Global Geography, Level IV
(Graduate and Academic)

NOVA SCOTIA
Labour and
Workforce Development

Acknowledgments

The Adult Education Division of the Department of Labour and Workforce Development wishes to acknowledge and thank the following faculty working group members, who

- provided guidance and professional input into the development of the document and the selection of teaching resources
- enthusiastically piloted the curriculum
- developed great learning activities with their students
- shared their learning activities

Faculty Working Group Members

Taralee Hammond – NSCC/ALP Curriculum Consultant

Meredith Hutchings – DLWD Curriculum Consultant

Anita Jackson – IT Campus

Paul Leslie – NSCC/ALP Curriculum Consultant

Leanne Lowe – Pictou Campus

Troy Perfect – Marconi Campus

Reginald Rand – Kingstec Campus

Bryan Tattrie – Truro Campus

Diane Walsh – Strait Campus

Table of Contents

Introduction

The Changing Context of Adult Education

As globalization makes world markets more accessible, workplace demographics and the scope of business are changing. Today's workers are expected to have knowledge and skills that were unimagined a few decades ago. Nova Scotians are called upon to solve more problems, make more connections, think more critically and creatively, and communicate in more ways than ever. To meet these demands, workers must embrace lifelong learning.

Adult education must respond to these challenges by providing successful learning environments. New affordable tools must be factored into adult education to create a skilled workforce that can compete in global markets.

Adults who return to formal learning are likely entering a different world of education than they previously experienced. Many adult students juggle multiple responsibilities related to parenting, employment, and community involvement.

Essential Skill Requirement for the Workplace

There is evident pressure for adults to achieve a high school graduation diploma. Nova Scotian employers expect a high school education from people applying for most entry-level jobs. Entrance into skilled trades and technologies (as well as entry-level workplace training programs) also usually requires a high school diploma. Newly created jobs often require post-secondary education.

Educational Research

The fields of education, psychology, and sociology are exploding with research. Quality curriculum development needs to be grounded upon substantive results from these studies. This document integrates key research findings that help form the foundation for outcomes, learning activities, and the assessment suggestions provided in adult learning programs.

Nova Scotia's Response: Nova Scotia School for Adult Learning and the Adult Learning Program

The Nova Scotia School for Adult Learning (NSSAL) was created in response to global, national, and provincial issues and helps adults to prepare for life and work in the 21st century. NSSAL co-ordinates and supports the delivery of these adult education programs.

The Department of Labour and Workforce Development provides funding and co-ordinates the activities of three types of delivery partners: community-based programs, the Nova Scotia Community College, and adult high schools. This funding supports tuition-free programs for Nova Scotian adults. Two of these delivery partners, community-based programs and community colleges, develop programs based on the Adult Learning Program (ALP), which is flexible in delivery and recognizes a variety of credits. The Department of Labour and Workforce Development develops this curriculum with the delivery partners, the Public Schools Branch and (when appropriate) with employers and labour market specialists. Information about the ALP can be found through the Department of Labour and Workforce Development website, http://gonssal.ca.

Five Crosscutting Themes of the Adult Learning Program

NSSAL partners have identified five crosscutting themes that have an impact on student success. These themes have been applied to all aspects of curriculum planning and program delivery. They include employability, literacy/comprehension, numeracy, technology, and inclusivity/diversity.

Employability	ALP students are in transition. Their return to learning provides an opportunity to improve their skills and better their credentials. When students can make the link between classroom learning and the real world, they usually respond with increased motivation. Instructors can enhance these connections by helping students recognize links between past experiences, natural abilities, genuine interests, and the realities of their lives. By the end of every ALP course, students should be able to make employment connections with classroom material. They should have a repertoire of employment-related resources for independent use and should understand the meaning of "employability skills". To understand what employers are looking for, the Adult Learning Program uses as a benchmark The Conference Board of Canada's Employability Skills 2000+ (www.conferenceboard.ca/education/learning-tools/pdfs/esp2000.pdf). These include the "essential skills" as defined by Human Resources and Social Development Canada (HRSDC) and are considered necessary to enter, stay in, and progress in the world of work (either independently or as part of a team). They are presented as follows with the permission of The Conference Board of Canada. The Conference Board of Canada's Employability Skills are presented in three sections: Fundamental Skills, Personal Management Skills, and Teamwork Skills.

Employability Skills 2000+

The skills you need to enter, stay in, and progress in the world of work—whether you work on your own or as a part of a team.

These skills can also be applied and used beyond the workplace in a range of daily activities.

Fundamental Skills

The skills needed as a base for further development

You will be better prepared to progress in the world of work when you can:

Communicate

- read and understand information presented in a variety of forms (e.g., words, graphs, charts, diagrams)
- write and speak so others pay attention and understand
- listen and ask questions to understand and appreciate the points of view of others
- share information using a range of information and communications technologies (e.g., voice, e-mail, computers)
- use relevant scientific, technological and mathematical knowledge and skills to explain or clarify ideas

Manage Information

- locate, gather and organize information using appropriate technology and information systems
- access, analyze and apply knowledge and skills from various disciplines (e.g., the arts, languages, science, technology, mathematics, social sciences, and the humanities)

Use Numbers

- decide what needs to be measured or calculated
- observe and record data using appropriate methods, tools and technology
- make estimates and verify calculations

Think & Solve Problems

- assess situations and identify problems
- seek different points of view and evaluate them based on facts
- recognize the human, interpersonal, technical, scientific and mathematical dimensions of a problem
- identify the root cause of a problem
- be creative and innovative in exploring possible solutions
- readily use science, technology and mathematics as ways to think, gain and share knowledge, solve problems and make decisions
- evaluate solutions to make recommendations or decisions
- implement solutions
- check to see if a solution works, and act on opportunities for improvement

Personal Management Skills

The personal skills, attitudes and behaviours that drive one's potential for growth

You will be able to offer yourself greater possibilities for achievement when you can:

Demonstrate Positive Attitudes & Behaviours

- feel good about yourself and be confident
- deal with people, problems and situations with honesty, integrity and personal ethics
- recognize your own and other people's good efforts
- take care of your personal health
- show interest, initiative and effort

Be Responsible

- set goals and priorities balancing work and personal life
- plan and manage time, money and other resources to achieve goals
- assess, weigh and manage risk
- be accountable for your actions and the actions of your group
- be socially responsible and contribute to your community

Be Adaptable

- work independently or as a part of a team
- carry out multiple tasks or projects
- be innovative and resourceful: identify and suggest alternative ways to achieve goals and get the job done
- be open and respond constructively to change
- learn from your mistakes and accept feedback
- cope with uncertainty

Learn Continuously

- be willing to continuously learn and grow
- assess personal strengths and areas for development
- set your own learning goals
- identify and access learning sources and opportunities
- plan for and achieve your learning goals

Work Safely

- be aware of personal and group health and safety practices and procedures, and act in accordance with these

Teamwork Skills

The skills and attributes needed to contribute productively

You will be better prepared to add value to the outcomes of a task, project or team when you can:

Work with Others

- understand and work within the dynamics of a group
- ensure that a team's purpose and objectives are clear
- be flexible: respect, be open to and supportive of the thoughts, opinions and contributions of others in a group
- recognize and respect people's diversity, individual differences and perspectives
- accept and provide feedback in a constructive and considerate manner
- contribute to a team by sharing information and expertise
- lead or support when appropriate, motivating a group for high performance
- understand the role of conflict in a group to reach solutions
- manage and resolve conflict when appropriate

Participate in Projects & Tasks

- plan, design or carry out a project or task from start to finish with well-defined objectives and outcomes
- develop a plan, seek feedback, test, revise and implement
- work to agreed quality standards and specifications
- select and use appropriate tools and technology for a task or project
- adapt to changing requirements and information
- continuously monitor the success of a project or task and identify ways to improve

The Conference Board of Canada

255 Smyth Road, Ottawa
ON K1H 8M7 Canada
Tel. (613) 526-3280
Fax (613) 526-4857
Internet: www.conferenceboard.ca/education

Literacy/ Comprehension	Literacy/comprehension recognizes the importance of students' abilities to understand, synthesize, and form critical perspectives around reading material, as well as express ideas in writing. As a fundamental skill, literacy is emphasized throughout the ALP curriculum. There seems to be a strong correlation between fluent literacy skills and successful daily living. Research identifies how reading needs to be strategically taught in order for comprehension to improve. For students who struggle with literacy/comprehension skills, guided instruction is essential to improve effective reading strategies. All ALP instructors must build the skills and confidence their students need to focus on reading comprehension and writing development during classroom activities. When literacy is highlighted as a crosscutting theme, instructors are challenged to find opportunities to strategically teach reading, writing, and comprehension skills. This involves understanding where reading decoding and comprehension breaks down for each student. Coaching students to identify their effective reading strategies means that they become an integral part of the solution.
Numeracy	The ability to solve daily living and workplace problems using math skills is becoming increasingly important. Although digital tools asssit with computation, independent problem-solving strategies are highly valued by employers. This is especially evident in trades and technologies where math skills are required to apply for the job and retain it. Direct instruction with practical examples is required to teach students why particular mathematical skills to solve problems. It is important for students to integrate learned math skills at home and at work. According to statistical data, educators face serious challenges to improve the numeracy skills of Nova Scotian students. During the years 2002–2009, there was a decrease in students who successfully completed the math portion of the General Equivalency Diploma (GED). In spite of this, students have made great strides in math when offered leadership and a collaborative environment. ALP instructors can help students to improve their numeracy skills by making direct connections to the mathematics and problem-solving skills required in their subject areas.

Inclusivity/diversity	ALP students come from diverse backgrounds and cultures. Some have diagnosed disabilities; others have serious blocks to learning that have not been identified. Knowing and respecting students as individuals is essential for them to reach their potential, especially since low self-esteem often prevents ALP students from achieving. In order to address this prevalent issue, the ALP environment was created from respect for adult students, their heritage, and their individual ways of learning. Teaching the value and acceptance of personal differences is one of the most rewarding things an ALP instructor can do. The key is positive communication. The crosscutting themes of inclusivity and diversity, when facilitated, ensure that all students feel welcome, supported, and respected. This allows ALP instructors to help students in building their confidence and defining their goals. The ALP curriculum encourages students and instructors to explore and celebrate who they are by: • embedding personal and cultural explorations into course outcomes and demonstrations • suggesting activities that require students to reflect on their backgrounds, culture, communities, attitudes, learning strengths, and challenges • providing appendices with activities to help students and instructors recognize their backgrounds and prior knowledge before going on to learn new knowledge or skills • incorporating assistive technology into teaching and learning activities and resources
Technology	Technology affects everyone in Nova Scotia. Whether it's gas pumps that accept credit cards, high-speed Internet, or programmable household appliances, technology is everywhere. Many labour-intensive jobs have disappeared or merged with technology, requiring applicants to have skills in this area. Integrating technology into all aspects of the Adult Learning Program helps ALP students gain confidence and skills in using these technologies.

Technology (cont'd)	Technology permeates the curriculum guides to reflect a various uses and functions: • **Basic Operations and Concepts:** concepts and skills associated with the safe, efficient operations of a wide range of information technologies • **Productivity Tools and Software:** the efficient selection and use of technology to perform tasks including: – idea exploration – data collecting – data manipulation, including the discovery of patterns and relationships – problem-solving – representation of learning • **Communications Technology:** the use of specific, interactive technologies that support collaboration and sharing through communication • **Research, Problem Solving, and Decision Making:** the organization, reasoning, and evaluation by which students rationalize their use of technology • **Social, Ethical, and Human Issues:** the understanding associated with the use of technology that encourages students to build and improve their learning environments and to foster strong relationships with their peers (and others who support their learning) ALP instructors assist students to embrace technology by providing them with choices of learning resources including media and the Internet. In addition, ALP instructors offer assistive technology options for students who want to determine if certain hardware/software applications can help them learn. In so doing, students gain the confidence and skills required, ensuring their employability in the changing workplace.

Benefits of Outcomes-Based Curriculum for Adult Students

Curriculum outcomes are the foundation for all ALP curriculum guides. They clearly state what students are expected to know, do, and value at the end of every ALP course.

