

# Health, Wealth, and Literacy

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Lifelong Learning



The Social Progress Index, which measures people's quality of life across the four continents, lists adult literacy rate as a key factor to the foundation of wellbeing. The International Literacy Association states that "The ability to read, write, and communicate connects people and empowers them to achieve things they never thought possible".

With the literacy requirements of the Diversified Basic Education increasing dramatically, it is imperative that educational stakeholders collaborate for adult learners' academic success and overall feeling of empowerment.

This workshop will review, compare and contrast the content versus disciplinary literacy requirements for the core DBE programs and offer tools to help adult centres devise their literacy action plans and ensuing professional development sessions.

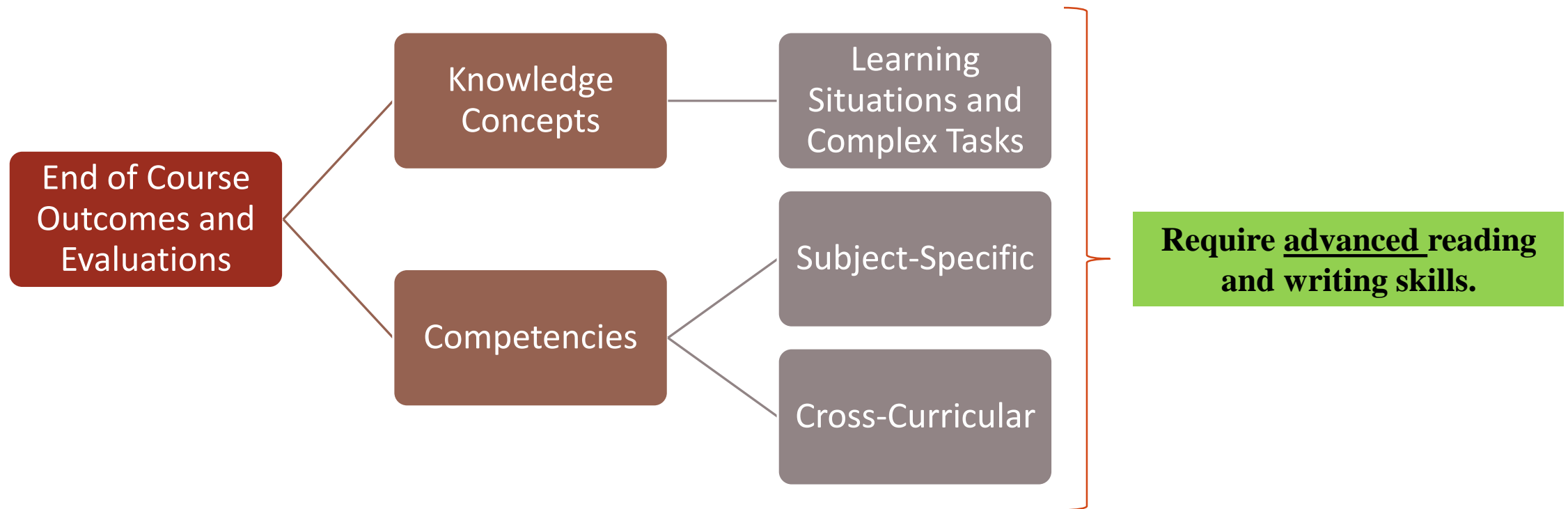
# Where are we now?

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- THE DEMANDS OF THE DIVERSIFIED BASIC EDUCATION PROGRAM
- ADULT LEARNER LEVELS, ABILITIES, SAMPLES
- LANGUAGE AND LITERACY EDUCATION FOR EDUCATORS

# The Demands of the DBE Program

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# DBE Sample Secondary 4 Question

Each of the documents below reveals a historical figure's position on the union of British colonies in a federation in the 1860s. A) Which figure had a different position than the other two? B) Explain how this position was different?

## Document 1

"The British government is ready to grant a federal union at once, and when that is accomplished the French element will be completely overwhelmed by the majority of British representatives."

Antoine-Aimé Dorion

## Document 2

"It is therefore necessary that the provinces should unite all their forces and all their resources to take rank among the most important countries in the world..."

Georg-Etienne Cartier

## Document 3

"...we have formed a scheme of government which unites the advantages of both, giving us the strength of a legislative union and the sectional freedom of a federal union..."

John A. Macdonald

A) Antoine-Aimé Dorion B) He was against the project, while the two other men supported it. Dorion's view was that the federal union of the colonies would make francophones a minority in the government, while the other two men valued the strength that a union would provide.

