

Read Alouds • Shared Reading • Small Group Reading Instruction • Writing • Phonological Awareness • Word Work • Speaking and Listening • Viewing, Visualizing and Representing • Digital Literacy • **Cross-Curricular Literacy** • Independent Reading

COMPREHENSIVE LITERACY GUIDES GRADES K-6



CROSS-CURRICULAR LITERACY

GRADES 1-6

OVERVIEW

As per the Literacy Definitions, Components and Elements released by Alberta Education in 2016, Alberta teachers across all subjects are expected to guide students to recognize the value of literacy (LA1), be more aware of themselves as learners (LA2), and understand the literacy demands within each task (LA3). Teachers are also called on to deepen student literacy knowledge and understanding through a focus on the rules of language (LKU1) and they are required to teach students how to acquire information (LKU2), how to construct meaning in increasingly complex and diverse texts (LKU3), and how to communicate meaning (LKU4).

<https://education.alberta.ca/media/3069627/definition-components-and-elements-literacy.pdf>

Literacy is the ability, confidence and willingness to engage with language* to acquire, construct and communicate meaning in all aspects of daily living.

***Language is a socially and culturally constructed system of communication.**

- Literacy Definition, Alberta Education 2015

Teachers often teach curriculum outcomes in a logical sequence, subject by subject, to ensure they are accomplishing their goals. However, this approach can create a disconnect between subjects. When possible, blurring curriculum lines allow students to develop competencies, tap into diverse background knowledge and experiences, make connections and apply learning across subjects.

Skills, knowledge and competencies are naturally interrelated. For example, literacy, numeracy and critical thinking span the curriculum. Students learn to persevere when reading, solving a math problem, mixing paint colours or testing a scientific principle. Students use creativity when writing a story, designing boats that float, or creating a compelling tourist ad for a region in Canada. Cause and effect relationships are examined in language, science and social studies.

By using common literacy approaches, vocabulary and strategies across subjects, students see strategies used in diverse ways and can learn to use strategies independently no matter what topic they are exploring.

DEFINITIONS

Infusing literacy across the curriculum can be approached in a number of ways. Here are a few terms used in relation to this topic:

Interdisciplinary - an approach that applies methodology from more than one discipline to examine a central theme

Cross-disciplinary-viewing one discipline from the perspective of another

Multidisciplinary - using several disciplines to focus on one problem with no attempt to integrate content

Content Literacy - using literacy skills and strategies to make sense of texts across subjects

Disciplinary Literacy - involves the use of reading, reasoning, investigating, speaking, and writing specific to a particular discipline (McConachie 2010), e.g. reading critically like a historian, reading for details like a mathematician or seeking cause and effect like a scientist

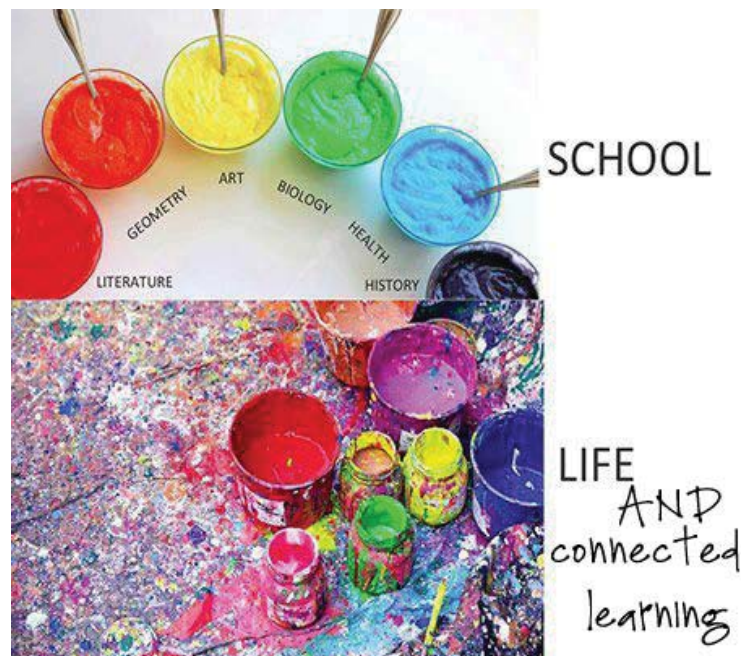


Image source: Traci Gardner, posted at thinkspace.csu.edu.au/theindependentvariable/2015/03/30/connected-learning-digital-literacy/