Demonstrations provide details and clarification about the knowledge, skills, and attitudes expected to complete each learning outcome.

Outcomes and demonstrations clarify goals for instruction. They also assist instructors and students to focus on relevant learning experiences that will achieve these results. Only a student can achieve an outcome; instructors, textbooks, or groups of students cannot. When planning, it is important to consider what criteria indicate whether a student has achieved the desired outcome and how the instructor may lead the student to that point. This process is as diverse as the students.

Outcomes-Based Curriculum Encourages Effective Adult Learning Principles

As outlined in the table below, outcomes-based curriculum encourages effective adult learning principles.

Provides Opportunities for prior learning and recognition (PLAR)	Organizing an adult program around specific outcomes and demonstrations provides opportunities for students to demonstrate that their prior knowledge, skills, and attitudes are equivalent to part or all of the outcomes and demonstrations of a course. This process of prior learning and recognition (PLAR) can help students avoid unnecessary repetition as they navigate through the ALP toward their goals.
Encourages student self-reflection, self-assessment, and goal setting	Clear outcomes place students at the centre of the goal-setting and assessment process. Self-assessment is a metacognitive process involving self-observation and self-awareness, leading to the active steps of self-regulation and the continuation of this cycle. As the active agent in this process, students can be encouraged to identify their strengths and weaknesses and to set both personal and career goals. Instructors can help students establish criteria for measuring their success. The appendices for ALP courses often include self-reflections to encourage students to self-assess and take responsibility for their learning.
Promotes flexibility of delivery	ALP curriculum guides suggest sequences of instruction and how to organize the outcomes into units. However, instructors can choose how best to teach the outcomes and demonstrations based on the needs and interests of their students.

Adapted from the *Public Schools Program, 2003-2004 (*Nova Scotia Department of Education)

Features of ALP Curriculum Guides

Course Design Information	• Defines the rationale for the course, key messages, some delivery options, and course outcomes
The Two Page, Four-Column Spread	• Illustrates how learning experiences flow from learning outcomes • Provides suggestions for teaching and learning for specific outcomes • Shows the relationship between outcomes and assessment strategies • Allows instructors to read the curriculum outline in many different ways • Makes it easier to search for specific information
Column One: Outcomes and Demonstrations	• Describes what students are expected to know, to be able to do, and value by the end of the course.
Column Two: Suggestions for Teaching and Learning	• Offers a range of suggested learning opportunities to be used in various combinations. It is not necessary for instructors to use all of these suggestions, not is it necessary for students to engage in the same learning experiences. Suggested activities emphasize and integrate ALP's five cross-cutting themes: literacy/comprehension, numeracy, employability, technology, and inclusivity/diversity.
Column Three: Suggestions for Assessment	• Offers a range of suggested tasks that students can perform to demonstrate achievement of the outcome, such as report on investigations, present research, and answer questions. Instructors use a range of strategies, including observations, conferences with students, portfolios, learning logs, and journals to gather information on each student's learning. Students are also involved I assessing their own and each other's work.
Column Four: Resources and Notes	• Suggests resources that may help students achieve learning outcomes. The resources can also motivate, reflect an appropriate reading level, and support a range of differing learning preferences, styles, and needs.
Appendices	• provides instructors with additional information or prepared activities to support the learning outcomes.

Adapted from the *Public Schools Program, 2003-2004 (*Nova Scotia Department of Education)

Characteristics of Effective ALP Delivery

Sharing an understanding about effective instruction will help NSSAL partners to deliver the ALP curriculum successfully. The following principles of adult learning are part of an effective program.

Principle of Learning	**Role of Instructors and Administrators**
Learning is a process of actively constructing meaning.	• create learning environments that foster investigation, debate, participation, exploration, communication, questioning, collecting, and finding ways to predict • provide students with meaningful experiences • help students to develop methods of learning
Students construct knowledge and make it meaningful by relating it to their prior knowledge and experiences.	• find out what students already know and can do • create learning environments and plan experiences that build on students' prior knowledge • acknowledge and respect students' learning experiences that may influence their ways of perceiving, thinking, feeling, and approaching the world • respect and support students' racial, cultural, and social identities • recognize, value, and use the great diversity of experiences and information students bring with them • make sure that the students see themselves reflected in the presented learning materials • ensure students are challenged to build on their prior knowledge, integrating new knowledge with existing understanding
Learning is enhanced when it takes place in a social and collaborative environment.	• ensure that discussion, group work, and collaborative ventures are central to classroom activities • structure opportunities for students to engage in diverse social interactions • ensure that students recognize the importance of transferring social and collaborative skills into their everyday lives • help students to see themselves as members of a community of learners

Principle of Adult Learning	Role of Instructors and Administrators
Students need to view learning as an integrated whole.	• plan opportunities to help students make connections across the curriculum and link them with the outside world • provide students with opportunities to apply strategies from across the curriculum to problems in real situations
Students must see themselves as capable and successful.	• ensure that all students experience genuine success on a regular basis • value experimentation and approximation as signs of growth • provide learning experiences and resources that reflect the diversity of the local and global community • provide learning opportunities that develop self-esteem without using self-esteem as a goal in itself
Students have different ways of representing knowledge.	• recognize each student's preferred style of constructing meaning and provide opportunities for exploring alternative ways • recognize, acknowledge, and build on students' diverse ways of representing knowledge • plan a wide variety of open-ended experiences and assessment strategies
Reflection is an integral part of learning.	• observe and reflect on their own learning processes and experiences • challenge their own beliefs and practices through continuous reflection • encourage students to observe and reflect on their own learning processes and experiences • encourage students to acknowledge and articulate their learning needs, styles, and preferences • help students use their reflections to change their behaviours and adjust their learning strategies

Adapted from the *Public Schools Program, 2003-2004 (*Nova Scotia Department of Education)

Creating an Effective ALP Learning Environment*

ALP students have struggled to learn adequate literacy and numeracy skills and are now returning to learning to try one more time. ALP instructors need to meet their act of courage with an equal response of respect. The ALP curriculum is designed to use several elements that help instructors encourage their students by creating a safe and effective environment:

- creating a welcoming environment
- taking different roles with students
- identifying different learning profiles
- differentiating instruction to support learning profiles
- engaging students
- organizing learning experiences to engage students

Creating a Welcoming Environment

As teachers select learning experiences that engage and motivate, they must remember that they are not just teaching a group of students, they are teaching a group of individuals, many of whom take great pride in being—and staying—unique. A "one-size fits all" approach will likely have little effect. Engaging students starts with knowing the students—each of them. Beyond students believing in their own abilities and capabilities, teachers must believe as well, and communicate their belief through the efforts they make to include students as partners in their learning.

Taking Different Roles with Students

To support students as they engage with learning, and to help them stay with it, instructors need to take on many roles: role models, instructors, assessors, supporters, and advocates. They need to try many approaches: motivate, model, provide explicit instruction, coach, integrate literacy skills, and integrate technology.

Identifying Different Learning Profiles

ALP courses focus on developing students into effective, life long learners. The majority of ALP students have struggled their whole lives with learning. During their time in ALP, students have an opportunity to identify their learning profiles and figure out their most effective learning strategies. Instructors play a key role by asking questions during the learning process:

- What factors are necessary for this student to learn?
- Where do any breakdowns occur?
- Can weaknesses be strengthened using interventions, or is it best to find ways around these problems, using accommodations?
- How can we make the most of natural inclinations and affinities?

* Portions of this section have been taken from the Nova Scotia Department of Education publication *Options and Opportunities*

To help develop learning profiles, the appendix contains information about Dr. Mel Levine's eight Neurodevelopmental Learning Constructs. Dr. Levine has spent his career helping students with learning difficulties, and he has developed a process to pinpoint the breakdowns in learning that interfere with an individual's academic success. This process involves input from students and instructors and a close examination of learner work. Each of the functions of the brain that can affect a student's learning and performance is considered, including memory, language, attention, and the ability to organize information. Also considered are neuromotor functions such as fine and gross motor skills or physical coordination, as well as social cognition (the ability to understand as well as to have successful social interactions) and higher-order cognition (being able to solve problems, think critically, or reason about one's self and the world).

The appendix includes some overview information about how to support students who are struggling. In order to best support students who struggle, we need to understand the demands of the tasks we are asking them to complete. If the tasks or outcomes require students to use their weak areas, instructors need to be flexible with their methods of instruction, try different approaches, and whenever possible, ask students to use their strengths when working in areas where they struggle.

Differentiating Instruction to Support Learning Profiles

Partnerships between students and teachers, and based on their understanding of the learner's learning profile, allow instructors to help students find ways to become more productive learners. The whole process encourages students to feel optimistic, to collaborate, and to recover their motivation by giving them a positive vision of their futures.

In the appendix, the curriculum guide offers teaching suggestions to reinforce constructs that get in the way of meeting outcomes. It also offers a range of teaching suggestions that use a variety of media, technology, and other ways to vary the teaching and learning environment.

Engaging Students

Instructors should consider the following suggestions for engaging students:

- Seek to know the person within the learner. Although student surveys or inventories can be helpful, nothing beats a one-to-one conversation. Each of us appreciates when someone shows sincere interest in our lives, in who we are, and in what matters to us. Be willing to share a little about yourself—as a person. Letting students know who we are helps build trust, the foundation for the teacher-learner relationship.
- Build in opportunities for students to have a voice. Many students feel that they have been excluded from their past learning experiences. Invite their views and opinions in meaningful contexts and create genuine opportunities for them to see their voices in action.
- Collaborate when you set criteria for learning and for individual assignments. Your involvement will ensure that certain goals are included; inviting student input will help them own the learning and related tasks; they will be more interested, motivated, and engaged, and they will learn more.
- Set goals that are attainable and that will promote a sense of accomplishment and self-satisfaction. It is essential to invite students to be part of setting learning goals.
- Offer choice, whenever possible
  - of reading material

  - of methods to present knowledge and information
  - of the topic for assignment or the focus within a topic
- Remember this: as important as it is to be positive and encouraging in our response to student work, it is equally important to be honest and sincere in order to develop a trusting relationship.

Engaging Students through Interactive Learning

Interactive learning is built on this premise: we learn best when we engage our minds, and we are more apt to engage when we interact with others. Instructors take the lead in guiding students to become more-effective learners when they create opportunities using explicit teaching and modeling, and monitor focused, interactive strategies for learning.

Many strategies are described in this document. Taking the time to read the research behind these strategies will help instructors understand why certain strategies work, how to make suitable adaptations, and how to create supports to help them make learning more relevant and engaging to all students.

Here are a few strategies that put interactive learning into practice. Most require students to interact in small discussion groups. Research suggests that this can be more effective than open dialogue between the instructor and a larger group where often only a small number of students participate while others remain uninvolved.

Front Loading

Effective teaching practice recognizes that many students approach a new concept or piece of text with limited familiarity. These students then have a difficult time making sense of new information since they have few “hooks” on which to connect new learning. Front loading is a pre-reading strategy in which students are given time to share their understandings of the key terms and background information, to build prior knowledge, which, in turn, creates those “hooks” or links to new learning so necessary to constructing meaning.

Using Authentic Materials for Real Purposes

Authentic materials and resources give students instant feedback about how their literacy and numeracy skills are increasing.

When they read newspapers, magazines, graphs, tables, websites, menus, workplace documents, and other materials found throughout their communities, it reinforces that they have joined the “club” of readers, writers and math savvy adults. In apprenticeship circles, learning by doing is widely recognized as the most effective path to personal mastery.

Developing Self-Esteem through Expertise

Activities that embody a series of outcomes and relate them to one another and that use a range of resources let students make more connections that mean something to them. After they work with one topic over a significant period of time, students are able to build up a body of knowledge and expertise. The goal is that they will become enthusiastic about the topic. Powerful by-products of this process are that they change students’ perspective about their self-worth and their self-esteem grows.