**DBE exams require learners to have:**

### 1) Advanced reading abilities:

- Decode and read correctly
- Access prior knowledge
- Read complex texts
- Demonstrate intellectual operations
- To extract implicit information
- To make skillful connections with texts
- To judge, value and evaluate texts

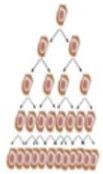
### 2) Advanced writing abilities:

- Reinvest reading comprehension
- Use content area vocabulary
- Use codes and conventions of writing
- Word count demands
- Time constraints
- Few marks towards code and conventions

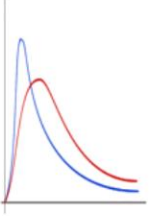
# DBE Sample Secondary 4 Math

**Setting the Context**

Cancer is a scourge that has preoccupied the medical world for many years. A great deal of energy and money has been invested in research to find out the cause of this illness and to develop the means to treat it. Mathematics has been an indispensable tool in advancing this research. Researchers have collected data and identified algebraic models that have helped them to better understand their observations. For example, the way a cancerous tumour grows is similar to cell division in bacteria. This is consistent with the theory that a cancerous tumour develops from a "defective" cell that constantly divides.



Source: Bing.com



Source: Bing.com

It is recognized that 40% of cancers do not respond to treatment. Recently, researchers have been looking at why cancerous cells become resistant to treatment. Did they benefit from genetic mutations or develop a resistance to stress? These adaptive mechanisms have already been modelled as a way of explaining the evolution of animal species. Applied to tumours, these models can predict how cancerous cells will behave during treatment. By comparing these predictions to laboratory data, the model can be validated and corrected, if needed. By analyzing the similarities with already established models, a mathematician can help doctors find the best treatment combinations to overcome a cancer when the cells are resistant to a therapy.

In this learning situation, you will be creating an algebraic model using experimental data on the growth of a tumour. Using your model, you will predict how long it takes for the tumour to attain a critical mass. You will also determine what the consequences are for smokers with a genetic predisposition towards lung cancer.

**Learning Situations and Complex Tasks require:**

## **1) Advanced reading abilities:**

- To situate themselves in the topic
- To retain important information
- To disregard irrelevant information
- To extract implicit information
- To understand what they are being asked to find

## **2) Advanced writing abilities:**

Students are now being asked to:

- make predictions
- list consequences
- state opinions
- draw a conclusion
- explain their thought process, etc.

# Adult Learner Levels

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## Disciplinary Level versus Reading Level

Disciplinary Level of Adult Learner	Reading Level
Mathematics secondary 3	Paul Laplante 2013 Study for PROCEDE: Reading level Secondary 1 -2
English Language Arts secondary 4	
French Second Language secondary 5	
Contemporary World secondary 5	

# Adult Learner Secondary 5 Writing Samples

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**Contemporary World Secondary 5 Essay Question: Introductory paragraph adult sampler:**

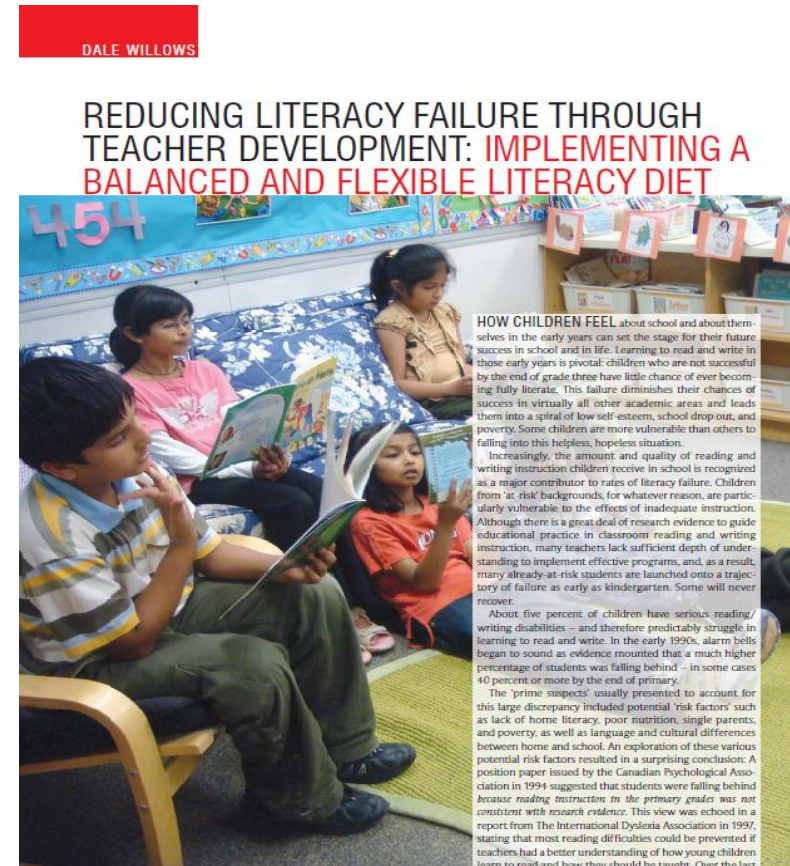
- ❖ **Sample 1:** When it comes to tensions and conflicts around the world. It's rare that it's about one problem. Usually there's many reasons why states don't get a long. Whether it's religious, ethnic or linguistic.
- ❖ **Sample 2:** The identity demands can be a source of conflicts in a region by three types of conflicts ethnic, religious, and linguistic.
- ❖ **Sample 3:** Different identity recognition has been a huge concern way before some groups were created, or before I was even born. Identity crisis is way worse than discrimination. Having different beliefs, race or ethnicity, or even a mother tongue can lead to a situation where a lot of people get hurt. It is sad to say that part of what we are can cause a horrendous event.



