

Curriculum Planning & Assessment Resource

Science

Grade 1: Matter



**Alberta Regional Professional
Development Consortia**

*Dedicated to the provision of professional learning
opportunities at the local, regional and provincial levels*



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Grade 1: Matter

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 the selected activities 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, curriculum 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.

INTRODUCTION

Organizing Idea

Matter: Understandings of the physical world are deepened by investigating matter and energy.

Guiding Question

How can properties of an object be altered?

Learning Outcome

1M1 Students analyze properties of objects and investigate how they can be changed.

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. “Is this an example of diversity?). Example
- Understanding/making sense of a novel context using one or more understandings (eg. Students watch a video or complete a case study and explain what they viewed/interpreted through the lens of the understanding).. [Example](#)
- Being able to describe why (developing predictions or hypotheses) something is unfolding, or what might happen next 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). Example
- Construct arguments by taking a position on a novel issue and defending it with known understandings.

Summative Assessments: [Surface, Deep and Transfer Assessment](#)

Sample Summative Assessment: [See Slide #4 on this Slide Deck](#)

Computer Science & Matter Connection	Scientific Methods
<ul style="list-style-type: none">• Introductory Video & Slide Deck "Wait! What? I'm teaching Computer Science?"<ul style="list-style-type: none">◦ (Part 1) (Part 2)	<ul style="list-style-type: none">• Scientific Method Introductory Video - ARPDC (How scientific method fits in the curriculum.)• Integrating Matter and the Scientific Methods - sample unit plan for second KUSPs
<ul style="list-style-type: none">• Integrating Computer Science & Grade 1 Matter• Grade 1 Computer Science - Curriculum Planning & Assessment Resource.pdf• Computer Science Organizing Idea KUSP cards - use these to help understand and integrate CS KUSPs throughout teaching and learning in Science and across curricula.• CS Unplugged - “Computer Science without a computer”• ScratchJr - teach computer science outcomes using the ScratchJr app on a Chromebook, iPad or other device. This is a great way to introduce computational thinking outcomes before introducing them to block coding later.	<ul style="list-style-type: none">• Introducing Steps in an Investigation: Grade 1<ul style="list-style-type: none">◦ asking questions◦ making predictions◦ observing and recording data◦ analyzing data◦ reaching conclusions• Grade 1-6 Investigation Steps Progression

Click to jump!

KUSPs

1M1.1

1M1.2

[Literature Connections](#)

KUSPs 1M1.1

Prerequisite Knowledge

- Students know that an object is anything that can be perceived using one or more of the five senses.
- Students know the five senses.
- Students know that properties of objects that can be perceived using one or more of the five senses include colour, size, shape, texture, temperature, sound, scent & taste.

Misconceptions

- Students may believe that heavier objects also take up more space (area).
- Students may believe the larger the object the more it weighs.
- Students may believe that you can not change the properties of solid objects.

I Know Statements

- I know that measurable properties of objects include length, how much flat space an object covers (area) & weight (mass).
- I know that weight is the heaviness of an object.
- Tools, such as balance scales and magnifying glasses, can be used to examine properties of objects and materials.

I Understand Statements

- I understand objects have measurable properties.

Student Language | Essential [Vocabulary & Concepts](#)

- Property
- Measurable Property
- Weight

I Can Statements | Skills

- I can identify measurable properties of objects.
- I can directly compare the length, area, and weight of various objects.
- I can use various tools safely when examining the properties of objects.