Providing Meaningful Assessment

Assessment differs from evaluation. Effective assessment helps guide students to continue to learn and explore. Instructors may give informal feedback, such as in a conversation, or more formal feedback, such as through written comments or by placing a learner within a rubric. A rubric is usually a chart that describes students' work on a scale from poor quality to exceptional quality. It can be created with students or for them and provides particular criteria for whatever is being assessed. This gives students more detailed feedback about where their work sits on a scale and provides a road map for improvement. Assessments are usually given frequently, to help both students and teachers plan their instructional activities. In the curriculum document, each outcome suggests assessments that are appropriate.

Evaluation provides students with a rank or mark so that they can see how their progress compares with other students. Evaluation is often provided at the end of a learning cycle.

Both assessments and evaluations are useful; ALP instructors will need to be selective in their use.

To determine when to use an assessment, consider the following questions:

- Is the feedback providing clear and useful information to the student about their progress?
- Can the student make use of this feedback in order to progress?
- What effect will this feedback have on the motivation of the student to continue learning?
- Does the feedback lead the student and instructor to set specific goals?
- Does the feedback help the instructor to plan the most suitable learning activities for this student?

To determine when to use an evaluation consider the following questions:

- Is the feedback providing a final summary about the learner's progress for a section of learning?
- Will the feedback help to inform students about why they are moving on or not moving on to a new section of learning?
- Will the feedback help students understand the parts of the learning where they excelled and where they require more attention?

Characteristics of Effective ALP Assessment

Assessment is the systematic process of gathering information on student learning in order to improve student success and provide a basis for evaluation. High-quality assessment practices are essential to high-quality education. Effective assessment practices contain the following characteristics:

Assessments promote learning.	▪ Assessments should be used to help students recognize their learning strengths and identify ways they can further develop. ▪ Assessments can provide valuable insights about students' learning needs and styles, and instructors can use assessments to give students useful feedback and guide their efforts toward improvement.
Assessments influence the instructor's approach.	▪ Reflecting on this information helps instructors to evaluate the effectiveness of their instructional approaches and to adjust them accordingly.
Assessments inform evaluation.	▪ Evaluation is the process of analyzing, reflecting upon, and summarizing information from assessments and making decisions based upon the information gathered.
Assessments vary with contexts and needs.	▪ A variety of assessment strategies can provide valuable insight about students' strengths to ensure that the instructor is recognizing their diverse learning needs.
Assessments help students to set realistic career and life goals.	▪ Assessments provide foundations and milestones for setting time lines for ALP students and instructors. ▪ Achievement gives students the motivation to set goals. • ALP students will develop their portfolios based on these goals, which in turn will act as a tool to help them reach future goals.

Assessing "The Big Six" Reading Strategies

"The Big Six" refer to reading comprehension strategies that support readers as they aim to construct meaning and become aware of what they understand through interacting with text. These strategies are (1) pre-reading, (2) decoding, (3) fix-up, (4) navigation, (5) comprehension, and (6) making connections.

A NSSAL Reading Assessment assists ALP instructors to identify students' strengths and weaknesses with each of these Big 6 reading strategies.

Instructors can then teach students to improve their specific weak reading strategies. For struggling readers, who may have diagnosed or undiagnosed learning disabilities, particularly in the area of decoding, instructors can provide students with intensive computer-based training programs to improve their weak decoding skills or teach them to integrate assistive technology solutions such as text to speech into their study and daily living skills.

Assessing the Six Traits of Writing

NSCC ALP instructors developed a rubric for assessing the 6 traits of writing; (1) Ideas/Purpose, (2) Organization, (3) Audience/Voice, (4) Word Choice/Spelling, (5) Sentence Fluency and Grammar, and (6) Punctuation. In addition, the students' reliance on assistance during the writing process was also considered as a separate category (7) Process. This Writing Rubric is provided in Appendix A.

Instructors can then teach students to improve their specific weak writing traits. For struggling writers, who may have diagnosed or undiagnosed learning disabilities, particularly in the area of spelling, instructors can teach them to integrate assistive technology solutions such as word prediction, or speech to text features into their study and daily living skills.

Sharing Ideas Through Online Resources

NSCC provides ALP instructors with online support where activity descriptions, teaching materials, and resources are organized by unit. NSCC instructors are provided an electronic version of this course map which they can customize for use.

In this document, all activities marked with this symbol, nscc, are available electronically. These electronic versions include additional descriptions, teaching materials such as handouts, and links to resources.

A NSSAL instructor website has also been developed where instructors can search as well as post learning activities (http://instructors.gonssal.ca/). The password and login information are available through the Department of Labour and Workforce Development, Adult Education Division. There are numerous Social Studies activities. Many activities and resources that are made available on this website can be modified and made applicable for use with NSCC ALP students.

Global Geography Level IV

Changes to Global Geography Level IV Curriculum

Rationale for Curriculum Review

The decision to review the Global Geography Level IV curriculum was made for several reasons.

(1) Need for Graduate and Academic level courses
In a 2006 survey, NSCC ALP instructors identified a need to revisit the Level IV Global Geography curriculum. Instructors and students wanted there to be a Graduate as well as an Academic Global Geography course. Offering two distinct levels of geography oriented courses provides students with increased options for success and more pathways into NSCC or other post-secondary programs.

(2) Career exploration outcomes
These revised courses include outcomes asking students to explore geography related programs at NSCC to inform them about possible career and employment opportunities. For example, some post-secondary courses require academic geography prerequisites and these explorations will help students to take the appropriate courses required for their career and postsecondary learning path.

(3) Focus on geographic technology tools
Since geography-related occupations rely on GPS (Global Positioning Systems) and GIS (Geographic Information Systems), the FWG decided to infuse technology tools as fundamental components of these new courses. ALP Global Geography instructors will find technology related outcomes and resources throughout these courses. The key difference between the Academic and Graduate level Global Geography courses rests in the application of these tools. Graduate students will be introduced to these tools and will apply them to explore some basic geographic questions. Academic students will complete additional outcomes which require them to use these tools to gather, manipulate, and interpret data from a variety of sources.

(4) Academic and Graduate course overlap for flexible delivery
The faculty working group developed five units that can be delivered at Graduate or an Academic level.. This structure provides enough overlap for students to identify which level of the course matches their skill sets as well as their career aspirations. This overlap also provides instructors with opportunities for students from both courses to work and learn together. In addition, some of the outcomes from Unit Three: Human Population may overlap with work students may be doing in their elective course ALP LIV Sociology. Unit Four: Resource Management may link to work being completed for ALP Global History IV, or ALP Science IV.

(5) Infusion of the ALP Five Cross-cutting Themes
The focus of curriculum design had changed since the original inception of Level IV curriculum in 2001. With the introduction of the five crosscutting themes (employability, literacy/comprehension, numeracy, inclusivity/diversity, and technology), greater emphasis on outcome-based curriculum, and the

assignment of the Adult Education Division to the Department of Labour and Workforce Development (LWD) it was time to align the Level IV Global Geography curriculum to meet these new priorities.

The Big Picture - ALP LIV Global Geography

The following flow chart shows the five required units of Level IV Global Geography. These have been presented in a suggested order. Instructors and students may choose to alter this order.

Unit One: Why Geography Matters

Graduate and Academic students are introduced to fundamental geographic concepts, terms and tools and explore how various geographic tools are used in a variety of occupations.

↓

Unit Two: Planet in Peril

Graduate and Academic students use technology tools to investigate various issues resulting from the relationship between people and our planet.

Academic students extrapolate and manipulate data to predict differing potential scenarios.

Graduate and Academic students explore how various occupations apply knowledge of physical geography.

↓

Unit Three: Human Population

Graduate and Academic students use technology tools to analyze the implications of human population growth and distribution, and compare models of urban development.

Academic students extrapolate and manipulate data to predict plausible future scenarios for an urban area.

↓

Unit Four: Resource Management

Graduate and Academic students use technology tools to analyze factors that affect global production, distribution and consumption of resources..

Graduate and Academic students explore how various occupations apply knowledge of GIS technology.

Academic students extrapolate and manipulate data to predict plausible future scenarios where global resource scarcity may cause conflicts.

↓

Unit Five: Research Project

Graduate students conduct and present research on an issue of personal interest.

Academic students formulate and support a strategy using the geographic method in response to a specific geographical issue, through the manipulation of data.

Unit One: Why Geography Matters

Unit Description

Graduate and Academic students are introduced to fundamental geographic concepts, terms and tools and explore how various geographic tools are used in a variety of occupations.

Graduate and Academic Outcomes

1.1 Identify key concepts, skills, and problem solving and analytical methods used by geographers

- explain the concepts; the global village, interconnectedness, interdependence, geographic method, Commoner's Laws of Ecology,
- explore the concept of "place" to human activity and culture
- compare how different spatial tools (maps, Google Earth, aerial photography, GIS, GPS, atlases) define regions of the earth

1.2 Describe how geographic tools are used in different occupations (NSCC courses)

Unit Two: Planet in Peril

Unit Description

Graduate and Academic students use technology tools to investigate various issues resulting from the relationship between people and our planet. Students also explore how various occupations apply knowledge of physical geography.

Academic students extrapolate and manipulate data to predict differing potential scenarios.

Outcomes:

2.1 Investigate the relationship between the state of the planet and humans by manipulating data

- describe geographic issues using computer-based technology (e.g. GIS, spreadsheets, web-browsers, and presentation software)
- formulate an argument about the current state of an issue (relating to the planet in peril) using the discipline of geography

2.2 Describe how occupations (NSCC courses) apply knowledge of physical geography

Academic Outcomes:

2.3 Propose contrasting scenarios for an issue that impacts Planet Earth, (e.g. desertification, deforestation, global warming), through the use of quantitative and qualitative methods.

- extrapolate data to predict differing results for contrasting human interventions including practices, policies and / or laws
- identify bias in the differing results

Unit Three: Human Population

Unit Description

Graduate and Academic students use technology tools to analyze the implications of human population growth and distribution, and compare models of urban development.

Academic students extrapolate and manipulate data to predict plausible future scenarios for an urban area.

Outcomes:

3.1 Analyze the implications of growth, distributions, and densities

- (see link to math outcomes including graphs, measurement)
- explain patterns of population distributions and densities
- demonstrate an understanding of various measures of Quality of Life or other human development indices.
- interpret aspects of global population, using vital statistics as tools
- compare various cultural perspectives on population issue(s) (link to LIV Sociology and LIV Communications: Cultural Literacy)
- evaluate models of urban structure in developed and developing countries

Academic Outcomes:

3.2 Predict plausible future issues for a specific urban location through the manipulation of data, including census statistics, socioeconomic data, flow patterns and related infrastructure (e.g. aging population and available services, waste disposal and management, crime and crime prevention).

Unit Four: Resource Management (link to Global History, Science IV)

Unit Description

Graduate and Academic students use technology tools to analyze factors that affect global production, distribution and consumption of resources. Students also explore how various occupations apply knowledge of GIS technology.

Academic students extrapolate and manipulate data to predict plausible future scenarios where global resource scarcity may cause conflicts.

Outcomes:

4.1 Analyze factors that affect the global production, distribution and consumption of resources e.g. food, water, oil

- gather data on contemporary global patterns of production, distribution and consumption of resources
- analyze resource management issues by manipulating data using technology (e.g. GIS, spreadsheets, web-browsers, and presentation software)
- interpret the effects of global production, distribution and consumption of resources on Quality of Life throughout the world through a case study approach

4.2 Describe how occupations (NSCC courses) apply knowledge of GIS technology

Academic Outcome:

4.3 Predict at least two plausible future scenarios where "Northern" countries might conflict over access to a resource or commodity (e.g. water, oil, carbon credits, sugar, corn etc.) (direct link to Global History Academic outcome)

Unit Five: Research Project

Unit Description

Graduate students conduct and present research. (independently or collaboratively). on an issue of personal interest.

Academic students formulate and support a strategy, (independently or collaboratively), using the geographic method in response to a specific geographical issue, through the manipulation of data.

