Qui suis-je?”

Goal: Students will be able to ask and answer questions to identify an animal based on its characteristics

Disciplines:

- Science: biodiversity
- Language: vocabulary, question and answering skills, sentence manipulation (syntax), the 4 skills (listening, speaking, reading, writing)
- Social skills: cooperation, participation, conversation (brainstorming, partnered work)

Skills:

- Mastery of vocabulary related to animal characteristics
  - Movement : Est-ce que je vole? ...rampe? ...nage? ...marche?
  - Covering : Est-ce que j’ai des plumes? ...de la peau? ...de la fourrure? ...des écailles?
  - Number of legs : Est-ce que j’ai quatre pattes? ...deux pattes?
  - Habitat : Est-ce que j’habite dans la jungle? ...dans la forêt? ...à la ferme?
  - Colour : Est-ce que je suis brun? ...noir? ...jaune?
- Asking questions orally, using “Est-ce que... ?”
- Answering questions orally, using “oui” or “non”
  - “Oui, tu as des plumes”
  - “Non, tu n’as pas quatre pattes”
- Correlating information to arrive at a logical conclusion
  - “Est-ce que je suis un aigle à tête blanche?”

Supplies:

- white board and markers (or LED projector and screen)
- file cards or half-sheets of paper
• masking tape
• clipboard, class list

Steps:
• Brainstorm with class the vocabulary and question/answer stems. Allow them to use dictionaries, visual dictionaries and/or dictionary applications on their electronic devices. (co-construction, multimodal, zone of proximal development)

• Write the stems and vocabulary on the board for students to copy into their notebooks. Have them organize it in categories, so that related questions and vocabulary are together. (scaffolding, sorting information)

• Demonstrate a question and answer session for the students. (scaffolding)

• Practise asking questions together. Use the vocabulary and question/answer stems on the board as a guide. Leave the vocabulary and stems on the board throughout the activity, as a support. (scaffolding)

• Provide the students with file cards or half-sheets of paper to write the name of an animal on, and masking tape to attach it to their partner’s back. (kinæsthetic)

• Divide the class into groups of two. Ask them to tape the animal card to their partner’s back, without showing it to their partner. (kinæsthetic, gradual release)

• Allow the students to spread out in the room with their partners and to ask each other questions to identify the animal on their back “Qui suis-je?” (gradual release)

• Circulate to listen and provide feedback and support where needed. Use clipboard and class list to make notes on progress or questions. (formative assessment)

• Bring the class back together and have students each tell the class what they are: “Je suis un lion.” (making meaning, showing learning, closure)

Assessment:
• The assessment for this lesson is formative. I circulate and listen to the students’ conversations, and provide feedback to the students. I make notes as I go. I listen for their use of appropriate vocabulary, particularly for describing animal characteristics, language structures for questions and answers, and fluidity and pronunciation of oral French.

Outcome:
• Students were able to successfully ask and answer questions in French to identify an animal based on its characteristics.
• Students were engaged in speaking French with a sense of purpose.
• Students were proud about being able to complete this task.
• Students enjoyed the activity.

Possible extensions of activity:

• Have students make a visual representation of their animal in a sketch, collage, pastel drawing, cartoon or watercolour.
• Have students fill in an exit slip: “Aujourd’hui, je travaille avec Marc. Je suis un crocodile. Marc est une vache.”
• Have students mime their animal for the class to see if the class can guess what they are (drama improvisation).
• Have students do research to discover more information about their animal. Ask them to find 5 facts. Provide sentence stems in advance or after they’ve done their research, to support them with the language.
• Have the students answer questions from the whole class to identify their animal, or play in teams.

Reflection:

I am very pleased with this lesson. The students were engaged in learning. They were able to work independently because they had the skills and supports needed to accomplish this task. They worked cooperatively and were very motivated to do this activity. They developed multiple emerging literacies through the interdisciplinary combination of science, language and social skills in this lesson. They developed social skills through the group and partnered work, and skills for communicating and reasoning, because they needed them in order to accomplish the task.

This lesson could be improved through the possible extensions of this activity listed above. In particular, I would add a visual and dramatic arts component, and assign an inquiry research question. I would give the students the option of expanding on their own animal, or the animal they picked for their partner.

This was a simple and effective lesson that gave ownership to the students at a very early stage in Late French Immersion. They developed multiple emerging literacies, particularly in science, language and social skills. They were engaged and motivated by the activity. I would definitely do this lesson again next year.