# Language and Literacy Education Training

*“The vast majority of practicing teachers are graduates of B.Ed. programs in which they may have had only one course, or just part of a course, that focused specifically on language and literacy education.”*

**Dale Willows, REDUCING LITERACY FAILURE THROUGH TEACHER DEVELOPMENT: IMPLEMENTING A BALANCED AND FLEXIBLE LITERACY DIET**



# Assessment of Current Language and Literacy Education Practices: Reading

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Phonemic awareness

Concepts of print

Vocabulary

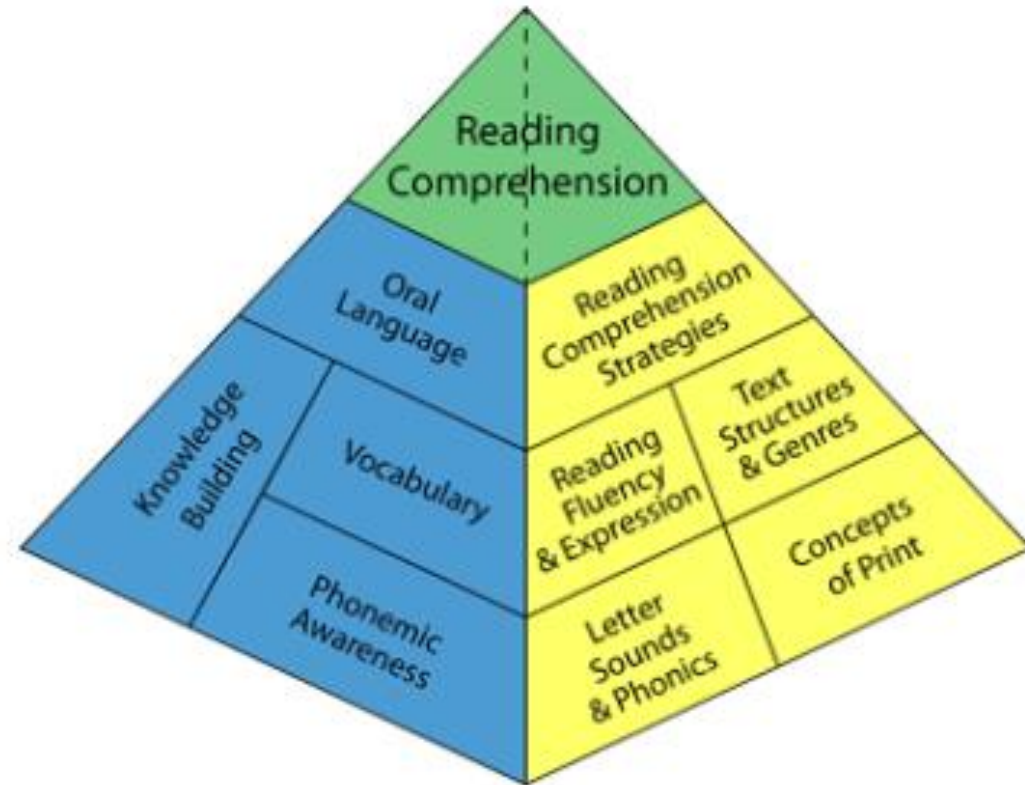
Knowledge building

Oral language

Reading Fluency and expression

Text structure and genres

Reading comprehension strategies



[https://www.oise.utoronto.ca/balancedliteracydiet/Food\\_Groups/index.html](https://www.oise.utoronto.ca/balancedliteracydiet/Food_Groups/index.html)

