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FORWARD

At Rocky View Schools, literacy and numeracy are foundational to all student learning; integral to this is our belief that every teacher is a literacy and numeracy teacher. As our mission is to engage all learners through meaningful and challenging experiences, preparing them to understand, adapt and successfully contribute to our changing global community, we are committed to the development of strong literacy and numeracy skills and 21st Century competencies. Students will need to be able to create, evaluate, and use information to reach their full potential, thrive in the world of work, and become caring, contributing members of society.

The Rocky View Schools K-12 Literacy and Numeracy Framework was developed to support these beliefs and to deliver on its Four Year Plan’s Goal One, Outcome One - Learners are Literate and Numerate. Over the past two years we have engaged in a collaborative process to establish a framework that provides a comprehensive, focused, and intentional system-wide approach to literacy and numeracy development, as well as a common set of essential conditions for implementation. This is the first version of the framework, with subsequent versions defining specific levels and sections.

Through RVS’ ongoing commitment to the professional learning of our educators, we will develop the professional capacity to support the framework and the literacy and numeracy development of all students in our classrooms. It is our hope that this resource will support and guide schools as they work to achieve high standards of literacy and numeracy teaching and learning and work together to ensure that all learners are successful, engaged, and supported.

Greg Luterbach, Superintendent of Schools, Rocky View Schools

Dave Morris, Associate Superintendent of Learning, Rocky View Schools
ACKNOWLEDGEMENTS

We would like to express our sincere appreciation to the exceptional educators who have participated in the development of this framework:

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Dawn Granley, Teacher  Jennifer Wentworth, Teacher

We would also like to acknowledge the support we received from the Calgary Regional Learning Consortium (CRC).
At Rocky View Schools literacy and numeracy are foundational to all student learning. The goal is that all students reach their potential by developing competencies of engaged thinkers and ethical citizens with an entrepreneurial spirit (Ministerial Order #001, 2013). Every teacher is a literacy and numeracy teacher as students need many opportunities to develop competencies and build literacy and numeracy knowledge, skills and attitudes in all subjects in all grades. Through an ongoing cycle of teaching, learning, and balanced assessments, teachers provide high quality personalized learning opportunities for all students. Critical to this process is on-going professional learning, supportive school leadership, community partnerships and a system-wide commitment to literacy and numeracy. Seven essential conditions: shared vision, leadership, quality programming, research and evidence, resources, time and community engagement are the building blocks that are integral to effective literacy and numeracy programming, and enable learners to be engaged, supported and successful.
DEFINITION OF LITERACY

Literacy is the ability, confidence and willingness to engage with language\(^1\) to acquire, construct and communicate meaning in all aspects of daily living (Alberta Education, 2015).

Literacy is foundational for all learning, making sense of the world and communicating with others.

Literacy is more than the ability to read and write. It involves the knowledge, skills and abilities—the competencies—that enable individuals to think critically, communicate effectively, deal with change and solve problems in a variety of contexts to achieve their personal goals, develop their knowledge and potential, and participate fully in society (Government of Alberta, p. 6).

“Literacy is the foundation for continuous learning ... has benefits for individuals, society and the economy. Stronger literacy skills are associated with higher income, better health and greater social and civic engagement.”

Alberta Education 2010b, p. 1

Alberta Education Literacy Progressions

*Literacy Progressions* describe key literacy milestones along a continuum of developmentally appropriate expectations and behaviours across all subjects from Kindergarten through Grade 12. The progressions provide a common language and construct for all educators to help students acquire or apply literacy when engaging with subject learning outcomes.

---

\(^1\) Language is a socially and culturally constructed system of communication.
DEFINITION OF NUMERACY

Numeracy is the ability, confidence and willingness to engage with quantitative\(^2\) or spatial\(^3\) information to make informed decisions in all aspects of daily living (Alberta Education, 2015). An information and technology-based society requires individuals who are able to think critically about complex issues, analyze and adapt to new situations, solve problems of various kinds, and communicate their thinking effectively.

