

Curriculum Planning & Assessment Resource

Mathematics Grade 1



**Alberta Regional Professional
Development Consortia**

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opportunities at the local, regional and provincial levels*



Curriculum Planning & Assessment Resource

Mathematics

Grade 1 - Time 1

About This Document

This Curriculum Planning & Assessment Resource is intended to be a collection of sample activities, assessments, and resources that teachers may wish to use as they develop their unit plans. This document is not intended to be a sequential list of activities. Rather, the intent is that teachers choose from this resource what is appropriate for their context, and sequence it in their planning.

The sample activities, assessments and resources included in this document have undergone an initial review to determine appropriateness and alignment to the curriculum. However, it is expected that teachers use their professional judgment in selecting activities, assessments and resources that are appropriate for their context.

While every attempt has been made to provide credit and receive permissions, some errors or omissions may have occurred. Please contact info@arpdc.ab.ca to report any error or omissions.

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Acknowledgements

Thank you to all the teachers, numeracy specialists, and technical expertise from Alberta school divisions and ARPDC who collaborated to develop, review, and revise these planning and assessment documents to support curriculum implementation.

Grade 1 - Time

Organizing Idea

Time: Duration is described and quantified by time.

Guiding Question

How can time characterize change?

Learning Outcome

1T1 Students explain time in relation to cycles.

Summative Assessment(s) - Transfer *(In Progress)*

Summative assessments can include the following.

- *Understanding/making sense of a novel context from the real world using one or more concepts (eg. "How are place value and money related?).*
- *Understanding/making sense of a novel context using one or more understandings (eg. Students use money to model the conversion of base 10 values and relate them to base 10 block').*
- *Being able to describe why (linking concepts) something is true, a result, or what might be an extension using learned concepts and understandings.*
- *Apply learning (create products; undertake projects; taking action such as creating a campaign) in a novel context or taking action using the understanding(s).*
- *Construct arguments by taking a position and verifying/proving it with known understandings.*

Summative

[\[understanding surface vs deep vs transfer\]](#)

Teachers will assess as they teach these concepts, although the 1T1a Duration and Story Map formatives may be used as a summative.

Click to jump!



KUSP 1T1

[Literature Connections](#)

KUSP 1T1

Assumable Curriculum / Prerequisite Knowledge / Vocabulary

Order events using words or ordinal numbers (limited to two events)

- Yesterday, today, tomorrow
- First, next/last

Student Language | Essential vocabulary & concepts

- **Duration:** the measure of time between events
- **Time:** the measure of the duration of events
- **Change:** to make or become different
- **Cycle:** any complete round or series of occurrences that repeats or is repeated
- **Sequence:** a pattern or process in which one thing follows another

Pre-Assessments 2

Nelson: Finding Each Students Pathway 2:

Calendar - p.48 (selected questions)

Nelson Leaps and Bounds pages will be referenced in the Pre-Assessments to follow up for emerging learners.

Pages will be referenced in the Assessments to follow up for emerging learners.

Learning Recovery



I Know Statements | Metacognition





- I know days of the week and months of the year are cycles from a calendar.
- I know time is a cycle.
- I know First Nations, Metis, and Inuit use cycles of seasons.

I Can Statements | Skills

- I can tell that time has passed by seeing change.
- I can describe cycles in daily routines and nature, and from a calendar.

Enhancement

1T1 Students explain time in relation to cycles. Learning Outcome					
Knowledge	Understanding	Skills & Procedures	Achievement Indicators	Illustrative Examples	Assessments (Explainer)
<p>Time can be perceived through observable change.</p> <p>First Nations, Métis, and Inuit experience time through sequences and cycles in nature, including cycles of seasons.</p> <p>Cycles from a calendar include days of the week and months of the year.</p>	<p>Time is an experience of change.</p> <p>Time can be perceived as a cycle.</p>	Describe cycles of time encountered in daily routines and nature. a	<p>Describe cycles in daily routines and cycles in nature.</p>	<p>Contrast the weekday daily routines (e.g. day/night, morning/afternoon, etc) with that of the weekend. https://letstalkscience.ca/educational-resources/lessons/cycle-day-and-night</p> <p>Describe cycles in nature (seasons, sun/moon, life cycles of flowers, trees, insects, etc.)</p> <p>Using a template place the following pictures in order showing the cyclical passage of time.</p> 	<p>1T1a - Duration - Surface</p> <p>1T1a - Using a Story Map to Track a Journey - Deep - National Geographic: this activity will have students track the journey a character takes in a story. Each day read a little more and ask questions such as: Where did we go yesterday? Where did we end up today? Where do you think we will be tomorrow?</p>
		Describe observable changes that indicate a cycle of time. b	<p>Describe the changes that occur over time (e.g. within the seasonal cycles).</p>	 <p>Look at the tree. Draw a picture of what it looked like in the past and what it will look like in the future.</p>	<p>1T1b Seasons - Deep. Cambridge University Press -This source has many activities listed within it. Check them out! Tie in with Science Earth Systems and Living Systems.</p> <p>1T1b - Morning, Afternoon and Night - Surface - K5 learning.</p> <p>1T1b - Birthdays - Deep - K5 learning-add to linear calendar</p> <p>(Cross Curricular with Science/ELAL) Nature Journaling Students draw trees to show the changes through the four seasons. To extend, students can include months of the year along with seasons, or they can continue to</p>