# Assessment of Current Language and Literacy Education Practices: Writing

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Phonemic Awareness

Letter sounds and phonics

Spelling and word study

Concepts of print

Knowledge building

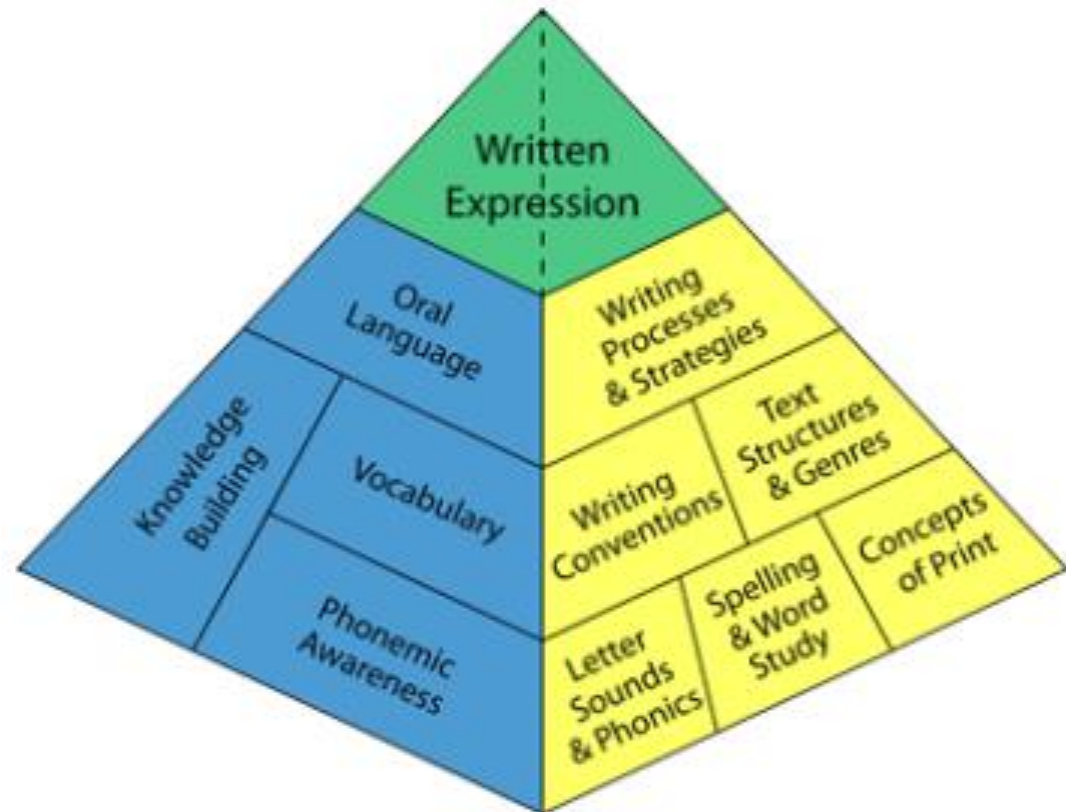
Vocabulary

Writing conventions

Text structures and genres

Writing process and strategies

Oral language



[https://www.oise.utoronto.ca/balancedliteracydiet/Food\\_Groups/index.html](https://www.oise.utoronto.ca/balancedliteracydiet/Food_Groups/index.html)

# Health, Wealth and Literacy Connection

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*“Evidence shows that students who do not learn to read on level by 3rd grade are much more likely to develop low self-esteem, drop out of school, and engage in antisocial and aggressive behavior.”*



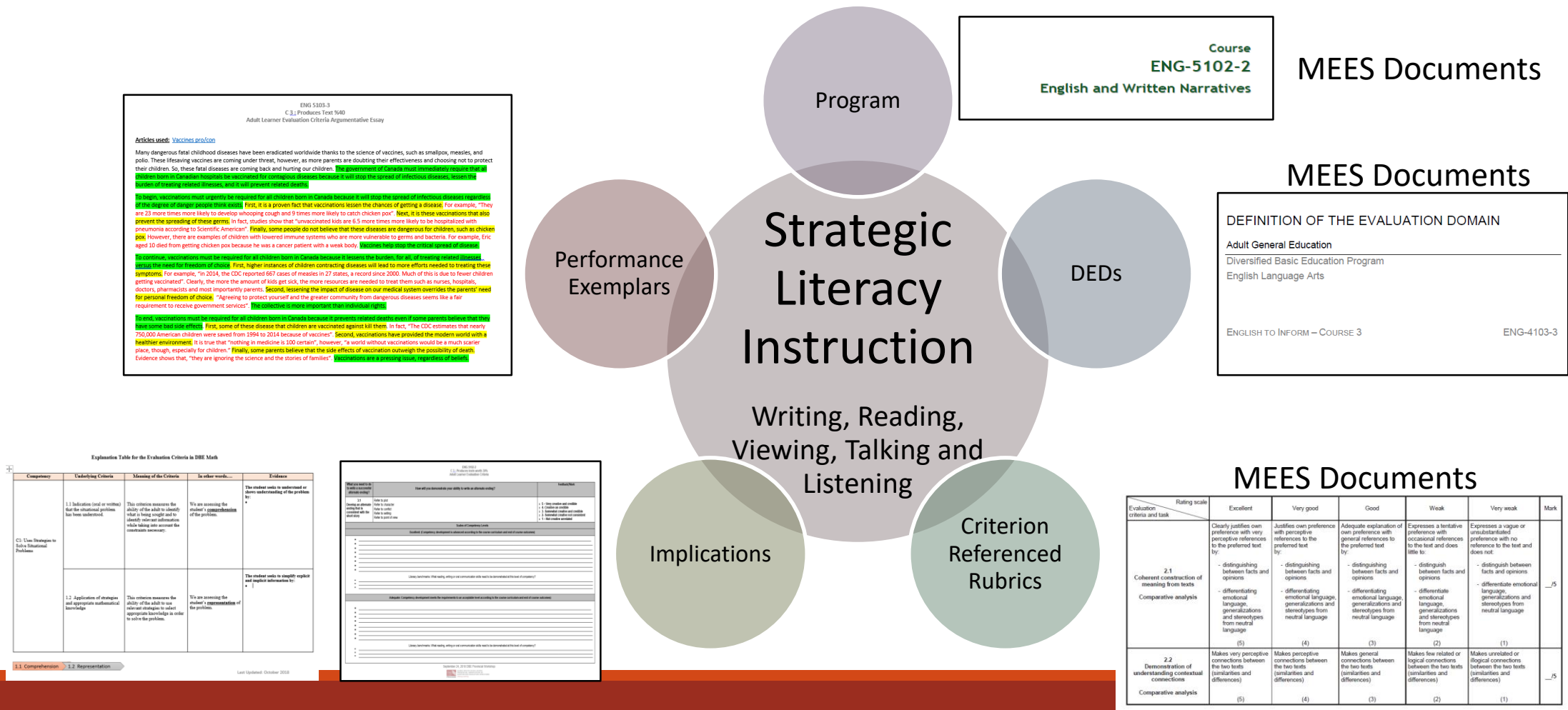
# Where are we going?