KUSP 1M1.1

Learning Outcome				
1M1.1 Students analyze properties of objects and investigate how they can be changed.				
Knowledge	Understanding	Skills & Procedures	Sample Activities & Resources What is Surface, Deep and Transfer	Assessments (formative)
<p>Measurable properties of objects include</p> <ul style="list-style-type: none"> length how much flat space an object covers (area) weight (mass) <p>Weight is the heaviness of an object.</p> <p>Tools, such as balance scales and magnifying glasses, can be used to examine properties of objects and materials.</p>	<p>Objects have measurable properties.</p>	<p>Identify measurable properties of objects.</p> <p>Directly compare the length, area, and weight of various objects</p> <p>Use various tools safely when examining the properties of objects.</p>	<p style="text-align: center;">Sample Surface Level Activities Property Measurable Property Using Tools</p> <ul style="list-style-type: none"> What is a measurable property? <ul style="list-style-type: none"> Introduction to Measurable Properties Introducing length, area & width: <ul style="list-style-type: none"> ARPDC Session (Recorded): Matter Grade 1 Video & Slide Deck Slides 50-56 What Tools Are Used For Measuring? <ul style="list-style-type: none"> ARPDC Session (Recorded): Matter Grade 1 Video & Slide Deck <ul style="list-style-type: none"> Slide 8 Measuring Length with Unifix Cubes Measuring Area with Unifix Task Cards Using a balance (Gizmo) Interactive Balance Activity Weighing Objects on a Balance Scale <hr/> <p style="text-align: center;">Sample Deep Level Activities</p> <ul style="list-style-type: none"> Introducing Investigations: Grade 1 <ul style="list-style-type: none"> Investigations: Grade 1 Session (Recorded): Bringing It Together: Matter & Scientific Methods <ul style="list-style-type: none"> Slide Deck: Slides 81-103 January Mystery Measure Object <ul style="list-style-type: none"> Find two objects where <ul style="list-style-type: none"> One object is longer but lighter than another object On object is shorter and lighter than another object One container holds more but weighs less than another container One object takes up less space but is heavier than another object Red Deer Public (Lab. experiment and activity guide) Compare the Weight of Objects Using a Balance 	<p style="text-align: center;">Sample Pre-Assessment Activities</p> <p>These activities introduce the concepts introduced in Kindergarten. Some of the slides in these documents may act as pre-assessment examples.</p> <ul style="list-style-type: none"> What is an Object? (from kindergarten) <ul style="list-style-type: none"> Object What is an Observation? (from kindergarten) <ul style="list-style-type: none"> Observing with the Senses 1.M.1.1 Observation Sort1.M.1.1 Object Sort and Classify .M.1.1 Sort and Classify Rubric What is an Observable Property?(from kindergarten) <ul style="list-style-type: none"> Property What is a Description? (from kindergarten) <ul style="list-style-type: none"> Description Description Words (Observable/Identifiable Properties) Mystery Object Activity What is an Exploration? <ul style="list-style-type: none"> Exploration Exploring by Noticing and Wondering <hr/> <p style="text-align: center;">Sample Formative Assessment</p> <ul style="list-style-type: none"> 1.M.1.1: Identifying Observable and

			<ul style="list-style-type: none"> • Compare the Properties of Two Objects • Can You Change it? <hr/> <p style="text-align: center;">Local/Nearby Options for Experiential Learning Excursions</p> <hr/> <p style="text-align: center;">Other Resources</p> <ul style="list-style-type: none"> • Sesame Street: All About the Word "Texture" 	<ul style="list-style-type: none"> • Measurable Properties of Objects • 1.M.1.1 Make Five Observations Activity • 1.M.1.1: Comparing the length, area, weight of two objects • 1.M.1.1: Comparing Two Shapes (Measurable Properties) <ul style="list-style-type: none"> • What is the connection between ... <ul style="list-style-type: none"> ○ Object and Measurable Property? ○ Measurable Property and Tools?
			<p style="text-align: center;">Infusing Indigenous Knowledge</p> <ul style="list-style-type: none"> • Infusing Indigenous Knowledge into Curriculum (Grades 1-12) • Main Website: Grade 1 Science 	

Resources

Additional Websites and Resources to Support Learning

Indigenous Related:

- The [Learning Circle](#): Classroom Activities on First Nations in Canada - Ages 4 to 7 - **The Learning Circle** has been produced to help meet Canadian educators' growing need for elementary-level learning exercises on First Nations. It is the second in a series of four classroom guides on First Nations in Canada. See Unit 2 for Seasons.
- [Learning from the Land \(teacher information\)](#) - Although there is much diversity between First Nations, Métis, and Inuit, a deep and abiding connection to the land is common. Dr. Leroy Littlebear says that "The land is a sacred trust from the Creator. The land is the giver of life like a mother. The ecological aspect of Indigenous knowledge is all about the land. The land is a source of identity for Aboriginal People. CASS Resource.

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Resources Developed by School Divisions/Educational Institutions

[Edmonton Catholic Pacing Guides](#)

[Edmonton Catholic Curriculum Crates](#)

[Edmonton Catholic Schools](#): Academic Vocabulary: Kindergarten to Grade 3

Edmonton Public [Science Snippets K-3](#)

Edmonton Public [Scope and Sequence](#)

[LearnAlberta Curriculum](#)

APRDC [New Curriculum Professional Learning Resources](#)

[Alberta Science Curriculum Teacher Resources \(CMASTE\)](#): Click on the Teaching Resources Tab at the top of The

- [Learning from the Land \(teacher information\)](#) - Although there is much diversity between First Nations, Métis, and Inuit, a deep and abiding connection to the land is common. Dr. Leroy Littlebear says that “The land is a sacred trust from the Creator. The land is the giver of life like a mother. The ecological aspect of Indigenous knowledge is all about the land. The land is a source of identity for Aboriginal People. CASS Resource.

General:

- [Earth and the Environment](#) - a Kindergarten Cross Curricular Unit - the resource outlines how we might connect the science topics of the earth to mathematics, writing and centre creation. Created by Ontario Teachers Federation: *It's About Time* Series
- [Science North](#) - this site provides Kindergarten teachers with a weekly lesson and video covering the major Organizing Ideas. Check the site for resources that match your unit plan.-
- Next Generation Science Standards - [Sample Bundling](#) (Multiple Organizing Ideas) in an instructional unit) based on [NGSS Model](#)
- What Are Storylines? - [Next generation Science Storylines](#)
- *K5 Learning* provides [free worksheets and additional](#) ones through subscription - sign up for free membership if using the resources.(surface level activities) [Our Senses](#), [Using Our 5 Senses](#),
- [cK-12 - Free STEM teaching resources](#) - provides a set of online science textbooks as open educational resources. (none to match Senses)
- **Ag for Life:** <https://resources.agricultureforlife.ca/en-ca/for-educators/curriculum-linked-resources>
We have full permission to use these resources as well as the National Agriculture resources. Please let them know if there are topics missing and they will help support possible development.
- **Alberta Agriculture** - Agriculture education k-12 <https://www.alberta.ca/agricultural-education.aspx>
Resources here are based on the old Topics but there are still some amazing linkages to our new curriculum. Most activities are black and white which teachers will appreciate since not everyone can copy in color! If we use the materials, download the PDF to your drive or put it in the Assessment folder that I shared with you, name it with the outcome number and name they used in the title and then hyperlink. Cite the source and hyperlink them to the page you download from.
- [Ulnooweg Education Centre](#) offers science units and an Indigenous Perspective Sign in for a free account through the Resources section into [Backyard Science](#): Select the resources you would like to review.
- [Let's Talk Science](#) - Bring critical thinking and curiosity to life in your K-12 classroom with our library of curriculum-aligned, bilingual, and ready-to-use resources. Save valuable prep time while creating engaging and relevant learning experiences for every student. [Picture Collection of Senses](#), [Observe and Record](#), [Observing](#)
- **PBS Learning Media** - [PBS Learning Media](#) - a large selection of science related resources. Review by subject, subtopic and grade. For Kindergarten selections check out the following general [link](#) or [The Five Senses](#), [My Five Senses](#), [Exploring Our Senses](#), [Sorting Objects Based on Properties](#)
- **Alberta Parks** - [Alberta Parks](#) - ABC [Nature Walk](#)
- **Hand2Mind Science Activities** - Lessons and Investigations for K-5 students [Sort Toys By Properties](#)
- [Salisbury Greenhouse](#) - Native Plants in Alberta
- View the **Matter - Kindergarten** Video and slide deck found on the ARPDG site for additional suggestions and resources.
- [Plants, People and Climate Change | Little Green Thumbs 2023](#) - check this link for [Activities](#)
- **Ontario Science Centre:** [Stem Education Toolkit](#) - contains resources to assist in starting your students in their inquiry journey, beginning with their question. It also has several assessment tools readily available.