				<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="padding: 5px;">Past</th> <th style="padding: 5px;">Present</th> <th style="padding: 5px;">Future</th> </tr> </thead> <tbody> <tr> <td style="height: 80px;"></td> <td style="text-align: center; vertical-align: middle;">  </td> <td style="height: 80px;"></td> </tr> </tbody> </table>	Past	Present	Future				<p>draw the same tree showing growth over the years. Questions:</p> <ul style="list-style-type: none"> - How does the tree change? What can you observe? - How can you tell which season it is? - What are some activities you enjoy during the different seasons? <div style="text-align: center;">  </div>
Past	Present	Future									
											
		<p>Relate cycles of seasons to First Nations, Métis, or Inuit practices. c</p>		<p><u>Winter counts Activity</u></p> <p>Winter Count Activity Name: _____ Date: _____</p> <p>Before I create my Winter Count: <i>What is the main purpose of a Winter Count?</i> _____ _____</p> <p>After I created my Winter Count: <i>What is the main purpose of a Winter Count?</i> _____ _____</p> <p>-Today's HOT QUESTION-</p> <p>Write one detail that supports the following conclusion: Human activities can affect the environment.</p>	<p><u>Winter counts Activity</u> Surface, Transfer - National Park Service</p>						
		<p>Identify cycles from a calendar. d</p>	<p>Identify the days of the week and months of the year from a calendar.</p> <p>Describe an event using the correct time marker (yesterday, tomorrow, next month) with corresponding day of the week or as an extension month of the year).</p>	<p>Consider using a linear calendar. See website below.</p>	<p>1T1d - <u>Yesterday and Tomorrow</u> - Deep - K5 Learning</p> <p>1T1d - <u>Months of the Year</u> - Surface - K5 Learning</p>						



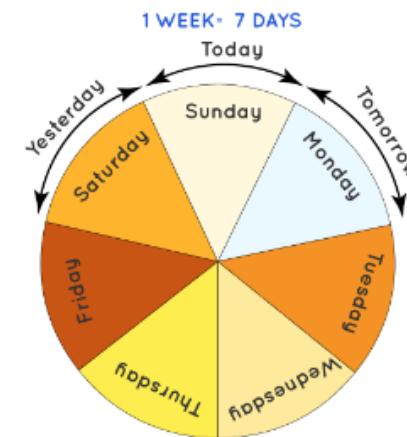
Days Of The Week

Yesterday and tomorrow.

Yesterday	Today	Tomorrow
	Wednesday	
	Friday	
	Sunday	
	Saturday	
	Tuesday	
	Thursday	
	Monday	

Friday	Monday
Wednesday	Thursday
Saturday	
Tuesday	

1 week = 7 days



Resources

Mathology

[ARPD Math Little Books for Alberta Curriculum](#)
[Mathology Free Resources on New Learn Alberta](#)

Mathology Activities

Mathology Grade 1: Measurement Cluster 3, Time and Temperature: Activities 16, 19
 Mathology Grade 1: Measurement Cluster 2, Time: Activity 9 (ON)

Math UP

AB_Cycles in Time and Patterns

- o Lesson 1: Cycles in the Calendar
- o Lesson 2: Cycles in Nature

Existing Texts

Math Focus 1 - Chapter 1 (small connection)
Math Makes Sense 3 - some references to time may work here

The best connection would be to tie this to science Cycles at the same time.

NCETM

[Measures](#) - select Time menus.