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- SUPPORTING TEACHERS TO IMPROVE LITERACY INSTRUCTION
- STRENGTHENING LITERACY DEVELOPMENT ACROSS THE CONTENT AREAS
- CREATING INSTRUCTIONAL TOOLS WITH LITERACY DEMANDS IN MIND

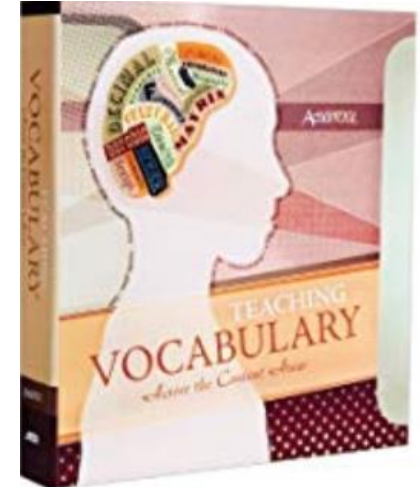
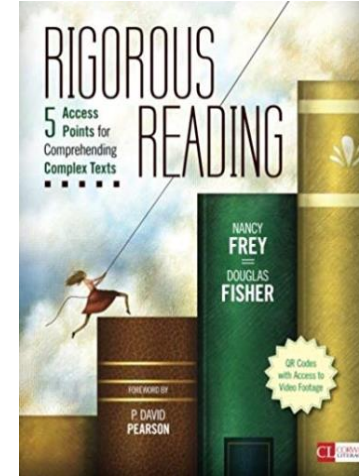
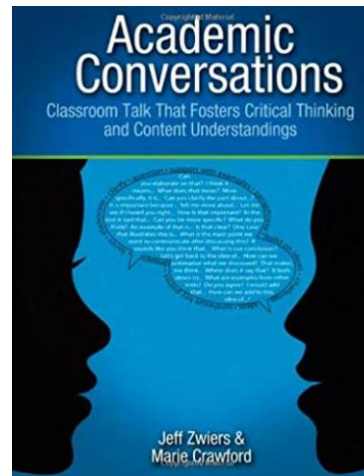
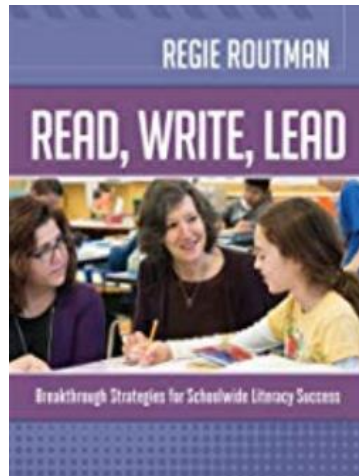
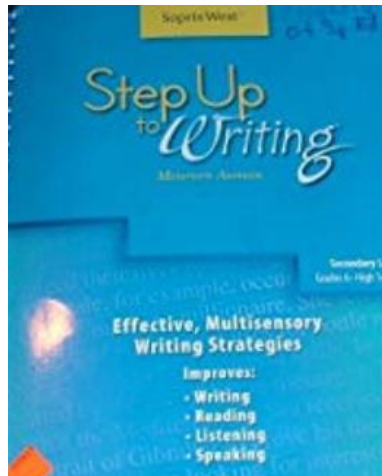


# Supporting Teachers to Improve Instruction



# Strengthening Literacy Development Across the Content Areas

## ❖ Shared literacy beliefs



# Creating Instructional Tools with Literacy Demands in Mind

## ❖ Shared literacy practices

## Curriculum-Aligned Problem Solving Templates

**Competency 1: Uses problem-solving strategies**

**1.1: Reading Strategies**

<p><b>C</b> Circle key numbers</p> <p><b>U</b> Underline the questions</p> <p><b>B</b> Box any math action words</p> <p><b>E</b> Eliminate information that is not important.</p>	<p>Are there any words that I don't understand?</p>
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**1.2 Problem Solving Strategies**