CROSS-CURRICULAR LITERACY

GRADES 1-6

RELEVANCE TO PROGRAM OF STUDIES

A sampling of literacy skills from the Grade 4 Alberta Program of Studies:

English Language Arts

- 1.1 Discover and Explore: express ideas, develop understanding, and express preferences
- 1.2 Clarify and Extend: combine ideas and extend understanding
- 2.1 Use strategies and cues: prior knowledge, comprehension strategies, textual cues
- 2.2. Respond to texts: experience various texts, construct meaning from texts
- 2.3 Understand Forms, Elements and Techniques
- 2.4 Create original text
- 3.1 Plan and Focus
- 3.2 Select and Process - Use a variety of sources, access information, evaluate sources
- 3.3. Organize, record and evaluate
- 3.4 Share and Review - Share ideas and information
- 4.2 Attend to Conventions
- 4.3 Present and Share

Social Studies:

- use and manage information and communication technologies
- interpret and present their findings
- defend their opinions
- reflect upon what they have learned
- recognize and responsibly address injustices
- communicate ideas and information in an informed, organized and persuasive manner.

Math:

- describe mental mathematics strategies
- provide examples of where fractions are used
- describe patterns found in tables and charts
- read and record calendar dates in a variety of formats
- model and explain that for different wholes, two identical fractions may not represent the same quantity

Science:

- communication is essential for science learning
- language provides a means for students to develop and explore their ideas and to express what they have learned
- language also plays a role in developing the skills of inquiry and problem solving
- ask questions that lead to exploration and investigation
- identify one or more possible answers to questions by stating a prediction or a hypothesis
- communicate with group members, showing ability to contribute and receive ideas
- identify new questions that arise from what was learned

CROSS-CURRICULAR LITERACY








GRADES 1-6

CONSIDERATIONS - PLANNING TIPS - CLASSROOM DESIGN

- Show students how literacy skills apply to multiple genres, topics and texts, both fiction and nonfiction.
- Highlight nonfiction texts in read alouds, shared readings, guided reading groups and craft lessons.
- Give students opportunities to read, write and talk about subject content they are learning.
- Allow students to use technology tools such as digital storytelling apps or presentation tools to demonstrate understanding or remix content in creative ways.
- Feature cross-curricular vocabulary on a word wall or develop additional subject specific word walls.
- Ensure that the classroom library is well stocked with texts across genres: math, science, social studies books, pamphlets, newspapers, magazines, environmental print, maps, game rules, how-to manuals, etc.
- Place curriculums beside each other and look for natural connections, overlaps and ways to intentionally infuse literacy strategies. Is it possible to create one “global” lesson or unit?
- When creating inquiry or project-based learning opportunities, include literacy components and assessable outcomes in student investigations, reports and final products/presentations.
- Consider longer blocks of instruction when combining content area outcomes as this allows students to engage in sustained, focused work time. (Ofsted Report, 2002-2003)



A FEW THOUGHTS FROM EDUCATIONAL EXPERTS IN THIS AREA:

-  In contrast to learning skills in isolation, students who participate in interdisciplinary experiences see the value of what they are learning and become more actively engaged. (Resnick, 1989)
-  Two things happen. First, young people are encouraged to integrate learning experiences into their schemes of meaning so as to broaden and deepen their understanding of themselves and their world. Second, they are engaged in seeking, acquiring, and using knowledge in an organic – not an artificial – way. (Beane, 1995)
-  Human brain increases capacity by making connections (synapses) not merely by amassing information. (London Grid for Learning, 2006)
-  Cross-curricular learning helps to develop metacognitive learners and metacognitive learners are able to adapt their learning to new situations. (Crown, 2006)
-  Benefits include higher levels of student engagement, increased teacher collaboration and professional growth, and more opportunities to differentiate learning. (Drake & Reid, 2010)
-  Learning in isolation leads to an incompleteness of understanding and application. Once teachers, through artistry and relevance, unite branches of knowledge, they can significantly enhance the learning process. (Gabriel)
-  At their best, integrative activities highlight the most unique aspects of each subject and fuse them, so that they reveal relationships among subjects that would not have been understood had each subject been taught alone. (Rauschenbach, 1996)

CROSS-CURRICULAR LITERACY

GRADES 1-6

CONSULTANT TIPS

Basic implementation might look like this...

- Read informational texts and reinforce reading strategies in Science, Social Studies and Math.
- Read a poem (ELA) about Alberta Pioneers (SS).
- Draw students' attention to curriculum overlaps when they occur.
- Assign a written text in Social Studies, assess the key ideas for a Social Studies assessment and the language skills for English Language Arts.

A more impactful implementation might look like this...

- Use texts from another subject to provide context. For example, if the class is reading a story about the diary of a worm, read companion nonfiction texts about worms to help students better understand the story.
- Intentionally schedule topics of study so related or complementary concepts in Math and Science, for example, will be taught at the same time.
- Design an inquiry or project-based learning opportunity that addresses outcomes from multiple curriculums.
- Undertake a community of practice with colleagues; co-plan an upcoming lesson or unit infusing literacy and outcomes from across subject areas in meaningful ways, co-teach and/or observe students during planned lessons and reflect on practice.

Someone who has the basics mastered and could go the extra mile might look like this...

- Plan an extensive integrated unit. Grade 6 teachers at one Alberta school aligned outcomes across multiple curriculums (ELA, MA, SC, SS, FSL) and helped their class create a Community with a forest to manage, an elected government (written

political campaign speeches), discussions about necessary municipal buildings and services, key landmarks were given French names, students calculated area and perimeter of structures, there was a crime scene to evaluate, etc.

- Another school made the decision to eliminate Grade 6 Language Arts from their timetable. ELA outcomes were to be embedded in other subjects.
- Team teach with teachers of varying subject expertise and reinforce common messages.

The tremendous power of a river is diminished when it is fragmented into little streams. However, when the streams are channeled together, it then can develop a deep flow.

So it is with learning...When professional educators combine their energies and reinforce the same deep learning, the stream of information is clearer for the student, the learning activities are more fluid, and the student's reservoir of knowledge and skills fills faster.

<https://www.edutopia.org/blog/cross-curricular-teaching-deeper-learning-ben-johnson>

SEE IT IN ACTION

What Learning Looks Like in Rocky View Schools - video playlist - skim through list to see sample student projects in an Alberta context:

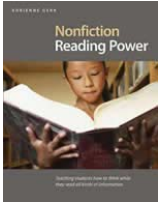
https://www.youtube.com/watch?list=PLuhDFTEpRQYGH_G4Xi_fmPW5IHtD20pz&v=zwmVV1neARs

Sample Grades 1 - 6 Cross-curricular projects:

<http://blog.mimio.com/enrich-the-learning-experience-with-cross-curricular-projects>

CROSS-CURRICULAR LITERACY GRADES 1-6

RESOURCES



Nonfiction Reading Power (2008) and *Nonfiction Writing Power* (2014), Adrienne Gear:
<http://www.readingpowergear.com/>



Genre Prompting Guide for Fiction & Genre Prompting Guide for Nonfiction, Poetry and Test Taking K-8
<http://www.heinemann.com/products/E04299.aspx>