Graduate Outcome:

5.1 Conduct and present research on an issue raised in this course that is of personal interest using the geographic method

Academic Outcome:

5.2 Formulate and support a strategy using the geographic method in response to a specific geographical issue, through the manipulation of data using GIS and other technologies

- use technology to analyze supporting documents (maps, graphs, charts, reports)
- create supporting documents (maps, graphs, charts, reports) using technology
- share the project through a display or report.
- respond to feedback.
- reflect on the process of creating the project and how it applies to your life

Integrating the Five Cross-Cutting Themes into ALP LIV Global Geography

	To integrate the themes, the Global Geography LIV curriculum	**As evidence of integration students will**
Literacy/ Comprehension	• integrates reading and writing activities • emphasizes literacy skills as thinking skills • focuses on literacy as a tool for effective learning/organizing/working • focuses on applying effective reading and writing strategies • suggests a variety of texts and sources of information to broaden the application of literacy skills • integrates media literacy skills in order to interpret information from a variety of media sources • integrates geographic technology tools to apply literacy and comprehension strategies to the interpretation of documents and data from charts, reports, maps and other formats • focuses on literacy as a learning tool to understand, retain, and use information to achieve personal/career goals	• identify and use effective reading comprehension skills (The Big 6: pre-reading, decoding, fix-up, navigation, comprehension, making connections) to understand information presented in a variety of ways (e.g. texts, technology guides, websites, documents, maps, charts, graphs) • be able to understand information presented via the Internet and a variety of media including TV, radio, magazines, newspapers • take notes to retain information • select and use written and graphic organizational tools to gather, compare, and present ideas • form and express opinions using evidence from credible sources • respect the opinions/views of others • plan, draft, write, revise, and edit written work • recognize effective strategies to learn, retain, and use new vocabulary
Numeracy	• focuses on gathering, interpreting, analyzing, and manipulating geographically related numerical information such as statistical data, from charts, graphs, reports, and GIS software • applies problem-solving skills identified in mathematics to solve geography related problems	• recognize the mathematical processes and skills required to solve geographic problems • refers to mathematical resources to assist in solving geographic and GIS related problems • use abstract thinking skills to solve multi-step problems • use mathematical formats to present statistical information

	To integrate the themes, the Global Geography LIV curriculum	As evidence of integration students will
Inclusivity / Diversity	• suggests learning activities and resources to foster awareness and respect for all cultures • provides frequent opportunities for students to select activities and topics of personal interest and relevance • provides opportunities for students to complete activities and projects that can meet outcomes for other ALP LIV courses (e.g. Science, Global History and Sociology) • encourages instructors to match student learning needs with appropriate learning activities and resources	• respect the opinion and views of others • discuss personal learning strengths and challenges with instructors to identify ways to successfully meet the learning outcomes • make choices to select activities and topics that match personal interest, background knowledge, and future goals • demonstrate respect for their own culture and the cultures of others • integrate adaptive and assistive technology tools as required to optimize learning
Technology	• focuses on the use of GPS and GIS technology tools and software to meet the course outcomes • requires LIV Academic Global Geography students to apply higher order thinking skills to manipulate and interpret data to respond to geographic global issues • requires students to research how GPS, GIS and related geographic technology and software tools are applied in occupations • integrates the use of multimedia resources to engage students with current, and relevant global issues • encourages instructors to teach students how to integrate adaptive and assistive technology tools for faster and more effective learning	• demonstrate facility in the use of GPS and GIS technology and software tools to meet the course outcomes • integrate the use of technology and the Internet as a source of information, taking into consideration the validity and credibility of the source of information • use a variety of multimedia resources to engage with global geography topics and issues • use a variety of software tools to gather, organize, and present assignments • integrate adaptive and assistive technology tools as required
Employability	• includes outcomes requiring students to research and present how various occupations apply geographic knowledge and technology tools • includes an outcome requiring students to research and present how various NSCC courses apply geographic knowledge and technology tools • encourages students to select activities and assignments based on career goals and interests • includes career related resources and workplace documents as content to foster	• select global topics of personal interest matching future goals • research potential careers and jobs that apply geographic knowledge and technology tools • research NSCC courses that apply geographic knowledge and technology tools

	To integrate the themes, the Global Geography LIV curriculum	**As evidence of integration students will**
	effective communication skills	

Global Geography, Level IV Units

Unit 1: Why Geography Matters

Focus Statement – Students are introduced to fundamental geographic concepts, terms and tools and explore how various geographic tools are used in a variety of occupations.

Outcomes	Demonstrations
1.1 Identify key concepts, skills, and problem solving and analytical methods used by geographers	• explain the concepts; the global village, interconnectedness, interdependence, geographic method, Commoner's Laws of Ecology
	• explore the concept of "place" to human activity and culture

Unit 1: Why Geography Matters

Focus Statement – Students are introduced to fundamental geographic concepts, terms and tools and explore how various geographic tools are used in a variety of occupations.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • nscc Website Credibility: explore issues of information source credibility (e.g. website evaluation activities) • nscc Unit 1 Textbook Guide:: read the text, Global Connections, Chapter 1, and use the study guide to understand key concepts and vocabulary. Develop a glossary of geography related terminology including; Global Village, Sustainable Development, United Nations, MDC's, LDC's, LLDC's, Thresholds, Sustainable Society, and North-South Gap • nscc Interconnectedness Case Studies & nscc Understanding our Interconnected Universe: show evidence of understanding the concept and implications of an interconnected planet. For example, view and present personal reflections about ideas presented in films and media such as the Suzuki film, "It's Not Empty Space" and reflect on ideas of interconnectedness, and Suzuki's statement that "We are the earth." **Optional Activities** • explain the issue of plagiarism and use standards for citing sources • map personally relevant locations plotting these on a variety of maps using a variety of geographic tools and information • nscc What is Geography? The 5 Themes: explore six key geographic concepts; location, region, spatial pattern, spatial interaction, human/environmental interaction, and culture. For example, produce "Compare-Contrast" chart to determine how these concepts differ in at least two differing geographic areas • nscc Commoner's Four Laws of Ecology: read about Commoner's Laws in text and complete the case study, The Refireproofing of Florida	**Print Resources:** • Global Connections - Chapter 1 • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Global Connections Study Guide for Unit 1 • Global Connections Study Guide for Unit 1 - answer key **Geographic Tools:** **Software Tools:** • Word processing software • Inspiration Templates – Comparison, Venn Diagram • Word prediction software (e.g. Word Q) **Media Resources:** • Suzuki Speaks/ It's Not Empty Space **Online Resources:** • see Appendix A: Resources • see specifics for each online activity
Core Activities • nscc Maps: make maps of personally relevant places such as the homes of family and friends **Optional Activities** • discuss family history(ies) and what factors cause families to settle in communities and move from one location to another • discuss the relationship between place and culture	

Unit 1: Why Geography Matters

Focus Statement - Students are introduced to fundamental geographic concepts, terms and tools and explore how various geographic tools are used in a variety of occupations.

Outcomes	Demonstrations
Cont'd **1.1 Identify key concepts, skills, and problem solving and analytical methods used by geographers**	• compare how different spatial tools (maps, Google Earth, aerial photography, GIS, GPS, atlases) define regions of the earth
1.2 Describe how geographic tools are used in different occupations (NSCC courses)	

Unit 1: Why Geography Matters

Focus Statement - Students are introduced to fundamental geographic concepts, terms and tools and explore how various geographic tools are used in a variety of occupations.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • Maps: complete activities to explore various mapping tools, for example activities adapted from the Oxford School Atlas Teacher's Resource • Introduction to GPS: explain the basic use and function of a GPS unit. Use a GPS to find and track routes, set waypoints, and mark objects. Download these markers from the GPS to a computer to use in combination with additional geographic information • GIS: Mapping Our World - Geographic Inquiry in ArcMap: complete Mapping Our World Module 1: Geographic Inquiry in ArcMap; Lesson 1: The basics of ArcMap & Lesson 2: The geographic inquiry process **Optional Activities** • Geocaching: use maps to complete geographic tasks; e.g. find "treasures" through geocaching, plot frequently used routes, map out the spread of current events such as communicable diseases • • Intro to Google Earth: explore personally interesting and relevant locations on the earth through a variety of geographic tools such as print maps, atlases, online maps, Google Earth etc. • map travel routes (personal or family) over a week	**Print Resources:** • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Mapping Our World - Module 1 • Global Connections Study Guide for Unit 1 • Global Connections Study Guide for Unit 1 - answer key **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Software Tools:** • Word processing software • Presentation software • Organizing and thinking software (e.g. Inspiration) • Word prediction software (e.g. Word Q) • Text to Speech software (e.g. Speak Q)
Core Activities • identify a variety of geographic tools used in a range of occupations • Geographic Occupations: find connections between geographic tools and occupations taught at NSCC through answering questions about the NSCC catalogue, interviewing NSCC staff or students	**Online Resources:** • see Appendix A: Resources • see specifics for each online activity

Unit 2: Planet in Peril

Focus Statement - Students will use technology to investigate how the relationship between people and our planet has resulted in our planet in peril.

Outcomes	Demonstrations
2.1 Investigate the relationship between the state of the planet and humans by manipulating data	• describe geographic issues using computer-based technology (e.g. GIS, spreadsheets, web-browsers, and presentation software)
	• formulate an argument about the current state of an issue (relating to the planet in peril) using the discipline of geography

Unit 2: Planet in Peril

Focus Statement - Students will use technology to investigate how the relationship between people and our planet has resulted in our planet in peril.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • Unit 2 Textbook Guide: read the text, Global Connections, Chapters 3, 4, and 5, and use the study guide to understand key concepts and vocabulary. Add new vocabulary to personal glossary. • Planet in Peril Case Studies: complete two case studies that reflect issues about the Planet in Peril, for example, Tornadoes, Polar Bears, Desertification • Mapping Our World: The Earth Moves or Life on the Edge: complete either Mapping Our World Module 2, Lesson 1 or Lesson 2: The Earth Moves: Observe seismic and volcanic activity patterns around the world, analyze the relationships of those patterns to tectonic plates boundaries and physical features on the earth's surface, and identify cities at risk Life on the Edge: Investigate the East Asia portion of the Ring of Fire, where millions of people live with the daily threat of seismic or volcanic events. Identify zones of tectonic plate subduction and populations at risk. **Optional Activities** • Snap Shots of the World in Peril: or Al Gore in 10 Minutes: prepare and share reflections and responses about relevant and personally interesting news and stories about our Planet in Peril. • Take Google Earth Layer Tour: use the Layers feature in Google Earth to tour the earth searching for evidence of a planet in peril. For example, select volcanoes, or earthquakes Dead Zones, Fish to Eat, Human Impacts. Discuss the possible impacts these might have on people, and our planet.	**Print Resources:** • Global Connections - Chapters 3, 4 & 5 • Global Connections Study Guide for Unit 2 • Global Connections Study Guide for Unit 2 - answer key • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Mapping Our World - Modules 2 & 7 **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films • Documentaries **Software Tools:** • Word processing software • Presentation software • Organizing and thinking software (e.g. Inspiration) • Word prediction software (e.g. Word Q) • Text to Speech software (e.g. Speak Q) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity
Core Activities • Mapping Our World: Forces of Nature: Water World: formulate an argument about the changes that might occur to the surface of the Earth if the major ice sheets of Antarctica melted . Consider the consequences of projected changes on human structures, both physical and political. Create an action plan for a major city that would be flooded in the event of a catastrophic polar meltdown.	

Unit 2: Planet in Peril

Focus Statement - Students will use technology to investigate how the relationship between people and our planet has resulted in our planet in peril.

Outcomes	**Demonstrations**
2.2 Describe how occupations (NSCC courses) apply knowledge of physical geography.	

Unit 2: Planet in Peril

Focus Statement - Students will use technology to investigate how the relationship between people and our planet has resulted in our planet in peril.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • nscc Physical Geographic Occupations: Make an annotated list of how occupations directly use knowledge of physical geography through information gathered through: - the NSCC course catalogue - conducting interviews with NSCC staff and students - Internet research about various occupations - conducting interviews with people working in various occupations	**Print Resources:** • NSCC Catalogue **Geographic Tools:** • GPS unit and software • GIS software • Google Earth **Media Resources:** **Software Tools:** • Word processing software • Presentation software • Organizing and thinking software (e.g. Inspiration) • Word prediction software (e.g. Word Q) • Text to Speech software (e.g. Speak Q) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity

Unit 2: Planet in Peril

(Please note: shaded outcomes are for Academic students ONLY, in addition to the Graduate outcomes.)