<p>What am I given?</p>	<p>What am I asked to find?</p>	<p>Can I represent the given data in a different way?</p> <ul style="list-style-type: none"> <li>• Graph</li> <li>• Table</li> <li>• Drawing</li> <li>• Flowchart</li> </ul>	<p>What operations do I need to use to solve this problem?</p>	<p>What missing information do I need to find before I start solving this problem?</p>
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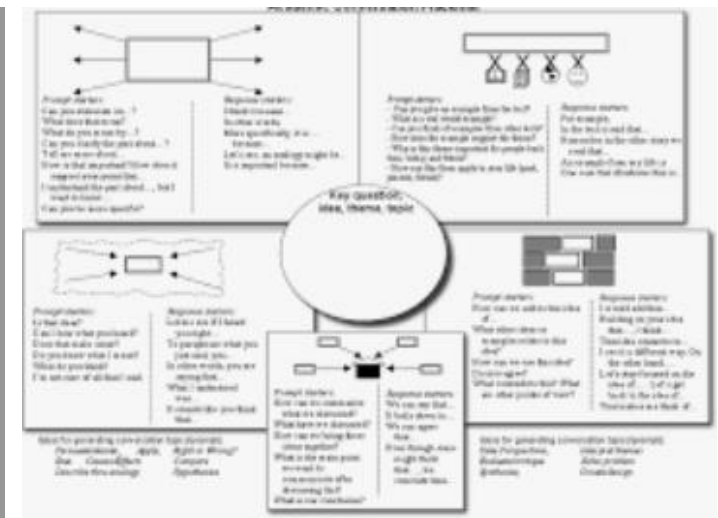
Diagram illustrating the flow of problem-solving strategies:

- From the "Can I represent the given data in a different way?" box, an arrow points down to a large empty box.
- From the large empty box, an arrow points right to the "What pattern or relationship(s) exists among the data that is given?" box.

# Scaffolded Lab Report Templates

[illegible]

# Oral Conversations Placemat





# Health, Wealth, and Literacy Connection

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**“Adolescents who do not learn to write well are at a disadvantage. In school, weaker writers are less likely than their more skilled classmates to use writing to support and extend learning in content classrooms. Their grades are likely to suffer, especially in classes where writing is the primary means for assessing progress (Graham, 2006b). Their chances of attending college are reduced, because universities increasingly use writing to evaluate applicants’ qualifications. At work, writing has become a gateway for employment and promotion, especially in salaried positions (see reports by the National Commission on Writing, 2004, 2005). Employees in business as well as government (local, state, and federal) are expected to produce written documentation, visual presentations, memoranda, technical reports, and electronic messages. In the community at large, as E-mail has progressively supplanted the telephone for the purpose of communication, adults who are not able to communicate in writing may be unable to participate fully in civic life.”**

Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, 99, 445-476. <https://doi.org/10.1037/0022-0663.99.3.445>