“Numeracy, like writing, must permeate the curriculum”. When it does, “it will enhance students' understanding of all subjects and their capacity to lead informed lives” (Steen, 2001, p. 115).

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2 Quantitative information is information that can be measured and expressed as an amount.

3 Spatial information is the physical location of objects or the relationship between objects.
“To succeed in today’s data-driven and interconnected world, it is essential that all Alberta children develop strong literacy and numeracy skills.”

Alberta Education, 2015

Numeracy Progressions

Alberta Education Numeracy Progressions

Numeracy Progressions describe key numeracy milestones along a continuum of developmentally appropriate expectations and behaviours across all subjects from Kindergarten through Grade 12. The progressions provide a common language and construct for all educators to help students acquire or apply numeracy when engaging with subject learning outcomes.
WHY ARE LITERACY AND NUMERACY IMPORTANT?

Literacy and Numeracy are foundational to successful learning and living. They are lifelong and active processes that begin at birth and develop throughout one’s lifetime. Literacy and Numeracy are the means through which students develop knowledge and understanding in each subject/discipline area.

We use literacy and numeracy every day when we interpret a utility bill, choose a cellphone plan, answer an email, post a message on social media, figure out how much paint to buy, compare prices at the grocery store or interpret a political cartoon (Alberta Education, 2016).

Numeracy and Literacy enable individuals to reach their full potential, achieve a better quality of life, and contribute to their communities. To discover and make meaning of an increasingly complex and evolving world, students need the confidence and habits of mind to acquire, create, connect and communicate information in a variety of contexts, going beyond the basic skills of reading, writing and solving simple arithmetic problems (ERLC, 2016).

The goal of the Student Learning Ministerial Order for an inclusive Kindergarten to Grade 12 education is to enable all students to employ literacy and numeracy to construct and communicate meaning; and discover, develop and apply competencies across subject and discipline areas for learning, work, and life (Alberta Education Ministerial Order on Student Learning, 2013).

“The 21st C Learner is . . .

“Everything that you would say in society that counts as humanly important – a better life, better health, more cohesion, more individual happiness, greater collective good, more money, economic development at the individual and societal level – the rates of those things go up as the (achievement) gap becomes smaller.”

Crowe, 2009, p.18; Crow, T, 2009

Figure 1: Alberta Education Student Competencies
Figure 2: Rocky View Schools, 2013
LITERACY AND NUMERACY ARE A SHARED RESPONSIBILITY

Literacy and numeracy learning is everyone’s responsibility and is embodied and practiced across all subject/discipline areas at all grade levels.

Shared responsibility is:

- A joint effort (provincial, division, school, levels) from all educators required to increase literacy and numeracy levels.
- A system-wide commitment to high-quality literacy and numeracy instruction.
- The responsibility of all educators; all teachers are teachers of literacy and numeracy.
- Working collaboratively to identify explicit and implicit literacy and numeracy expectations that build and scaffold learning as students move through the subjects and grades.

“Collaborative action and shared responsibility among educators, school authorities, parents, community members, business leaders and students on literacy is needed. Literacy development begins at birth. Experiences in the family, in early learning environments, and in school years have important consequences in literacy skills’ development.”

As conveyed in Alberta Education (2008) and Canadian Education Statistics Council (2009)

Figure 3: Adapted from Literacy First: A Plan For Action, Alberta Education, 2015
## LITERACY AND NUMERACY FRAMEWORK