Focus Statement - Students extrapolate and manipulate data to predict differing potential scenarios.

Outcomes	Demonstrations
2.1.Acad (Academic only) Propose contrasting scenarios for an issue that impacts Planet Earth, (e.g. desertification, deforestation, global warming), through the use of quantitative and qualitative methods.	• extrapolate data to predict differing results for contrasting human interventions including practices, policies and / or laws
	• identify bias in the differing results

Unit 2: Planet in Peril

Focus Statement - Students extrapolate and manipulate data to predict differing potential scenarios.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • Analyzing Our World: Windblown : propose contrasting scenarios for changes that might occur to climate and vegetation growth as a result of changes to wind and ocean currents. Part 1: Complete Analyzing Our World Module 3: Lesson 2, Windblown. Part 2: Select one country that might be particularly affected by changes in temperatures, wind, and ocean currents. Predict two different outcomes. Part 3: Which prediction do you believe will happen? Why?	**Print Resources:** • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Analyzing Our World - Module 3: Lesson 2 **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films • Documentaries **Software Tools:** • Word processing software • Presentation software • Organizing and thinking software (e.g. Inspiration) • Word prediction software (e.g. Word Q) • Text to Speech software (e.g. Speak Q) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity
Core Activities • Analyzing Our World: Windblown: Continue analysis of Analyzing Our World Module 3: Lesson 2, Windblown. Part 4: Do you believe one source of data more than another? Why?	

Unit 3: Human Population

Focus Statement - Students use technology tools to analyze the implications of human population growth and distribution, and compare models of urban development.

Outcomes	Demonstrations
3.1 Analyze the implications of growth, distributions, and densities	• explain patterns of population distributions and densities
	• demonstrate an understanding of various measures of Quality of Life or other human development indices. • interpret aspects of global population, using vital statistics as tools • compare various cultural perspectives on population issue(s) (link to LIV Sociology and LIV Communications: Cultural Literacy)

Unit 3: Human Population

Focus Statement - Students use technology tools to analyze the implications of human population growth and distribution, and compare models of urban development.

.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • Unit 3 Textbook Guide: read the text, Global Connections, Chapters 7, 8, and 15, and use the study guide to understand key concepts and vocabulary. Add new vocabulary to personal glossary.	**Print Resources:** • Global Connections - Chapters 7, 8 & 15 • Global Connections Study Guide for Unit 3 • Global Connections Study Guide for Unit 3 - answer key • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Mapping Our World - Module 4 **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films - NFB: Africville Africville: Can't Stop Now • Documentaries • TV Shows • Pod casts • Internet Sites • Online newspapers, magazines, blogs **Software Tools:** • Word processing software • Presentation software • Video editing software (e.g. Windows Movie Maker) • Organizing and thinking software (e.g. Inspiration) **Online Resources:** see Appendix A: Resources see specifics for each online activity
Core Activities • Mapping Our World Module: Populations: The March of Time: complete Module 4: Lesson 1, "The March of Time." Analyze the locations and populations of the world's largest cities from the year 100CE through 2005 CE. Describe spatial patterns of growth and change among the world's largest urban centres during the past two thousand years and speculate on reasons for these patterns. **Optional Activities** • A Day in the Life of...: compare how two differing cultures view issues around family size and population growth • Canadian Immigration Policy : explore one of the following population and culture related topics and then prepare a presentation to try to persuade others about your perspective: 1) Canadian companies should be encouraged to hire migrant workers if they cannot find workers locally. 2) Canada has a more sustainable immigration policy than (pick another country) • Canadian Government Skilled Worker Test for Immigrants: take the Canadian Government Skilled Worker Test for Immigrants. Prepare something to persuade others that this is a fair or unfair test to require of immigrants applying to come to Canada.	

Unit 3: Human Population

Focus Statement - Students use technology tools to analyze the implications of human population growth and distribution and compare models of urban development.

Outcomes	Demonstrations
3.2 Analyze the implications of growth, distributions, and densities	• compare models of urban structure

Unit 3: Human Population

Focus Statement - Students use technology tools to analyze the implications of human population growth and distribution, and compare models of urban development.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • Mapping Our World Module: Populations: Growing Pains: create a comparison chart of vital statistics between one MDC and one LDC. Complete Mapping Our World Module 4: Lesson 2, "Growing Pains". Compare the processes and implications of population growth in one of the world's fastest growing regions, sub-Saharan Africa, and the slowest growing region, Europe. Through the analysis of standard of living indicators in these two regions, explore some of the social and economic implications of rapid [population growth. • Planning for Human Population Project: complete and present a project comparing two countries considering current and future populations and resource data. **Optional Activities** • Jane Jacobs: research the work of renowned Canadian urban planner and activist, Jane Jacobs, (1916 -2006). Some of the urban planning ideas that she thought were most successful included: Cities as Ecosystems; Mixed-Use Development; Bottom-Up Community Planning; The Case for Higher Density; and Local Economies. Look into 2 of these and prepare something to show an understanding of her ideas along with some examples of these ideas in action in urban centres from from around the world. • Remember Africville: view the NFB documentary, Africville, and discuss some of the social, environmental, and economic factors involved with the development and then relocation of this African-Canadian urban community • Watch Manmade Island Being Made: use Google Earth to look at the history of urban centres. Example #1: Manmade island in the shape of a palm in Dubai. Open up the Google Earth marker. Then click on the clock in the top menu bar. Push the slider bar as far to the left as possible and then watch the island being built. Find another place you are interested in and do the same thing. Compare the growth over time. Compare the models of urban development used to plan these communities. • Population Pyramids: use Statistics Canada Census Information to create a Population Pyramid. • Urban Planning Projects:: Health, Transportation and Changes to Urban Life Complete projects to compare the history of urban planning in Britain (the industrialized world), with another location which was not part of the Industrial revolution. Focus on one theme: health, or transportation, or urban planning. Use 1/2 hour streamed British TV shows to begin the research to show how mechanization and inventions during the Industrial Revolution transformed urban life, the health of citizens, and their relationship to the world via new forms of transportation.	**Print Resources:** • Global Connections - Chapters 7, 8 & 15 • Global Connections Study Guide for Unit 3 • Global Connections Study Guide for Unit 3 - answer key • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Mapping Our World - Module 4 **Geographic Tools** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films - NFB: Africville Africville: Can't Stop Now • Documentaries • TV Shows • Pod casts • Internet Sites • Online newspapers, magazines, blogs **Software Tools:** • Word processing software • Presentation software • Video editing software (e.g. Windows Movie Maker) • Organizing and thinking software (e.g. Inspiration) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity • 3 episodes of streamed videos What the Industrial Revolution Did for Us: City Living, Modern medicine, On the Move

Unit 3: Human Population

(Please note: shaded outcomes are for Academic students ONLY, in addition to the Graduate outcomes.)

Focus Statement - Students use technology tools to analyze the implications of human population growth and distribution, and compare models of urban development.

Outcomes	Demonstrations
3.3.Acad (Academic outcome) Predict plausible future issues for a specific urban location through the manipulation of data, including census statistics, socioeconomic data, flow patterns and related infrastructure (e.g. aging population and available services, waste disposal and management, crime and crime prevention).	

Unit 3: Human Population

Focus Statement - Students use technology tools to analyze the implications of human population growth and distribution, and compare models of urban development.

Suggestions for Teaching and Assessment	Resources/Notes
Core Activities • read the text, Global Connections, Chapters 14, and make study notes understand key concepts and vocabulary. • nscc Analyzing Our World: Population Case Study: complete either Analyzing Our World Module 4: Lesson 1 or Lesson 2 Lesson 1: Generation gaps Use global data to investigate variations in population age and structure and the relationship of age structure to a country's rate of natural increase. After exploring global patterns, data will be downloaded, mapped and examined. Lesson Two: Pyramids of people Use international population data to create population pyramid graphs. Once the graphs are constructed, population patterns will be compared between countries in various stages of development. **Optional Activities** • nscc Mekong River Case Study: gather, and analyze information about the effect of population changes. For example, analyze information about the effect of dams on the Mekong River in China through reading case studies, and watching You Tube videos. Use Google Earth to trace down the Mekong River and view various pictures posted along this immense river. Find these dams: Gongguoqiao Dam 2008, Xiaowan Dam, Manwan Dam 1996, Dachaoshan Dam 2003. Jinghong Dam 2010 Respond to the following questions, citing references: - What are some of the key environmental changes of the Mekong River? - What are the various reasons cited for these changes? - What are some of the human impacts currently being experienced due to these environmental changes? - What are some of the predictions of future human and environmental impacts? Who makes these predictions and what are the sources of data being used? - Explain some environmental, transportation, and urban models that might be effectively applied to remedy the problems experienced on the Mekong River?	**Print Resources:** • Global Connections - Chapter 14 Oxford School Atlas • Oxford School Atlas Teacher's Resource • Analyzing Our World - Module 4 **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films • Documentaries • TV Shows • Pod casts • Internet Sites • Online newspapers, magazines, blogs **Software Tools:** • Word processing software • Presentation software • Video editing software (e.g. Windows Movie Maker) • Organizing and thinking software (e.g. Inspiration) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity

Unit 4: Resource Management

Focus Statement - Students will analyze implications resulting from changes in the availability, use, and distribution of global natural resources.

Outcomes	Demonstrations
4.1 Analyze factors that affect the global production, distribution and consumption of resources e.g. food, water, oil	• gather data on contemporary global patterns of production, distribution and consumption of resources • analyze resource management issues by manipulating data using technology (e.g. GIS, spreadsheets, web-browsers, and presentation software)
	• interpret the effects of global production, distribution and consumption of resources on Quality of Life throughout the world through a case study approach

Unit 4: Resource Management

Focus Statement - Students will analyze implications resulting from changes in the availability, use, and distribution of global natural resources.

Suggestions for Teaching and Assessment	Resources/Notes
Core Activities • Unit 4 Textbook Guide:read the text, Global Connections, Chapters 9 and 10, and use the study guide to understand key concepts and vocabulary. Add new vocabulary to a glossary. • Mapping Our World: The Wealth of Nations: complete the case study Module 6: Lesson 1, "The Wealth of Nations". **Optional Activities** • Canadian Water Use: tabulate and compare statistics about the water use by average Canadians. What questions and concerns does this raise about our use of this resource?	**Print Resources:** • Global Connections, Chapters 9 & 10 • Global Connections Study Guide for Unit 4 • Global Connections Study Guide for Unit 4 - answer key • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Mapping Our World: Module 6: Lesson 1, "The Wealth of Nations" **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films • Documentaries • TV Shows • Pod casts • Internet Sites • Online newspapers, magazines, blogs • Black Coffee documentary • Black Coffee Google Earth Tour **Software Tools:** • Word processing software • Presentation software • Video editing software (e.g. Windows Movie Maker) • Organizing and thinking software (e.g. Inspiration) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity • episodes of streamed videos What the Industrial Revolution Did for Us: Material World, Working Wonders
Core Activities • Research Case Study: Black Coffee : watch episodes of the Black Coffee documentary. Then follow a corresponding Black Coffee Google Earth Tour and complete the questions and assignments. Demonstrate your understanding of how coffee has had a global impact socially, politically, and economically. Many presentation formats are possible. All written work will be assessed using the ALP writing rubric. • Complete a research case study about one of our planet's vital resources such as water, or oil, tea, cotton ,or corn. Complete questions and assignments. Demonstrate your understanding of this resource has had a global impact socially, politically, and economically. Many presentation formats are possible. All written work will be assessed using the attached writing rubric. Use 1/2 hour streamed British TV shows to begin the research to show how mechanization and inventions during the Industrial Revolution transformed economics from an agricultural base to capitalism. Explore how the tea, cotton and other commodities drove exploration, colonialization, and world economics.	

Unit 4: Resource Management

Focus Statement - Students will analyze implications resulting from changes in the availability, use, and distribution of global natural resources.

Outcomes	Demonstrations
4.2 Describe how occupations (NSCC courses) apply knowledge of GIS technology	

Unit 4: Resource Management

Focus Statement - Students will analyze implications resulting from changes in the availability, use, and distribution of global natural resources.