The Reading Strategies Book (2015), Jennifer Serravallo - this practical teaching resource features numerous strategies that support comprehension in nonfiction: <http://www.heinemann.com/products/EBK07777.aspx>

Literacy and Numeracy Secretariat: What Works? Research into Practice - a series of brief monographs outlining research and best practices in topics such as integrated learning in the classroom, science and literacy, word problems, etc. http://www.edugains.ca/newsite/literacy/classroomlearningK_6/Integration.html

Making Cross-Curricular Connections - guiding ideas on how to integrate subjects with Alberta curriculum examples:
http://www.canadianteachermagazine.com/article_2016_ti_cross-curricular-connections.html

Adolescent Literacy Toolkit (2007) - an overview of best practices for intermediate grades and tips for planning strategic literacy-based lessons across the content areas:
<http://www.franklin.kyschools.us/Downloads/CCSSO-Content%20Area%20Literacy%20Guide.pdf>

Teaching Content Areas if Teaching Reading (video):
<https://www.youtube.com/watch?v=RiP-ijdxqEc>

Meeting Standards Through Integrated Curriculum, ASCD, 2004 (book synthesis):
<http://www.ascd.org/publications/books/103011/chapters/What-Is-Integrated-Curriculum%2%A2.aspx>



Competencies, Alberta Education - overviews of eight competencies, learning guides, poster and teacher and student-friendly postcards: http://erlc.ca/resources/resources/cross_curricular_competencies_overview/

CHALLENGES/PITFALLS

- ! Studies (Barnes and Shirley, 2005, 2007; Roth, 2000) have shown that applying two, three or four subjects to the same theme can produce a 'bland broth' of half-understood ideas and misconceptions. Interdisciplinary teaching and learning can easily result in less clarity about what the subject entails. (Barnes, 2011).
 - Cross-curricular integration should be carefully structured to maintain the integrity of the outcomes.
 - Seeking to make learning more meaningful should not dilute the learning or replace instructional time that may be needed to develop discrete skills and outcomes.
http://www.teachprimary.com/learning_resources/view/making-cross-curricular-links
 - Aim for a balance of instruction and opportunities to combine content areas and make use of informational texts.
- ! Cross-curricular projects can easily veer off in far reaching directions or take more time than expected.
 - When designing learning tasks, careful planning is required to ensure they are closely aligned to desired competency development, curriculum outcomes and student abilities.

CROSS-CURRICULAR LITERACY

GRADES 1-6

MODIFICATIONS, SUPPORTS AND TECHNOLOGY TOOLS

In the past, students who struggled to learn were frequently excluded from participating in activities that led to exploration, discovery, and critical thinking. With thematic instruction, however, these students including those who are acquiring English as a Second Language can be fully included.

For example, prior to introducing a piece of literature or informational text, it is beneficial to provide additional support for students who lack background knowledge, or who have difficulty understanding select vocabulary and concepts. Teachers or specialists may provide this background information and preteach potentially troublesome words or concepts.

Other class members who possess a good deal of background information about the theme may share information. This “support in advance” enables the students who struggle to fully participate in class discussions, writing, sharing, and reading. Instead of being excluded, they are now class members who have a chance to succeed.

<https://www.eduplace.com/rdg/res/vogt.html>

Creating Language Objectives in order to support English Language Learners in Content Area Instruction:

<http://www.colorincolorado.org/article/language-objectives-key-effective-content-area-instruction-english-learners>

DIGITAL TOOLS

Online news, science and reference sites:

NEWSELA

- Newsela
- Dogo News



- 2learn.ca
- Animals A-Z



- National Geographic
- Britannica School
- Discovery Education Canada
- Power Knowledge Life Science and Physical Science
- www.learnalberta.ca/online/referencecentre.aspx
- <https://www.commonsensemedia.org/lists/best-news-sources-for-kids>

Search engines for kids



- www.kiddle.co
- www.kidrex.org
- www.kidzsearch.com
- Google Voice Search (use the mic icon)