### ESSENTIAL CONDITIONS

<table>
<thead>
<tr>
<th>Essential Condition</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1. Shared Vision</td>
<td>Stakeholders share understanding of and commitment to effective literacy and numeracy programming in their school.</td>
</tr>
<tr>
<td>2. Leadership</td>
<td>Leaders at all levels have the capacity to champion the implementation of literacy and numeracy programming in their schools.</td>
</tr>
<tr>
<td>3. Research and Evidence</td>
<td>The implementation of the literacy and numeracy programs are based on current research, evidence (assessment) and lessons learned.</td>
</tr>
<tr>
<td>4. Resources</td>
<td>Human resources, materials, funding and infrastructure are in place to support effective literacy and numeracy programming.</td>
</tr>
<tr>
<td>5. Quality Programming</td>
<td>Teachers provide quality literacy and numeracy programming for all students and have access to professional learning opportunities- teacher knowledge, skills and attributes are enhanced through ongoing professional learning related to effective literacy and numeracy programming.</td>
</tr>
<tr>
<td>6. Time</td>
<td>Time is provided to support implementation of effective literacy and numeracy programming.</td>
</tr>
<tr>
<td>7. Community Engagement</td>
<td>Parents, school councils, students, community members, etc. are partners in supporting effective literacy and numeracy programming.</td>
</tr>
</tbody>
</table>

*Figure 4: Guide to Support Implementation: Essential Conditions, January 2010 using Alberta Education Essential Conditions*

### Guides to Support Implementation: Essential Conditions for Literacy and Numeracy Programming

“Successful implementation requires the coordinated, collaborative, and comprehensive efforts of education partners working together towards a shared vision of learning success for all students.”


Through a grant from Alberta Education, the Edmonton Regional Learning Consortium (ERLC) developed a guide to support implementation of literacy and numeracy programming based on the essential conditions outlined above. This guide can be used to support conversations as a school staff with respect to the development, planning and teaching of literacy and numeracy.

**A Guide to Support Implementation: Essential Conditions for Literacy and Numeracy Programming** will support leaders and school staff in implementing effective literacy and numeracy programming for all students.

As well an **Alternate Format for A Guide to Support Implementation: Essential Conditions for Literacy and Numeracy Programming** was developed by Dr. Karen Loerke (adapted from the ERLC and the draft guide).
In Rocky View Schools we believe:

- Literacy and numeracy are **foundational** for all learning, making sense of the world and communicating with others.
- Literacy and numeracy learning is a **shared responsibility** embedded in all subjects and grades.
- A **system-wide commitment** to high-quality literacy and numeracy instruction is essential.
- Leaders actively lead, support and promote literacy and numeracy learning and leadership.
- School, home and community partnerships enhance literacy and numeracy learning.
- Every learner is capable of literacy and numeracy success.
- Literacy and numeracy instruction is based on the evidence of sound **research** verified by classroom practice.
- Literacy and numeracy instruction motivates, **engages, and supports** every student’s learning.
- Literacy and numeracy instruction requires a **balanced and responsive approach**.
- Literacy and numeracy learning embraces the informed and ethical use of **digital technology**.
- Balanced, ongoing **assessment** drives literacy and numeracy instruction.
- In order to provide high quality literacy and numeracy instruction, teachers require relevant ongoing **professional learning**
Essential Condition 2: Literacy and Numeracy Leadership

Leaders at all levels have the capacity to champion the implementation of literacy and numeracy programming in their schools.

Leaders actively lead, support and promote literacy and numeracy learning and leadership.

Literacy and numeracy leaders:

- Have a strong understanding of literacy and numeracy development.
- Work with all staff in the on-going development and implementation of quality literacy and numeracy programs.
- Provide effective supervision to support quality literacy and numeracy instruction.
- Engage in critical and collaborative dialogue.
- Model lifelong learning and engage in continuous, deep professional learning in literacy and numeracy.
- Highlight effective research-based literacy and numeracy practices.
- Reflect on ongoing teacher literacy and numeracy learning and school based leadership practices.
- Create dynamic learning environments and foster teacher leadership and coaching strategies to sustain growth and development.
- Create guidelines and collect, analyze, report and act on school data to support literacy and numeracy for all learners.
- Allocate resources to support implementation of quality literacy and numeracy programming across the curriculum.
- Facilitate partnerships and connect with agencies to support student literacy and numeracy development.
- Value and celebrate success.

“School leadership is second only to classroom teaching as an influence on student learning.”

(Leithwood, Harris and Hopkins, 2008)

“Leading teacher learning and development double the efficacy of any other dimension of leadership in improving student learning outcomes.”