Suggestions for Teaching and Assessment	**Resources/Notes**
Core Activities • nscc GIS and Geography Occupations: use the NSCC catalogue and interview NSCC staff and students to explore how GIS is used in occupations in NSCC Schools; Trades and Technology, Health and Human Services, and Business.	**Print Resources:** • NSCC Catalogue **Geographic Tools:** • GPS unit and software • GIS software • Google Earth **Media Resources:** **Software Tools:** • Word processing software • Presentation software • Organizing and thinking software (e.g. Inspiration) • Word prediction software (e.g. Word Q) • Text to Speech software (e.g. Speak Q) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity

Unit 4: Resource Management

(Please note: shaded outcomes are for Academic students ONLY, in addition to the Graduate outcomes.)

Focus Statement - Students will analyze implications resulting from changes in the availability, use, and distribution of global natural resources.

Outcomes	Demonstrations
4.3 Acad (Academic Outcome) Predict at least two plausible future scenarios where "Northern" countries might conflict over access to a resource or commodity	

Unit 4: Resource Management

Focus Statement - Students will analyze implications resulting from changes in the availability, use, and distribution of global natural resources.

Suggestions for Teaching and Assessment	Resources/Notes
Core Activities • nscc Black Coffee Future Scenarios: watch episodes 2 and 3 of the Black Coffee video documentary. Take the Global Earth Tour and prepare two scenarios around either: 1) the future of deforestation in Haiti due to cutting forests to plant coffee beans OR 2) the future economic survival of the Ethiopian Fair Trade Coffee growers. Also watch episodes of the streamed video series What the Industrial Revolution Did for Us: Material World, Working Wonders. Explain how the rise of industrialization and capitalism intertwined with the history of coffee. • nscc Analyzing Our World: Trading Places: complete the case study Module 5: Lesson 2, "Trading Places". Pick one product and predict the impact on the business that makes this product if the price of oil and gas increase substantially. Predict two different ways that this business might respond to these increased oil and gas costs. Which solution would you choose if you ran this business?	**Print Resources:** • Global Connections, Chapters 9 & 10 • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Analyzing Our World Module 5: Lesson 2, "Trading Places" **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films • Documentaries • TV Shows • Pod casts • Internet Sites • Online newspapers, magazines, blogs • Black Coffee documentary • Black Coffee Google Earth Tour **Software Tools:** • Word processing software • Presentation software • Video editing software (e.g. Windows Movie Maker) • Organizing and thinking software (e.g. Inspiration) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity • episodes of streamed videos What the Industrial Revolution Did for Us: Material World, Working Wonders

Unit 5: Research Project

(Please note: shaded outcomes are for Academic students ONLY, in addition to the Graduate outcomes.)

Focus Statement - Students will conduct and share research about a relevant global issue of personal interest, independently or collaboratively.

Outcomes	Demonstrations
5.1 (GraduateOutcome) Conduct and present research on an issue raised in this course that is of personal interest using the geographic method	• use technology to analyze supporting documents (maps, graphs, charts, reports) • create supporting documents (maps, graphs, charts, reports) using technology
5.2 Acad (Academic Outcome) Formulate and support a strategy using the geographic method in response to a specific geographical issue, through the manipulation of data using GIS and other technologies	• share the project through a display or report • respond to feedback • reflect on the process of creating the project and how it applies to your life

Unit 5: Research Project

Focus Statement - Students will conduct and share research about a relevant global issue of personal interest, independently or collaboratively.

Suggestions for Teaching and Assessment	Resources/Notes
Core Activities • Independent Research: complete a research project (Graduate) or paper (Academic). Work will be assessed using the ALP writing rubric.	**Print Resources:** • Global Connections • Oxford School Atlas • Oxford School Atlas Teacher's Resource • Mapping Our World: • Analyzing Our World • ALP Writing Rubric **Geographic Tools:** • GPS unit and software • ArcGIS software • Google Earth **Media Resources:** • Films • Documentaries • TV Shows • Pod casts • Internet Sites • Online newspapers, magazines, blogs • Black Coffee documentary • Black Coffee Google Earth Tour **Software Tools:** • Word processing software • Presentation software • Video editing software (e.g. Windows Movie Maker) • Organizing and thinking software (e.g. Inspiration) **Online Resources:** • see Appendix A: Resources • see specifics for each online activity • episodes of streamed videos What the Industrial Revolution Did for Us: Material World, Working Wonders

Appendix A

LIV Global Geography Resources

Print Resources

Corbin, C., Taylor, J., and Trites, J. *Global Connections: Geography for the 21st Century*. Don Mills, ON: Oxford University Press, 2000 ISBN 0-19-541341-5

Palmer, A.M., Palmer, R., Malone, L., and Voigt, C.L. *Mapping Our World: Using GIS*. Redlands, CA: ESRI Press, 2008. ISBN 978-1-58948-203-6

Palmer, A.M., Palmer, R., Malone, L., and Voigt, C.L. *Mapping Our World: Using GIS, Student Workbook, Level 2.*. Redlands, CA: ESRI Press, 2008. ISBN 978-1-58948-203-6

Palmer, A.M., Palmer, R., Malone, L., and Voigt, C.L. *Analyzing Our World: Using GIS*. Redlands, CA: ESRI Press, 2008. ISBN 978-1-58948-204-3

Palmer, A.M., Palmer, R., Malone, L., and Voigt, C.L. *Analyzing Our World: Using GIS: Student Workbook, Level 3*. Redlands, CA: ESRI Press, 2008. ISBN 978-1-58948-204-3

Stanford, Quentin H., general ed. *Canadian Oxford School Atlas.* 9th ed.,
Don Mills, ON: Oxford University Press, 2008. ISBN 0195429249

Streamed Video Resources

- **Black Coffee**

Streamed video of three episodes of the documentary Black Coffee (need link). The series explores the history of coffee from 6th century Ethiopia and chronicles its impact on social, cultural, political, environmental, and economic systems of the world. Colonization, slavery, deforestation, and the creation of poverty states are only some of the issues integrally wrapped up with the history of coffee. Fair trade, specialty coffee shops, and organic coffee growing methods are explored in the 3rd episode. Google Earth tours extend students understanding of this powerful documentary series.

- **What the Industrial Revolution Did for Us**

Streamed video of 6 episodes (30 minutes each) of the British television series about the impact of the Industrial Revolution.

1) http://ffh.films.com/digitallanding.aspx
2) Look on right hand side. Add in this user name and login
   User name: NovaScotiaCC
   Password: Digital

- **Unit 3: Planning for Human Populations**

City Living
With the rise of industry came the rise of the cities. In this program, host Dan Cruickshank scours London to examine how the mechanisms of industrialization generated urban life as people know it today.

Modern Medicine
Industrialization not only changed the face of Western society-it also made people sick. Overcrowded cities, harsh working conditions, and newfound mobility all conspired to imperil public health.

On the Move
This program chronicles the transportation revolution of England's industrial age, which not only transformed the way people and things are moved from place to place, but forever altered people's relationship to distance and time.

- **Unit 4: Resource Management**

Material World
This program investigates how England's insatiable appetite for tea, cotton, and china fueled that country's industrial revolution. Explores the impact of inventions.

Working Wonders
In the space of 60 years, England transformed itself from a rural economy into an industrial powerhouse. This program tells the story of the innovations and innovators from the Industrial Revolution.

- **Unit 5: Research Project**

Material World & Working Wonders

Web Resources

There are an enormous number of geography related sites and resources. Here are a few excellent ones. Also refer to specific activities for linked resources. Type the following headings (bulleted bold text) in your Internet search engine to access these web resources.

Searchable Instructor Repositories

- NSCC TLM (add link)
- NSCC Sharpeoint (add link)
- NSSAL Instructor website
  http://instructors.gonssal.ca
  Login: adulted
  Password: nssal
  Search or browse using keywords (e.g.Social Studies, History, Geography)

Geography Web Sites

- **Geosense geography game—timed geography game**
- **Map puzzles and interactive maps**
- **MapQuest**
- **National Geographic**
- **Seaworld Busch Gardens Curriculum Guides**
- **World Atlas of Maps Flags and Geography Facts**
- **ESRI**
  GIS and ArcGIS software
- **Canadian Geographic**
  Explore this information-packed site. Includes links to many mapping sites, sites providing free maps with lesson plans and mapping games.
- **Geocaching**
  Geocaching is an outdoor activity that combines hiking, problem solving, computer literacy, and GPS technology. Some caches are "virtual" and involve finding historically relevant sites rather than finding an actual box or cache.

Economics

- **Statistics Canada**
  Information-packed website with many reports and statistical information about Canada's economic situation
- **Global Rich List**
  Compares personal income levels to income levels of the world's population

Culture & Diversity

- **Center for Media Literacy**
  Articles and reports promoting media literacy in social studies
- **Queen's University at Kingston Cultural Diversity**
  Queen's University cultural diversity website for high school activities
- **Indian and Northern Affairs Canada**
  Indian and Northern Affairs Canada home page
- **Citizenship and Immigration Canada**
  Department of Citizenship and Immigration home page
- **Remembering Black Loyalists, Black Communities in Nova Scotia**
  Nova Scotia Museum site for information on Black loyalists
- **Nova Scotia Museum**
  Mi'kmaq photo gallery, info sheets (click on Museum Info), time lines of Nova Scotian history, etc.
- **Nova Scotia Department of Education**
  Click under Document Depot, Curriculum & Textbooks, Related Categories/ Curriculum-Related Websites. Then explore Social Studies including African Canadian Studies 11 (including links for each module), Atlantic Studies, Geography, History, and Mi'kmaw Studies 10.
- **Nova Scotia Department of Education Learning Resources and Technology Services**

Employability

- **Top 100 Internet sites for Learning and Employment**
  categorized listing of sites compiled through the Government of Canada; also available in print, free of charge
- **labourmarketinfo.EDnet.ns.ca**
  Nova Scotia Department of Education Document Depot of Labour Market Information
- **careeroptions.EDnet.ns.ca**
  Nova Scotia Career options—a career planning website for Nova Scotians
- **Canada Prospects**
  Canada Prospects magazine website—information and exercises regarding career explorations
- **Canadian National Occupation Classification 2001**
  National occupations with job descriptions, salary, essential required skills
- **Centre of Education and Work**
  Self-assessment tools, career information, etc.
- **Essential Skills—Human Resources and Social Development Canada**
  There are nine essential skills listed: reading text, document use, writing, numeracy, working with others, continuous learning, oral communication, computer use, and thinking skills. This site lets you explore some 200 occupational profiles to see how these skills are used in different ways and occupations. You can also search a collection of authentic workplace materials to see how these skills are used on the job.
- **TOWES**
  Test of Workplace Essential Skills developed by SkillPlan and Bow Valley College
- **Applications of Working and Learning**
  A professional development project for educators
- **Conference Board: Employability Skills Toolkit**
  Employability skills toolkit

- **Canadian Occupational Projection System (COPS)**
  Labour market information for career decision making
- **Job Futures**
  Information from Service Canada for people searching for jobs
- **Labour Market Information**
  Labour market information from Service Canada
- **The Workplace Canada**
  Information posted through Service Canada offices in Nova Scotia, contains Atlantic Canadian employment information

Graduate & Academic Core Assignments

Unit	Graduate & Academic Core Assignments	Academic Assignments
	MOW = Mapping Our World	AOW = Analyzing Our World
#1: **Why Geography Matters**	• Textbook guide • Interconnectedness case study • Intro to maps • Intro to GPS (need to add this) • Intro to GIS – MOW 1:1 • Intro to GIS – MOW 1:2 • Geographic occupations	
#2: **Planet in Peril**	• Textbook guide • MOW Module 2:1 or 2:2 • Planet in Peril Case Study • Physical Geography Occupations	• AOW 3:2
#3: **Planning for Human Population**	• Textbook guide • MOW Module 4:1 • A Day in the Life • Compare Urban Models	• AOW 4:1 • Case study
#4: **Resource Management**	• Textbook guide • MOW 6:1 • Research Case Study • GIS and Geography Occupations	• Case study future scenarios • AOW 5:2
#5: **Research Project**	• Research project	• Formal research project

Reading Strategies – The Big Six

Pre reading Strategies

- ❑ Do I choose texts that I can read successfully?
- ❑ Do I spend time predicting what the text will be about and thinking about what I already know about the topic?
- ❑ Did I set a purpose for reading?
- ❑ Can I identify the author's purpose and who they wrote this for?