# How will we get there?

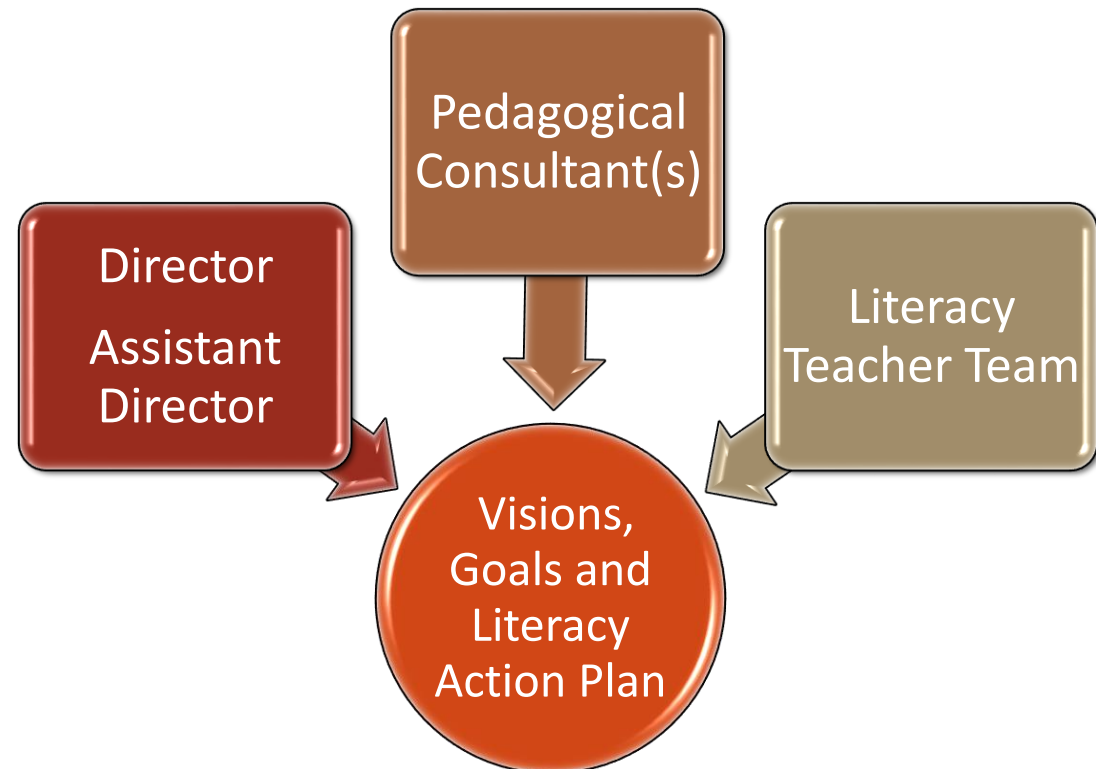
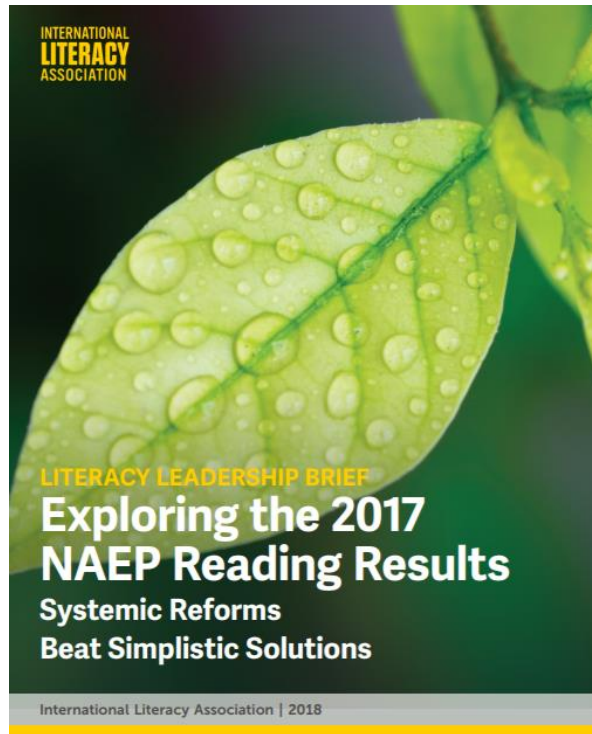
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- BUILDING LITERACY LEADERSHIP
- VISION, GOAL AND LITERACY ACTION PLAN

# Literacy Leadership

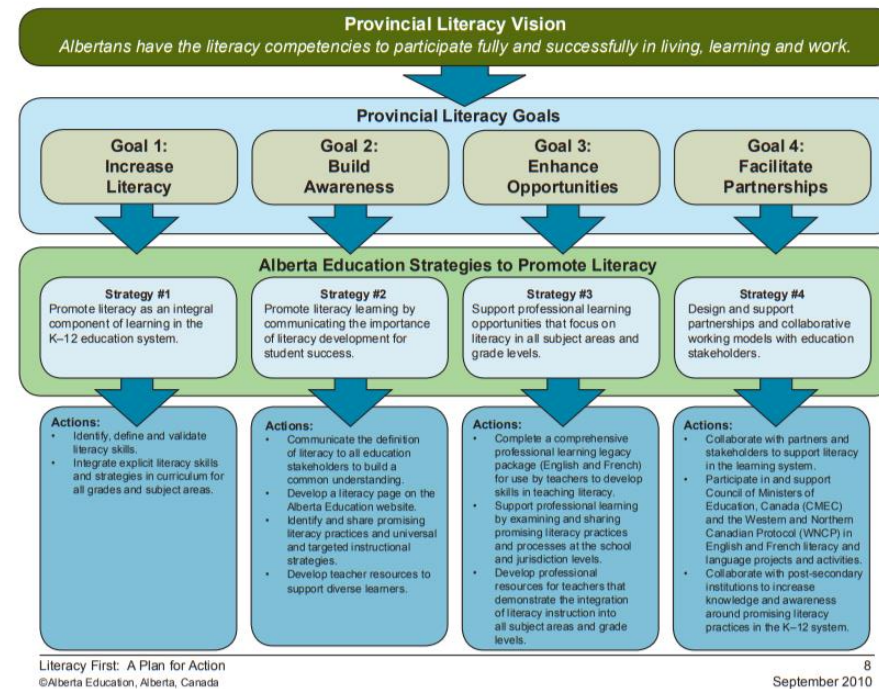
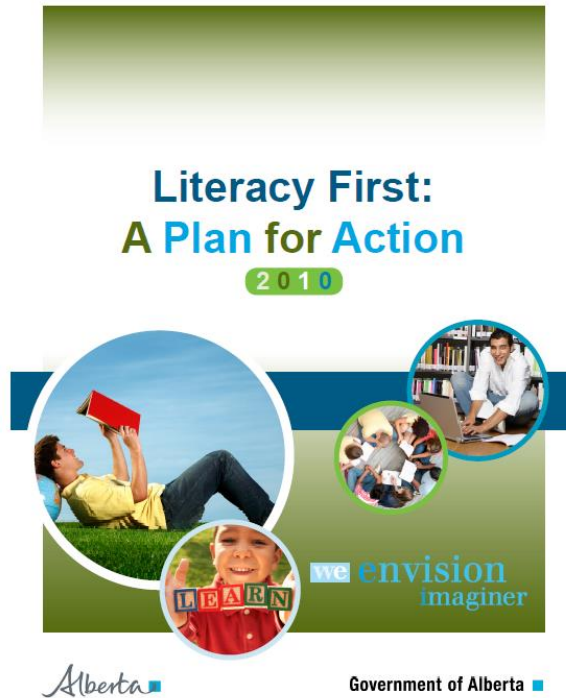
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“The buy-in of these three pillars need to be in place to lead the discussion of the vision of excellence...” (Exploring the 2017 NAEP Reading Results,7)