(Robinson, 2011)
Essential Condition 3: Research and Evidence

The implementation of the literacy and numeracy programs are based on current research, evidence and lessons learned.

Literacy and numeracy instruction are based on the evidence of sound research verified by classroom practice.

It necessitates that:

- Effective literacy and numeracy researched practices and their implications are communicated, discussed, and understood by school staff members.
- Effective literacy and numeracy research is current, evidence-based and peer-reviewed.
- Research is verified by classroom practice and is viewed through the lens of each school and classroom setting to determine suitability. (Does the research match the learning context and student needs?)
- Guidelines for analyzing student achievement results are in place and clearly communicated and used for planning to determine student needs.

When examining new initiatives, educators need to be critical and ensure that the evidence is research based and not based on personal positions or opinions. According to Lincoln, Guba, and Schwandt (2007), qualitative research needs to be rigorous, trustworthy and authentic.

Therefore considerations when reading educational research include:

- Findings are evidenced-based.
- Results are from quasi-experimental and qualitative research that uses a prolonged period of investigation and results are cross-checked from multiple sources.
- Methodology is clearly described, understood and connected to the data.
- Results are supported by the data and research and there is sufficient data to draw the conclusions.
- Use of primary studies where possible.

“If we look at the whole school...literacy and leadership are equal partners. That is, the quality of teachers and the quality of leaders are the two most important variables in a school.”

(Routman, 2014, Read, Write, Lead)
LITERACY AND NUMERACY FRAMEWORK

**Essential Condition 4: Resources**

Human resources, materials, funding, and infrastructure are in place to support effective literacy and numeracy programming.

Resources are a priority in the division and school budget. Knowledgeable school-based administrators collaborate with staff to allocate budget resources that address the staffing and student needs revealed by classroom and school evidence.

Designating staff for literacy support and leadership is an important strategy for building and sustaining quality literacy and numeracy programming. Literacy and numeracy coaches who are knowledgeable about literacy and numeracy research, pedagogy and the change process work alongside colleagues modelling, demonstrating, and facilitating professional learning.

Embedded time for professional learning for teachers to research, collaborate, and enhance their professional capacity is instrumental in developing effective literacy and numeracy programming and supporting a whole school focus on student achievement.

Careful consideration and planning are required when selecting literacy resources to meet the needs of students in order to provide a high quality literacy and numeracy program.

**Selecting Appropriate Literacy and Numeracy Resources**

Recommended resources align with the Rocky View Schools Literacy and Numeracy Framework, in particular Essential Condition 5: Quality Programming and adhere to RVS’ literacy and numeracy beliefs and understandings.

*When considering investment in seminal RVS recommended literacy and numeracy resources, consultation with one of the specialists is recommended due to the ongoing development of effective resources.*

“Math is about sense making. This is the most fundamental that a teacher of mathematics needs to believe and act on. It is through the teacher’s actions that every (learner) in his or her own way can come to believe this simple truth and, more importantly, believe that he or she is capable of making sense of mathematics. Helping students come to this belief should be the goal of every teacher.”

*(Van de Walle, Teaching Student Centered Mathematics, 2006, p. ix)*
**Essential Condition 5: Quality Programming**

Teachers provide quality literacy and numeracy programming for all students and have access to professional learning opportunities- teacher knowledge, skills and attributes are enhanced through ongoing professional learning related to effective literacy and numeracy programming.

**DIVISION-WIDE PRACTICES**

**Literacy Practices**

With a firm understanding of ‘balanced literacy’ RVS has advocated particular practices to support quality programming.