Decoding

- ❑ Can I read with confidence about 90% of the words?
- ❑ Do I know what to do if I get stuck?

Fix-Up Strategies

- ❑ Do I catch myself when I have lost track of the meaning? Can I figure out this confusing text on my own?

Navigation Strategies

- ❑ Can I find information easily? Do I use the features of different texts such as headings, glossaries, etc.?

Comprehension Strategies

- ❑ Can I identify the main ideas and the details that support the main ideas?
- ❑ Do I see what is going on as I read, as if I have a story going on in my head?
- ❑ Do I question as I read? Do I try to answer my questions?
- ❑ Can I map out how the text is organized so that I understand how the author put it together?

Make Connections

- ❑ Can I use and apply the new information that I learned?
- ❑ Can I make connections to the text?
- ❑ Do I connect what I am reading to my life, to other texts, or to how people understand the world?

Writing Strategies - Six Traits of Writing + Process

Ideas / Purpose

- ❑ Do I set a purpose when I write?
- ❑ Do I choose topics to write about that interest me?
- ❑ Do I spend time gathering my thoughts and thinking about what I already know about the topic?
- ❑ Do my ideas match my topic?

Organization

- ❑ Do I spend time organizing my thoughts; connecting similar thoughts together, linking thoughts in a logical order?
- ❑ Do I read through my work to make sure that the organization flows well?
- ❑ Do I make changes, (add, delete or rearrange ideas), to my work to improve the flow and organization of my ideas?

Audience/ Voice

- ❑ Do I picture/ consider my audience when I am writing? Do I know who my audience will be when I write?
- ❑ Do I choose words based on who will be the reader?
- ❑ Do I chose the right tone of voice for my audience (e.g. formal/ informal, fun/ serious, inviting/ authoritative)

Word Choice/ Spelling

- ❑ Do I use a variety of words? Do I try to paint a picture with my choice of words?
- ❑ Do I use a dictionary to make check that my choice of words are used correctly?
- ❑ Do I find my own spelling errors?
- ❑ Do I correct my own spelling errors?

Sentence Fluency/ Grammar

- ❑ Do I write in complete sentences?
- ❑ Do I write a variety of kinds of sentences (declarative, imperative, interrogative, exclamatory)?
- ❑ Do I use a variety of sentence patterns (compound, complex)?
- ❑ Do I correct incorrect sentence patterns (run-on, sentence fragments)?

Presentation

- ❑ Do I use formatting that suits my purpose and audience?
- ❑ Do I choose formatting that makes enhances my message (does not distract from my message)?

Process

- ❑ Do I take pride in my work?
- ❑ Do I use feedback from others to make my own changes, revisions and editing)?

Adult Learning Program Writing Rubric

TRAIT	(1) LII	(2) Level III exit	(3) Level IV Grad Exit	(4) Level IV Academic Exit
Ideas / Purpose	• topic is not clear • content does not match the writing purpose/task • significant amount of questionable or unsupported information is used to support the writer's position • opinions are provided as fact	• topic is stated and content generally matches the writing purpose/task • provides details from credible source (s) • supporting / research details provide an introduction to the topic • personal perspectives may be presented as research about the topic	• topic is clearly stated and the content consistently matches the writing purpose /task • compares details about the topic from various credible sources • supporting / research information is used to demonstrate solid understanding • personal perspectives included are identified but commonplace	• topic is clearly stated as a thesis, and consistently matches the writing purpose/task • cohesive synthesis of ideas from various credible sources • supporting / research information enhances understanding of the writer's position • personal perspectives show sophisticated understanding, insight and/or originality
Organization	• reader is not given a focus • organization inappropriate for the purpose • ideas are not organized into paragraphs	• organization generally consistent with the purpose • ideas are loosely organized into paragraphs • transitions between paragraphs may confuse	• organization consistent with the purpose • ideas are organized into focused paragraphs • transitions between paragraphs are generally clear	• features of organization enhance the purpose • readers are informed about the organization of the essay • paragraphs flow easily with a variety of transitions
Audience / Voice	• tone & language is inappropriate for the purpose and audience	• developing appreciation of tone and language appropriate for audience	• tone and language is appropriate for the audience	• tone and language is engaging and consistently appropriate for the audience
Word Choice/ Spelling	• word choice is limited; overuses/ repetitive use of words • words or technical terms often used incorrectly • numerous errors in spelling	• word choice is limited / repetitive • vocabulary is sometimes used correctly • may contain errors in spelling	• word choice is appropriate and conventional • vocabulary is generally used correctly • some errors in spelling but most do not interfere with meaning	• word choice is fresh, and extends readers' understanding of the topic • vocabulary is varied and always used correctly • minimal spelling errors that do not interfere with meaning
Sentence Fluency and Grammar	• sentences fail to convey meaning • sentences are not consistent in tense or number (subject-verb agreement) • lack of or misuse of punctuation	• sentence structures are formulaic and may be awkward • variations in tense and / or number may confuse • frequent misuse of punctuation	• includes a variety of sentence lengths and structures, used correctly and conventionally • variations in tense and / or number do not confuse • punctuation use may be consistent	• wide variety of sentence structures and lengths used correctly and appropriately • sentence variety emphasizes key ideas • sentences are consistent in tense and number agreement • punctuation use is consistent
Presentation	• disregard for the appearance and presentation	• overuse or misuse of formatting distracts from the presentation	• appropriate and conventional use of formatting and presentation techniques	• formatting enhances and clarifies key ideas and meaning
Process	• depends upon assistance for every aspect of the writing process	• requires substantial assistance with the writing process including idea generation, idea organization, and mechanics	• requires specific assistance with the writing process particularly revision, and editing	• uses feedback appropriately throughout the writing process

Appendix B

Appendix B

Neurodevelopmental Information

Table of Contents

Neurodevelopmental Information

This appendix is intended to be used three ways: as an introduction to the world of neurodevelopmental constructs, as a reference to the overall relationship between the neurodevelopmental constructs and communications, and as a collection of strategies that are specific to constructs for supporting neurodevelopmental weaknesses.

All of these materials have been taken from the All Kinds of Minds website, which is accessible to anyone with the Internet (www.allkindsofminds.org). They have been reorganized and adapted to fit with this specific document so as to be more user friendly.

What Are Neurodevelopmental Constructs?

According to Dr. Mel Levine in *A Mind at a Time* (Simon & Schuster, 2002) a neurodevelopmental function is the most basic instrument for learning. It is likened to a delicate tool found in a carpenter's tool chest. Our minds are said to make use of different clusters of neurodevelopmental functions to learn specific skills and to create particular products (Levine 2002, p. 28). These functions may be one component or memory, allowing a student to remember where they have seen something in the past or the capacity to store and retrieve chains of information. Given the metaphor of the brain as a toolbox, the total number of neurodevelopmental functions is inestimable. It should not be surprising then to consider that breakdowns or weaknesses are commonplace. Everyone has weaknesses of some sort; for some people they become a permanent roadblock to learning. In order to use the concept of neurodevelopmental constructs to help struggling students, it is important to identify the eight systems that are the foundation of the concept:

a) attention
b) memory
c) language
d) spatial ordering
e) sequential ordering
f) neuromotor function
g) higher order cognition
h) social cognition

Attention (Levine 2002, p. 31)

Attention is the administrative bureau of the brain, the headquarters for mental regulators that patrol and control learning and behaviour. The attention controls direct the distribution of mental energy within our brains, so that we have the wherewithal to finish what we start and stay alert throughout the day. Other controls of attention slow down our thinking so we can plan and complete tasks competently and efficiently.

Memory

Memory works in three ways: short term, long term, and active working. Most people think they know what short-term memory is. In fact, it is the ability to store information in the brain for two to three seconds. The memory that most people think is short term is actually active working memory. This portion of memory allows a person to hold several pieces of information and procedures at the core of operations—holding a pen and writing an idea down coherently takes a large active working memory until the task becomes habitual. Long-term memory is the storage of information and procedures for use over days, weeks, months, or even years. It is the filing cabinet of the brain.

Language (Levine 2002, p. 32)

The language ingredients of learning include, among other things, the ease with which a brain detects differences between the 44 or so different English language sounds; the ability to understand, remember, and start using new vocabulary; the capacity to express thoughts while speaking and on paper; and the speed of comprehension needed to keep pace with the flow of verbal explanations and instructions. Language is divided into receptive and expressive functions.

Spatial Ordering (Levine 2002, p. 33)

The spatial ordering system is designed to enable us to deal with or create information arranged in a gestalt, a visual pattern, or a configuration. Through spatial ordering, we perceive how parts of things fit together. It also helps us organize the various material necessities of the day, such as pencils, notebooks, keys, and other props needed for academic efficiency and proficiency.

Sequential Ordering (Levine 2002, p. 33)

This system, a working partner of spatial ordering, helps us deal with the chains of information that come into or depart from our minds coded in a particular serial order or sequence. Sequential ordering forms the basis for time management, for understanding time, estimating time, allocating time, and being aware of time's passage.

Neuromotor Function

Neuromotor functions are divided into three categories: fine motor, gross motor, and graphomotor. Most people recognize fine motor as the ability to draw, repair fine machinery, and build model toys. Gross motor involves the larger muscles and is often connected to athletic ability—the ability to throw a ball, run efficiently, and jump well. Graphomotor is the key to school work—the ability to handwrite or print letters on a page. An excellent description of the graphomotor skills used in writing can be found in Levine's *The Myth of Laziness* (Simon & Schuster, 2003, p. 28).

Higher Order Cognition (Levine 2002, 34)

Higher order cognition includes the ability to problem solve and reason logically, to form and make use of concepts, to understand how and when rules apply, and to get the point of a complicated idea. Higher order cognition also takes in critical and creative thinking.

Social Cognition

Social cognition includes the ability to communicate and interpret feelings (one's own and others'), using appropriate vocabulary, tone and intonation in different social settings, selecting appropriate topics for the audience, regulating the use and appropriateness of humour, engaging in proper conversational techniques, presenting oneself well, processing body language, tone and voice of other participants in a social setting, getting along with other people, resolving conflicts in non-violent ways and working with people to achieve a desired goal. In short, social cognition is how we get along with others.