# Sample Vision, Goals and Literacy Action Plan

“There is no universal, one size fits-all solution. When it comes to improving reading achievement, the practical implication is that each school’s path to success will be somewhat different”  
(Exploring the 2017 NAEP Reading Results,7).

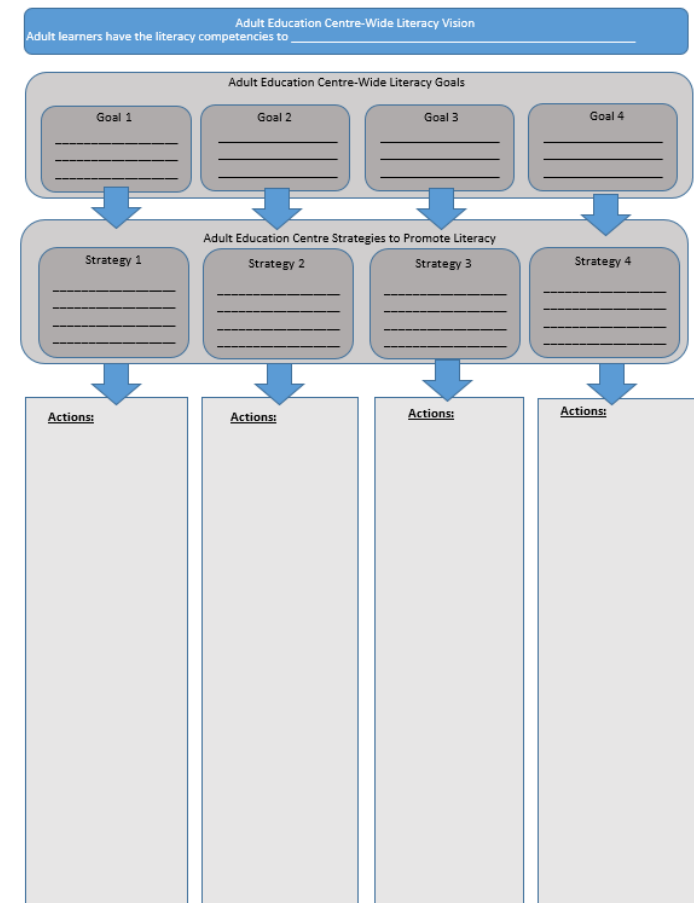


# Developing a Vision, Goals and Literacy Action Plan

❖ A literacy action plan has 5 key components

- ❖ Strengthening Literacy Development Across the Content Areas
- ❖ Strategic interventions for struggling Readers and Writers
- ❖ School Policies, Structures, and Culture for Supporting Literacy
- ❖ Building Leadership Capacity
- ❖ Teacher Professional Development

Irvin, J. L., Meltzer, J., & Dukes, M. S. (2007). *Taking action on adolescent literacy: An implementation guide for school leaders*. Alexandria, VA: Association for Supervision and Curriculum Development.



# Health, Wealth and Literacy Connection

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- 48 per cent of adult Canadians have low literacy skills that fall below high school equivalency and affect their ability to function at work and in their personal lives. 17 per cent function at the lowest level, where individuals may, for example, be unable to read the dosage instructions on a medicine bottle. (OECD Programme for the International Assessment of Adult Competencies\*, 2013).
- Canada ranked eighth out of 15 countries evaluated by the PIAAC on the percentage of adults with adequate literacy skills. The assessment found that the percentage of adults with inadequate literacy skills (48 per cent) has increased significantly over the previous decade (OECD Programme for the International Assessment of Adult Competencies\*, 2013).
- Out of six predictor variables to determine variance in earnings, literacy had the most significant effect, followed by education (Literacy in the Information Age: Final Report of the International Adult Literacy Survey – OECD and Statistics Canada, 2000).

<https://abclifeliteracy.ca/workplace-literacy-facts>

# Follow Up Workshop: why writing matters in all Content areas, even when it “doesn’t count”?

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ISABELLE BERTOLOTTI AND NICOLE LALONDE-BARLEY

RENCONTRE NATIONAL JANUARY 24 AND 25, 2019

AQIFGA APRIL 2019



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# Optimizing Math and Science Instruction with Essential Literacy Strategies

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