**Components of Balanced Literacy**

- Interactive Read-Aloud/Write-Aloud
  - Modelling what proficient readers do
  - Activating prior knowledge, building background knowledge and connecting to students’ experiences
  - Explicit teaching of strategies

- Shared Reading and Writing
  - Collaborative teacher-led activity
  - All eyes looking at the same text
  - Serves as an instructional bridge between read aloud and student-directed independent reading

- Guided Reading and Writing
  - Students have time to work alongside teacher and each other to build skills and strategies
  - Target strategies based on formative assessment data

- Independent Reading and Writing
  - Students have time to consolidate their learning through independent practice
  - Reading and writing to build skill and confidence as readers and writers

- Word Work
  - Meaningful word study using words from content areas and cross curricular vocabulary
  - Purposeful, meaningful, personalized activities
  - Students identify patterns and look for connections to sounds, meanings, structures and related words

**Optimal Learning Model**

- **I do**
  - Writing
  - We do
  - You do

- **We do**
  - Word work
  - Independent Writing
  - Conferencing

- **You do**
  - Guided Groups/Strategy Groups

Find this on the literacy website at schoolblogs.ouv.edu/ouvs-courses/makingliteracyvisible

Adapted from The Writer’s Workshop, The Lucy Calkins Reading and Writing Project, Columbia University, 2014 and Doug Lemov, 2014
Numeracy Practices
With a firm understanding of the Program of Studies and ‘balanced numeracy’ RVS has advocated particular practices to support quality programming.

Components of Balanced Numeracy

Fluency, Reasoning, Problem Solving
Through the three pillars of Fluency, Reasoning and Problem Solving RVS educators plan engaging, purposeful learning opportunities which allow all students to be successful. Through these carefully constructed experiences, students make sense of the world around them.

<table>
<thead>
<tr>
<th>Fluency</th>
<th>Fluency is established when—through carefully constructed experiences—students become fluent in the foundations of mathematics through varied and frequent practice with developmentally appropriate and increasingly complex tasks. Fluency demands more of students than memorizing—students need to understand why they are doing what they are doing and know when to use different methods. As well as fluency of facts and procedures, students should be able to move confidently between contexts and representations, recognize relationships and make connections in mathematics. Fluency is exhibited through efficiency, accuracy, and flexibility.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Mathematics and Estimation (ME)</td>
<td>Number Facts</td>
</tr>
<tr>
<td>Connections (CN)</td>
<td>Standard Algorithms</td>
</tr>
<tr>
<td>Visualization (V)</td>
<td>Procedures</td>
</tr>
<tr>
<td>Technology (T)</td>
<td>Calculation Methods</td>
</tr>
<tr>
<td>Problem Solving Strategies</td>
<td>Conceptual Understanding</td>
</tr>
<tr>
<td>Visualization Strategies</td>
<td>Mathematical Vocabulary</td>
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<td></td>
<td>Modelling</td>
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<td></td>
<td>Concrete→Pictorial→Abstract</td>
</tr>
<tr>
<td></td>
<td>Representations</td>
</tr>
</tbody>
</table>
Reasoning is fundamental to knowing and doing of mathematics. Some would call it systematic thinking. Reasoning is the deep learning that occurs when--through the solving of rich, highly cognitive tasks, rigorous discussion and reflection--students make connections among conceptual ideas.

Students develop the ability to reason through opportunities that encourage them to follow a line of inquiry, conjecture relationships, develop arguments, justify or prove, and make generalizations using mathematical language.

Reasoning enables students to make use of all their other mathematical skills and so reasoning is the 'glue' which helps numeracy make sense.

<table>
<thead>
<tr>
<th>Conjecture</th>
<th>Using mathematical language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open questions</td>
<td>Problems with Intentional learning</td>
</tr>
<tr>
<td>Math talk</td>
<td>Following a line of inquiry</td>
</tr>
<tr>
<td>Communication</td>
<td>Developing an argument, justification or proof</td>
</tr>
<tr>
<td>Making connections</td>
<td>Applying procedural skills in context</td>
</tr>
<tr>
<td>Rich tasks</td>
<td></td>
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</tbody>
</table>

Problem Solving is an intellectual and creative process where students engage with challenging authentic and non-routine tasks where the path to a solution is not obvious. Students plan, investigate and revise as they select and apply the mathematics they know. Students formulate, use and test known strategies and break down problems into a series of simpler steps as they persevere to seek solutions. Problem Solving is the primary focus of numeracy and is a means through which students can make connections to their experiences in and out of the classroom.