Sources of digital nonfiction texts

- BookFlix
- TrueFlix
- Storyline Online
- Epic Books - www.getepic.com
- Raz Kids
- TumbleBooks (access through public library website)
- Pobble365.com (daily picture prompt)
- Hoopla App (use your public library card to borrow ebooks)
- OverDrive App (use your public library card to borrow ebooks)



CROSS-CURRICULAR LITERACY

GRADES 1-6

Digital Storytelling Tools:



- Google Slides
- BookCreator App
Student Example: www.youtube.com/watch?v=bcXgNkj5tjM&list=PLwflOclG7wbkXBohVI83pYXuQaV9uelCn&index=43



- Toontastic App
Student Example- www.youtube.com/watch?v=101j18i--El&t=3s
- Draw & Tell App
Tutorial & Example- www.youtube.com/watch?v=3gG_I2VBY8I
- Tellagami App
Student Example- www.youtube.com/watch?v=QEBZ13m5FyI

PLANNING AND ASSESSMENT TOOLS

Galileo Educational Network - designing inquiry-based learning experiences, sample Alberta-based classroom projects: www.galileo.org/teachers/designing-learning/resources/inquiry-and-assessment/

Child Study Centre, Garneau School, Edmonton - Project Learning phases: [http://garneau.epsb.ca/media/elementaryjuniorhighschools/garneau/images/ProjectLearningintheClassroom3.0\(2\).pdf](http://garneau.epsb.ca/media/elementaryjuniorhighschools/garneau/images/ProjectLearningintheClassroom3.0(2).pdf)

Buck Institute For Education - resources to support Project-Based Learning: www.bie.org/Alberta

Assessment Consortium - performance tasks, rubric tools: www.aac.ab.ca



UNIT PLANNING TEMPLATE (modified from Lakeland University)

BACKWARD DESIGN/DOWNWARD DESIGN CROSS-CURRICULAR PLANNING MODEL

Subjects /Strands: _____ Grade(s): _____

Number of days _____ Culminating task due date: _____

BIG IDEA FOR THIS UNIT	What is important for students to know? What are the enduring understandings and authentic, real-world applications of this knowledge? What is the driving question that guides learning and ties to intended curriculum outcomes? How will this deepen student understanding across subject areas?
SPECIFIC EXPECTATION(S)	What will students learn? Identify curriculum outcomes from each subject area the unit will address.
STUDENT LEARNING GOALS (e.g. I CAN STATEMENTS)	Identify what students will be expected to know and be able to do.

UNIT PLANNING TEMPLATE (modified from Lakeland University)

CULMINATING TASK	What students will do/write/say to demonstrate their understanding of the big idea? How will it be differentiated and respond to individual needs?
SUCCESS CRITERIA	What will successful acquisition of the learning goals look like and sound like? How will we know what students have learned?
ASSESSMENT TOOLS	<input type="checkbox"/> Checklist <input type="checkbox"/> Rubric <input type="checkbox"/> Rating Scale <input type="checkbox"/> Anecdotal Comments <input type="checkbox"/> Feedback Form <input type="checkbox"/> Self/Peer <input type="checkbox"/> Other
LEARNING SKILLS, ATTRIBUTES, AND COMPETENCIES,	Identify learner skills, attributes, literacy and numeracy elements, competencies and FNMI perspectives that will be targeted during this unit.