Strategies to Use for Weaknesses in Reading	
Function Weakness	**Possible Strategies**
Attention	• encourage students to pay attention to their mental energy levels and approach their work accordingly • provide reading jump starts such as reading the first part of a passage to the students or having students read alternating paragraphs • use advanced organizers to preview the reading task and give students a framework for the task • introduce technical vocabulary and abstract concepts before reading a passage and use the new vocabulary in a different context before returning it to the reading • provide short but frequent breaks that allow students to stretch or move around to rejuvenate their mental energy • break up lengthy passages into shorter chunks; help students get involved in reading by asking them questions about content as soon as they finish each section • to motivate students, have them read in areas where they are interested in the content • give students outlines to help focus their attention on important information in a passage • give students texts in which some words or ideas have been highlighted or underlined, as a model for them to follow • point out the important information you have read in the text together • prioritize information that students should attend to in a certain passage—read first for facts, read second for important themes, etc. • have students read guiding questions before reading the text and encourage them to refer to these questions while reading • help students develop their use of reading comprehension strategies while they read • give students opportunities to pull out key points from readings to related to their affinity areas • help students use strategies that improve their reading comprehension • work on pronunciation by rhyming with other words • break down new, complex vocabulary words into smaller parts

Strategies to Use for Weaknesses in Reading	
Function Weakness	**Possible Strategies**
Attention (Cont'd)	• before they read, ask students to write down the reading comprehension strategy they will use—guiding questions, highlight or underline important details, summarize after each paragraph • give student opportunities to practice using tools that promote and reinforce comprehension • use positive reinforcement to keep students engaged in reading tasks • help students predict what a passage will be about and then evaluate their predictions as they read • encourage students to pace themselves or control the tempo of their reading rate • have students estimate the amount of time they will need to read a text and then compare the end result to self-monitor • challenge students to connect to new words by rhyming them with words they know
Memory	• review important vocabulary from the text with the students before they begin to read • have students read in pairs, alternating passages, with the listener paraphrasing, summarizing, and asking questions about the text • review optional pre-reading strategies • have students take quick notes as they read • teach students paraphrasing and summarizing techniques to use while reading • encourage students to jot down important points or words they don't know as they read • encourage students to highlight or underline text as they read and to reread the highlighted or underlined text • stress making connections to the text as the students read • let students practice counting out syllables by tapping lightly with fingertips or pencils • show students how to use phonemes and morphemes to create words • practice taking out initial, then middle, then ending sounds to practice blending and segmentation

Strategies to Use for Weaknesses in Reading	
Function Weakness	**Possible Strategies**
Memory (Cont'd)	• introduce new text to students by reviewing what they have already learned about the topic • as a pre-reading activity, have students scan a text for visual features • teach students how to create notes that reinforce their understanding and help trigger information recall at a later time • help students identify the information in a text they are looking for • teach students how to use graphic organizers to organize and consolidate what they have learned • encourage students to draw a diagram to represent the content of the text • teach students to use self-questioning strategies • separate time for reading and time for reviewing a text • teach students how to self-test for comprehension • make sure students have all the materials they need before they begin to read

Strategies to Use for Weaknesses in Reading	
Function Weakness	**Possible Strategies**
Higher Order Cognition	• review and practice paraphrasing and summarizing techniques • provide options or choices of reading strategies and have students rate the effectiveness of each strategy • give students opportunities to practice decoding text to make it more automatic • provide a wide variety of texts on which to practice each strategy • have students identify which reading comprehension strategy they will use before they begin to read—practice on different types of texts • model each strategy for the class, over and over • encourage students to use a previewing exercise before they read • encourage students to self-monitor as they read • introduce new concepts before asking students to read about the concepts • get students to think about their prior knowledge of a subject before they read and encourage them to do this on their own when possible • give students opportunities to read in their areas of personal interest • give students many opportunities to practice using tools that promote and reinforce comprehension • have students represent concepts using many methods • create an interest in new vocabulary by students track the words outside of the classroom • have students vary their pace and tempo of reading by thinking about how much time they have and how much time they need to comprehend a passage; focus on how easier passages are faster to read than more difficult passages

Strategies to Use for Weaknesses in Reading	
Function Weakness	**Possible Strategies**
Language	• work on pronunciation through the assistance of rhyming counterparts • break down new, complex vocabulary words into smaller parts • challenge students to find connections through rhyming with new words • use the new vocabulary in a different context before returning to the reading • relate new vocabulary to students' personal and prior experience • show how new vocabulary words are related—by topic and by experience • show students how to keep a personal dictionary of new vocabulary words • have students create word webs or visual diagrams to connect new words to each other • provide direct instruction about the rules of grammar and syntax • provide examples of different ways that sentences may be combined • give students increasingly complex sentences and ask them to interpret different possible meanings • give students practice rearranging sentences and parts of sentences to create new meaning • have students practice sorting words into different categories by using the sounds and meanings of the words • make use of the connection between sound and symbol when reading and writing • encourage students to use a variety of methods to approach new vocabulary (e.g., recognizing morphemes, using syllables, recognizing sounds of letter combinations) • encourage students to reread books or texts to develop fluency

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Attention	• adjust the rate, complexity and amount of information students must take in or produce at any one time • modify your lessons so that students do important writing activities that are more challenging when they have more mental energy • schedule frequent, brief periods of activity, especially after difficult or more challenging tasks • help students to recognize periods when they are putting in less effort • have students record periods when they seem to be putting in less effort—create a graph to translate the actions into a visual display • use diaries or graphs as motivational tools and opportunities for positive praise • help students when their mental energy wanes • encourage students to write about what excites them • allow students to create a large-type big book that they could share • use student work from previous years, or fabricated work samples, to help students develop or improve their self-monitoring skills • discuss different ways to self-monitor the quality of work • provide students with checklists that set out the steps of a task or the important components of a process that needs to be monitored • provide cue cards with “mini” lessons or sets of rules. Have students keep them on their desks to help with self-monitoring • allow students to delay judging their work by allowing a couple of days to lapse between when they finish and when they evaluate • do NOT allow students to wait until they finish a task to check their progress or understanding • have students evaluate their own work on a regular basis and allow opportunities for them to revise before they submit work for you to evaluate

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Attention (Cont'd)	• have students create personal benchmarks to mark their progress towards reaching a certain academic goal—working for 20 minutes without a break, completing all homework for the week, proofreading before handing in an assignment • use rubrics to show ways to improve their written output • give students a list of questions to start their self-monitoring process • copy pages from students' favorite books, magazines, and newspapers and then circle or highlight the punctuation used on the page. Discuss why the author used each type of punctuation • give students a list or paragraph of completed sentences and have them add the punctuation • show students how punctuation can change the meaning of a sentence • when modeling different punctuation rules, introduce only one rule at a time
Memory	• copy pages from students' favorite books, magazines and newspapers and then circle or highlight the punctuation used on the page. Discuss why the author used each type of punctuation • give students a list or paragraph of completed sentences and have them add the punctuation • when modeling different punctuation rules, introduce only one rule at a time • show students how punctuation can change the meaning of a sentence • have students read sentences aloud before making punctuation decisions • let students practice using punctuation when they write on a computer • post punctuation rules in the classroom • provide students with an opportunity to correct capitalization and

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Memory (Cont'd)	punctuation errors through proofreading exercises • provide students with a paragraph missing all capital letters and have them add the capitals • introduce only a few new vocabulary words at one time • teach students how to use the spellchecker in the word processing package they are using • encourage students to record their ideas first without worrying about spelling • integrate spelling lessons into larger activities • remind students of strategies for using the dictionary to look up unknown words • consider students' first language or dialects spoken at home as this can be help you explain the difference between spoken language and the written word • help students understand what types of grammar rules are used for writing • have students speak their ideas before writing them down • have students practice correcting subject-verb agreement in a set of pre-selected sentences • give students a list of verb tenses with commonly used verbs • provide multiple opportunities for students to practice correct verb tense usage • give students a list of adjectives and a list of places and events; have students choose 5 to 10 adjectives and one event and then write a short paragraph or story using the selected words • give students the opportunity to practice verb endings • have students find correct use of grammatical rules in their favorite books or magazines or other documents

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Higher Order Cognition	• create a safe environment in the classroom that supports risk taking and promotes innovative thinking • provide activities that engage students in brainstorming and creative thinking to uncover latent strengths to give students who need recognition a successful way to express themselves • allow students to select materials, projects, writing topics, and vocabulary words • use high-interest subject matter for creative activities • allow students to create products using different formats—videos, collages, etc. • develop activities that promote students' ability to think ahead or predict possible outcomes • use collaborative activities where students start with the same beginning and work in teams to determine different outcomes • use story-starter activities of a collaborative piece where each student contributes a certain portion • predict the end of events or stories before reading the facts • develop the asking of "how" or "why" questions • consider students' first language or dialects spoken at home as this can help you explain the difference between spoken language and the written word • help students understand what types of grammar rules are used when writing • have students speak their ideas before they write them down • have students practice correcting subject-verb agreement in a set of pre-selected sentences • give students a list of verb tenses with commonly used verbs • provide multiple opportunities for students to practice correct verb

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Higher Order Cognition (Cont'd)	tense usage • give students a list of adjectives and a list of places and events; have them choose 5 to 10 adjectives and one event and then write a short paragraph or story using the selected words • encourage students to keep an Ideas Journal • have students keep a list of things they would like to do if they had "Time on My Hands" • provide prompts or story starters—an ideas jar, a list of ideas on the wall • allow students to dictate ideas into a tape recorder or use voice-recognition software • give students the opportunity to practice verb endings • have students find correct use of grammatical rules in their favorite books or magazines or other documents
Language	• copy pages from students' favorite books, magazines, and newspapers and then circle or highlight the punctuation used on the page. Discuss why the author used each type of punctuation • provide students with a list or paragraph of completed sentences and have them add the punctuation • when modeling different punctuation rules, introduce only one rule at a time • show students how punctuation can change the meaning of a sentence • have students read sentences aloud before making punctuation decisions • let students practice using punctuation when writing on a computer • post punctuation rules in the classroom • give students an opportunity to correct capitalization and punctuation errors through proofreading exercises • provide students with a paragraph missing all capital letters and have them add the capitals

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Language (Cont'd)	• introduce only a few new vocabulary words at one time • teach students how to use the spellchecker in the word processing package they are using • encourage students to record their ideas first without worrying about spelling • integrate spelling lessons into larger activities • remind students of strategies for using the dictionary to look up unknown words • consider students' first language or dialects spoken at home as this can help you explain the difference between spoken language and the written word • help students understand what types of grammar rules are used for writing • have students speak their ideas before writing them down • have students practice correcting subject-verb agreement in a set of pre-selected sentences • give students a list of verb tenses with commonly used verbs • give students many opportunities to practice using correct verb tenses • give students a list of adjectives and a list of places and events; have students choose 5 to 10 adjectives and one event and then write a short paragraph or story using the selected words • give students the opportunity to practice verb endings • have students find correct use of grammatical rules in their favorite books or magazines or other documents

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Temporal-Sequential Ordering	• encourage students to preview what assignment will look like when it is completed or what they will need to do to complete the assignment • distribute an organizer that shows the steps to take to complete the assignment • provide jump starts to students to help them begin • encourage students to start a homework session by planning what they will accomplish during the session • have students identify the steps they need to take to be successful • encourage students to include reviewing their work from the day as part of their regular study time • encourage students to work on topics of interest to help them work on their own and sustain work on writing assignments • recognize students' attitudes towards various types of writing and encourage them to see that they have the necessary tools, both internal and external, to do the task at hand • be aware that students may be unwilling to start because they fear doing a less than perfect job • have students practice activities that involve organization • give students a list of words to organize into groups • encourage students to do an outline before writing and use positive praise when they organize things well • demonstrate how to use outlines and graphic organizers • give students a list of ideas in the wrong order and have them reorder the list • give students sentences from a paragraph that are out of order and have them put them in order • encourage students to use computer software programs that help them generate ideas, outlines, and graphic maps of their ideas

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Neuromotor	• encourage students to use a comfortable writing implement—the "right" pen or pencil • review the proper grip of a pen and encourage students to experiment to find the best grip for themselves • give students a pre-shaped pencil grip as a positive and supportive gesture • give students opportunities to write with various limitations—no wrist motion, write from the elbow only • allow students to use a computer in lieu of writing by hand • allow students to write with a pencil instead of a pen—it has less friction with the paper and doesn't smudge as easily • if students have too much difficulty typing, provide voice-activated or keystroke-reducing software • introduce activities where students combine fine motor practice with visual discrimination • introduce activities where students can write on the blackboard or with markers on graph paper or on an easel • have students use voice-synthesis software to make it easier to review drafts of their writing • use software that is designed to maximize the quality of a person's writing • hand out notes, or a typed or handwritten copy, of the material being presented so students can follow along • give students partially completed concept maps, outlines, and handouts to serve as guides or to use for review • allow students to copy information from the board or an overhead in stages • read the material aloud as students copy it • make sure all information to be copied from the board or overhead is written clearly • introduce creative writing activities where students can have fun while they practice letter formation correctly

Strategies to Use for Weaknesses in Writing	
Function Weakness	**Possible Strategies**
Neuromotor (Cont'd)	• give students the choice of printing, handwriting, or using a computer • provide opportunities for students to learn to work with a scribe • provide opportunities to practice keyboarding and working with word processing programs and writing software • be aware that students with graph motor issues may not be able to use a keyboard—they may need a scribe • recognize that the computer may become a survival tool for some students for producing legible work; however, it may not necessarily improve the quality of the content of the work • have tape recorded lectures and old tests available in the classroom as a resource for students to review • break writing assignments up into smaller tasks • evaluate each step of an assignment as it is completed • assign only one stage of writing per class or per day