<table>
<thead>
<tr>
<th>Non-Routine</th>
<th>Doing math without being told to do math</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovering patterns</td>
<td>Formulating own questions &amp; pursuing them</td>
</tr>
<tr>
<td>Test out own ideas</td>
<td>Generating own new ideas</td>
</tr>
<tr>
<td>Discovery</td>
<td>Becoming own teachers</td>
</tr>
<tr>
<td>Minimal scaffolding</td>
<td>Selecting own strategies</td>
</tr>
<tr>
<td>Formulating conjectures</td>
<td>Contextual, Interesting, Authentic or Real-life</td>
</tr>
</tbody>
</table>

“MATHEMATICS is not about numbers, equations, computations, or algorithms: it is about UNDERSTANDING.”

(William Paul Thurston)
In order to increase students' literacy and numeracy achievement, educators need to be mindful of the following top ten explicit and shared division wide practices:

**LITERACY PRACTICES**

1. **Utilize Alberta’s programs of studies, Ministerial Order on Student Learning, Alberta Literacy Progression and French Immersion Benchmarks for planning.** Teachers use curricula and student competencies to design learning activities to help students achieve their potential:

   - Address the five outcomes and six strands (read, write, listen, speak, view, represent) from the language arts curriculum
   - Provide opportunities for inquiry
   - Embed critical thinking during discussions and decision making
   - Implement the competencies
   - Examine vertical and lateral consistencies for K-12 experiences
   - Plan and implement for cross-grade/cross curricular numeracy instruction in a variety of contexts.

2. **Have a dedicated literacy block**

   Students need time and multiple opportunities to use and practice their developing literacy knowledge and skills in meaningful ways. Teachers need to provide extended time for literacy every day that is timetabled, uninterrupted, and intentionally planned to engage students

**NUMERACY PRACTICES**

1. **Utilize Alberta’s programs of studies, Ministerial Order on Student Learning, Alberta Numeracy Progression for planning.** Teachers use curricula and student competencies to design learning activities to help students achieve their potential:

   - Address the seven mathematical processes (communication, connections, mental mathematics and estimation, problem solving, reasoning, technology and visualization) from the mathematics program of studies
   - Provide opportunities to develop mathematical fluency with conceptual understanding
   - Provide opportunities for inquiry through rich tasks and authentic problem solving
   - Implement the competencies
   - Examine vertical and lateral consistencies for K-12 experiences
   - Plan and implement for cross-grade/cross curricular numeracy instruction in a variety of contexts.

2. **Have a dedicated numeracy block**

   Students need time and multiple opportunities to use and practice their developing numeracy fluency, reasoning and problem solving skills in meaningful ways. Teachers need to provide extended time for numeracy every day that is timetabled, uninterrupted, and intentionally planned to engage students
3. **Incorporate oral language strategies to support learning**

Every day students should engage in frequent opportunities to:
Have meaningful dialogue, listen and reflect with others, have conversations about what they are learning, express and explore conceptual knowledge in order to develop high order thinking, learn new vocabulary and negotiate and construct ideas.

4. **Incorporate a balance of literacy components in a gradual release of responsibilities/gradual increase in independence**

Literacy instructional components in reading and writing include:
- “I do” [read aloud, write aloud, think aloud, modelled]
- “We do” [shared, interactive, partner, guided] and
- “You do” [independent activities].

4. **Incorporate mathematical thinking and reasoning strategies to support learning**

Every day students should engage in frequent opportunities to: Have meaningful dialogue, listen and reflect with others, have conversations about what they are learning, express and explore conceptual knowledge in order to develop higher order thinking and negotiate and construct ideas. Students must realize it is acceptable to solve problems in a variety of ways.