Other

[Four Seasons Song](#) by Jack Hartman

Outdoor Connections: Claude Monet Inspiration

Change of light over a day:

- Have the children sketch the same outdoor scene at different times of the day. Help them label their papers with the time and descriptor (labels or analog clock or both):
 - Morning: 9:00 a.m.
 - Afternoon: 2:00 p.m.
 - Evening: 7:00 p.m.

Change of light (and weather) over a year:

- Show the children [Monet's haystack series](#) and explain that Monet painted the same object at different times of the day and different times of the year.
- Over the year, have students make observations about how the light changes throughout the day.
- Ask them to sketch their outdoor scene over more than one season.
- Transfer: Have them sketch a different scene, anticipating potential cyclical changes.

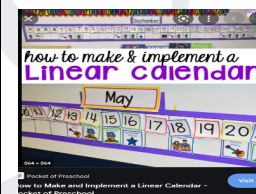
Adapted from: <https://earlymathcounts.org/lessons/telling-time/>

Websites

Linear Calendar:

- Instead of a “traditional” calendar, use a linear calendar as shown below.
- This encompasses counting, patterning, skip-counting, quantity, and passage of time more effectively. It also complements the use of a “number pathway” when building the number concept.

Source: Pocket of Preschool, <https://pocketofpreschool.com/how-to-make-and-implement-linear/>



Indigenous Lesson Plans and Resources

Interpretations for the calendar year months.

Resource: [When the Trees Crackle with Cold: A Cree Calendar Masinahikan](#)
[How to say the words.](#)

Problem Solving



Click to jump!

KUSP 1T1

[Literature Connections](#)

Literature Connections

Title	Author	Format (Picture Book, Novel, Non-fiction, other)	Publisher	ISBN	Notes
When the Trees Crackle with Cold	Bernice Johnson-Laxdal and Miriam Korner	Picture Book	Strong Nations Publishing 02/01/2017	9781927756850	This picture book is about the moon calendar of the northern Cree, the seasons, and the cycle of nature.
Fisher Finds the Bag of Summer	David Alexander Robertson	Picture Book	January 1, 2018 by Manitoba First Nations Education Resource Centre Inc	9781927849385	Story of constellations and changing of seasons.
Warren Whistles at the Sky	David Alexander Robertson	Picture Book	January 1, 2016 by Manitoba First Nations Education Centre	9781927849309	Story about the northern lights and stars.
A Second is a Hiccup	Hazel Hutchings	Picture Book	Arthur a Levine (March 1 2007)	0439831067, 978-0439831062	Connects to real world experiences
It's About Time (MathStart)	Stuart J. Murphy	Picture Book	HarperCollins; Illustrated edition (March 1 2005)	9780060557690, 978-0060557690	Cycles in daily routine
Cluck O' Clock	Kes Gray	Picture Book	Holiday House (Sept. 1 2003)	082341809X, 978-0823418091	Fun, humorous tale of a chicken's day through time
Eddie Gets Ready for School	David Milgrim	Picture Book	Cartwheel Books (July 1 2011)	0545273293, 978-0545273299	Cycles in daily routine
The Berenstain Bears Get Ready for School	Mike Berenstain	Picture Book	HarperFestival; Illustrated edition (June 23 2015)	0062075527, 978-0062075529	Cycles in daily routine
Ready Rabbit Gets Ready	Brenna Maloney	Picture Book	Viking Books for Young Readers (Jan. 29 2015)	0670015490, 978-0670015498	Cycles in daily routine
The Clock Struck One	Trudy Harris	Picture Book	Millbrook Press; Illustrated edition (Aug. 1 2009)	9780822590675, 978-0822590675	Rhyming sequential events of time
Cookies Week	Cindy Ward Tomie dePaola	Picture Book	Puffin Books; Illustrated edition (June 16 1997)	0698114353, 978-0698114357	Time described as days of the week
Four Seasons Make a Year	Anne Rockwell	Picture Book	Bloomsbury USA Childrens; Illustrated edition (March 1 2004)	0802788831, 978-0802788832	Changes of seasons
Time is When	Beth Gleick	Picture Book	Tundra Books (Sept. 9 2008)	0887768709, 978-0887768705	Sequence of time, passage of time
The Very Hungry Caterpillar	Eric Carle	Picture Book	Philomel Books; Brdbk edition (March 23 1994)	0399226907, 978-0399226908	Passage of time (week)