UNIT PLANNING TEMPLATE (modified from Lakeland University)

FORMATIVE ASSESSMENT STRATEGIES

- Teacher Conference
- Exit Card
- Self Assessment Checklist
- Concept Map
- Select Response
- Observation checklist
- Interview
- Peer Edit
- Spot Check

- Quiz
- Question and Answer
- Demonstration
- Teacher Edit
- Checklist
- Discussion
- Thumbs Up/Thumbs Down
- Self Assessment Response Form
- Other _____

VARIETY OF LEARNING EXPERIENCES

Ensure that there are a variety of learning experiences to match class and individual learning needs

Learning Experiences

- | | | |
|--|--|--|
| <input type="checkbox"/> Inquiry Questions | <input type="checkbox"/> Graphing | <input type="checkbox"/> Research (Independent) |
| <input type="checkbox"/> Anticipation Guide | <input type="checkbox"/> Guest Speaker | <input type="checkbox"/> Report Writing |
| <input type="checkbox"/> Brainstorming | <input type="checkbox"/> Inside/Outside Circle | <input type="checkbox"/> Response Writing |
| <input type="checkbox"/> Case Study | <input type="checkbox"/> Inquiry | <input type="checkbox"/> Response Journals |
| <input type="checkbox"/> Choice Boards | <input type="checkbox"/> Jigsaw | <input type="checkbox"/> Role Playing |
| <input type="checkbox"/> Class Discussion | <input type="checkbox"/> Journal Writing | <input type="checkbox"/> Round Robin |
| <input type="checkbox"/> Computer Simulation | <input type="checkbox"/> KWL chart | <input type="checkbox"/> Simulation |
| <input type="checkbox"/> Concept Attainment | <input type="checkbox"/> Learning Centres | <input type="checkbox"/> Snowball |
| <input type="checkbox"/> Concept Formation | <input type="checkbox"/> Learning Contracts | <input type="checkbox"/> Socratic Dialogue/ Rich Questioning |
| <input type="checkbox"/> Concept Creation | <input type="checkbox"/> Metaphors | <input type="checkbox"/> Song Creation |
| <input type="checkbox"/> Concept Mapping | <input type="checkbox"/> Movie Review/Analysis | <input type="checkbox"/> Teams Games Tournaments |
| <input type="checkbox"/> Critical Dialogue | <input type="checkbox"/> Mind Map | <input type="checkbox"/> Three Way Debate |
| <input type="checkbox"/> Cubing | <input type="checkbox"/> Model Building | <input type="checkbox"/> Think Pair Share |
| <input type="checkbox"/> Debate (Formal) | <input type="checkbox"/> Note Making (student generated) | <input type="checkbox"/> Think Pair Square (Graduated) |
| <input type="checkbox"/> Debate (Informal) | <input type="checkbox"/> Note Making (teacher generate) | <input type="checkbox"/> Think Together – Think Apart |
| <input type="checkbox"/> Examine Both Sides | <input type="checkbox"/> Numbered Heads | <input type="checkbox"/> Thinking Routines |
| <input type="checkbox"/> Four Corners | <input type="checkbox"/> Jigsaw | <input type="checkbox"/> Tying |
| <input type="checkbox"/> Game | <input type="checkbox"/> Panel Discussion | <input type="checkbox"/> Values Line |
| <input type="checkbox"/> Game Theory | <input type="checkbox"/> Placemat | <input type="checkbox"/> Venn Diagram |
| <input type="checkbox"/> Graffiti | <input type="checkbox"/> P/M/I | <input type="checkbox"/> Video Clip |
| <input type="checkbox"/> Graphic Organizer | <input type="checkbox"/> Problem Based Learning | <input type="checkbox"/> Word Wall |
| <input type="checkbox"/> Graph Creation | <input type="checkbox"/> Puzzle Pieces | <input type="checkbox"/> Word Web |
| | <input type="checkbox"/> RAFTS | <input type="checkbox"/> Other _____ |
| | <input type="checkbox"/> Research (Guided) | |

UNIT PLANNING TEMPLATE (modified from Lakeland University)

REFLECTION

SUCCESS OF OVERALL PROJECT

How well did the driving question and lessons work? Primarily teacher led or opportunities for student inquiry and initiative?

Evidence of Student Growth and Time Provided for Self-Reflection and Metacognition

Assessment Tools, Criteria, and Feedback – Curriculum Outcomes achieved? – Adequate student support?

Modifications for Next Time