4. **Incorporate a balance of numeracy components in a gradual release of responsibilities/gradual increase in independence**

Numeracy instructional components include:
- Whole Class (Modelling, Think Aloud, Number Talks, Mini-Lessons)
- Small Group (Guided Math, Mini-lessons, Collaborative tasks and Problem Solving)
- Individual (practice activities, rich tasks, problem solving, reflection, conferences, interviews)

5. **Teach reading comprehension**

The thinking processes involved in reading comprehension should be directly taught and modelled, practiced and applied independently. These include self-monitoring, summarizing, predicting, making connections, synthesizing, inferring, analyzing, and critiquing.

5. **Provide opportunity to construct own meaning**

Conceptual understanding is best developed when it proceeds from simple to complex and from concrete to abstract. At all levels, students benefit from working with a variety of materials, tools and contexts and from exposure to various pedagogical approaches when constructing meaning about new mathematical ideas.

6. **Include literacy across the content areas**

Content area texts have unique structures, language conventions, vocabulary, and thinking processes that enhance comprehension. So, direct instruction in literacy must be embedded within all subject areas.

6. **Seek numeracy entry points across content areas**

Some curriculum lends itself better to direct numeracy instruction although mathematical thinking has application across all content areas ie.
- Identifying structures and relevant data
- Being systematic
7. **Plan for student engagement**

Students should be engaged in activities where they can build on their prior knowledge and make connections between what they are learning and the world they live in. The learning environment should value and respect the diversity of students’ experiences and ways of thinking, so that students are comfortable taking intellectual risks, asking questions and posing conjectures.

8. **Differentiate instruction**

Effective literacy and numeracy programming and is provided based on student strengths, needs, interests and experiences. Programs that are responsive to the needs of students differentiate content, process, product and environment. This involves the use of diverse print, digital tools and resources and in the case of numeracy, manipulatives as well, and includes principles of Universal Design for Learning (UDL).

9. **Implement balanced assessments**

Literacy and Numeracy assessment practices must reflect the belief that all students are capable of literacy learning. Assessment “for”, “as”, and “of” learning is on-going, meaningful, and consistent, utilizing multiple forms of assessments to guide student learning.

10. **Involve students in metacognitive practices**

Metacognition is the ability to think about one’s own thinking and combines the interacting process of self-appraisal and self-management. Metacognition has been found to be critical in effective cognition and learning. Students are able to adopt metacognitive processes when opportunities are offered for students to hear others talk about their learning. Students need to regularly reflect on their learning and set goals to move their learning forward.

**DIVISION-WIDE ASSESSMENT**

In Rocky View Schools, teachers use pedagogical documentation when gathering evidence for assessment and programming. Pedagogical documentation is on-going assessment that informs teaching and learning. Pedagogical documentation features assessment “for”, “of” and “as” learning and intertwines thinking, learning and curriculum. Formative assessment during instruction has the greatest impact on achievement of any instructional strategy (Fisher, Frey & Hattie, 2016). On-going assessment is used to understand the learner over time, to guide instruction and track growth.

In Rocky View Schools assessments are used to inform instruction and enhance learning. Therefore:
• Teachers are aware of the purpose of their assessments and can describe what the assessments tell them about their students’ learning in relation to the Program of Studies.
• Teachers use assessment information to determine where individual students are at, and where they need to go in terms of their learning.
• Teachers use assessment information for programming purposes and not just for reporting purposes.
• Teachers attitudes and actions about assessment reflect the belief that all students are capable of learning.
• Teachers use assessment information in partnership with students.
• Parents are provided with assessment information and encouraged to support their child’s growth and learning.

Assessment FOR and AS learning strategies are evident in every classroom:

• Students have a clear understanding of what they are expected to learn.
• Students engage in strategies for both self and peer assessment.
• Students are provided with frequent feedback that is specific, timely and designed to help them know what they need to do to improve their learning.
• Students are engaged in purposeful classroom discussions that are designed to elicit evidence of learning.

Assessment OF learning include the following features:

• Aligns to the Program of Studies.
• Includes practices that are fair and flexible.
• Emphasize grading practices that reflect students’ learning.
• Assessments motivate and challenge students, and are respectful of student diversity.
• Students are provided choice in how they demonstrate their learning.
• Decisions about students are based on a variety of evidence.

**Literacy Assessment**

Pedagogical documentation that includes multiple authentic ongoing literacy assessments provides teachers with a comprehensive literacy understanding of their students.

The RVS Running Record and the RVS Independent Reading Level and Comprehension Assessment are authentic ongoing formative assessment practices that are an integral part of a student’s comprehensive literacy profile.

**Numeracy Assessment**

The Alberta K-9 Mathematics Achievement Indicators provide teachers with examples of evidence of understanding that may be used to determine whether or not students have achieved a given outcome. Achievement indicators also help teachers form a clear picture of the intent and scope of each specific outcome.

*Alberta K-9 Mathematics Achievement Indicators*

“When we situate reading ... as an end unto itself, we run the risk of taking pride in promoting readers who can read rather than nurturing readers who do read.”

*(Rebuilding the Foundation: Effective Reading Instruction for 21st Century Literacy, 2011)*
In addition to designated daily literacy and numeracy blocks, it is essential to provide time for staff to work collaboratively to realize the implementation of the Rocky View Schools Literacy and Numeracy Framework and to provide effective literacy and numeracy programming. Some examples of providing time to support the implementation of effective literacy and numeracy programming include:

- Collaborative meeting time to plan and work with colleagues.
- Time for staff to engage in professional conversations and learning.

**PROFESSIONAL LEARNING**

Professional learning in literacy and numeracy is the responsibility of all teachers. In order to provide high quality literacy and numeracy instruction, teachers require relevant ongoing professional development. Ongoing professional learning leads to a deep understanding of literacy and numeracy teaching, learning and assessment.

To sustain and improve student learning, teachers engage in regular independent and collaborative reflection upon their professional practices. Shared learning, in particular, enhances whole-school literacy and numeracy improvement.

![RVS Professional Learning Model](image-url)

**Alberta Regional Learning Consortia** provide rich resources and tremendous support for educators' professional learning relating to literacy and numeracy.
Increased understanding and commitment to excellence in literacy success occurs when all stakeholders are provided with opportunities to learn about, collaborate, and engage in supporting high levels of literacy and numeracy learning. Establishing strong school-home relationships in support of literacy and numeracy entails involving and supporting parents/guardians in contributing to their child’s literacy and numeracy learning.

"By developing positive connections... a sense of common purpose was fostered.... A key element of building partnerships was to encourage positive and purposeful joint working with a shared responsibility for student achievement"  

(Campbell, Fullan & Glaze, 2006, p.29)

**Family Literacy**
Research shows that the earlier parents become involved in their children’s literacy practices, the more profound the results and the longer lasting the effects. Parents and caregivers make a significant contribution by providing a stimulating environment around language, reading and writing as well as supporting at home, the school’s literacy agenda, both during the early years as well as the primary and secondary years of schooling.

**Family Numeracy**
Access to online resources provided via Canada’s major financial institutions ie. TD, Scotiabank, BMO can augment the school numeracy focus, with specific emphasis on financial literacy.

**Community Partnerships**
Partnerships and engagement with non-profit organizations, post secondary institutions and businesses including local libraries, can play a vital role in supporting K – 12 literacy and numeracy.

**Rocky View Reads**
Rocky View Reads is a partnership with Calgary Reads and FortisAlberta supporting Rocky View Schools with the goal to be a thriving reading community where all children read with confidence and joy. Together we are enhancing literacy skills and building the joy of reading in our school communities.

**Canadian Foundation for Economic Education**
The financial education of our children should start early. The Canadian Foundation for Economic Education and Scotiabank Partner (CFEE’s) Talk With Our Kids About Money program provides teachers and parents with free tools and resources designed to help them have relevant/age appropriate conversations about money.

**Junior Achievement**
Rocky View Schools partner with Junior Achievement (JA) OF Southern Alberta. JA programs focus on financial literacy, work readiness and entrepreneurship giving students the skills and confidence they need to be leaders of tomorrow.
REFERENCES