Home Page.

This website hosts resources developed to support teachers in implementing the [Alberta Science Curriculum](#) initially released in 2023. The resources were created with support from the Centre for Mathematics, Science, and Technology Education (CMASTE) and contributions from students in the Faculty of Education, Elementary Education B.Ed. program. We will be continuing to add resources to this site, so please check back regularly.

[SLEAKs, SPAMs and SWAGs - Sciences Resources Developed by Red Deer Public Schools:](#)

The purpose of this guide is to assist any kindergarten teacher in their instruction of the new science curriculum. Within this document, you will find links to external sites and resources, as well as internal resources that are organized by the coordinators of RDPSD. This is certainly a dynamic document in that it is always changing; if you have any suggestions for modifications, please do not hesitate to contact the RDPSD science coordinator. Contact [Nate Siler](#) if you have any questions.

Lesser Slave Watershed Council [Classroom Presentations](#)

[Lesser Slave Forest Education Society](#) (they are updating their programs to match the new curriculum)

Comox Valley School District #71 - [Science Resources](#). BC Ministry of Education

Government of Canada Science Resources:

[Activity Books:](#)

Science is all around us and can be discovered, explored and used in so many ways! This new Activity Book showcases the diversity of the world of science through activities in health, energy, environment, agriculture, meteorology, astronomy, the living world and much more!

[Canadian Science - History and Achievements](#)

Select from 67 different entries of the history and achievements of Canadians in Science.

[Resource links](#)

Select from pages of activities, maps, lesson plans, videos etc. to support students of all age levels in science education.

Websites and Resources to Support Planning

Inclusion - Best Practices Meeting the Needs of [All Learners in Science](#)

Differentiation: Preview vocabulary and pre teach to students. Use various forms of media to present vocabulary including simplified explanations, visuals in the form of diagrams to label and connect concepts.

- **Ontario Science Centre:** [Curriculum Resources](#) - selected curriculum resources that include a video presentation and corresponding documents that provide easy-to-follow instructions and extension activities using everyday materials.
- Sorting By Property - [K5 Learning](#) - These surface level activities will allow students practice at sorting objects
- [KidSparkz](#) - Early Childhood - K Activities - Free and Paid Membership

Primary Connections (teacher guides, units of study and sample assessment rubrics based on Australian Science Curriculum but offers great links and activities to our curriculum)
No applicable one's for this KUSP

An Alternate Suggestion:

Core Knowledge - [Properties of Matter](#)

Focus:

In this unit, students learn that matter, the “stuff” of which everything is made, exists in many forms. Students will practice sorting and grouping materials by characteristics, called properties, and investigate how the properties of different types of matter make them useful for different tasks. Students take measurements, which permit simple comparisons of different objects.

Students explore concepts that include the following:

- Different forms of matter exist and can be solid, liquid, or gas depending on the temperature.
- Matter can be described and classified by its observable and measurable properties. (Grade 1)
- Different properties of matter are suited to different purposes.
- A variety of objects can be built up from a small set of pieces.
- Heating and cooling a substance may cause an observable change that may or may not be reversible.

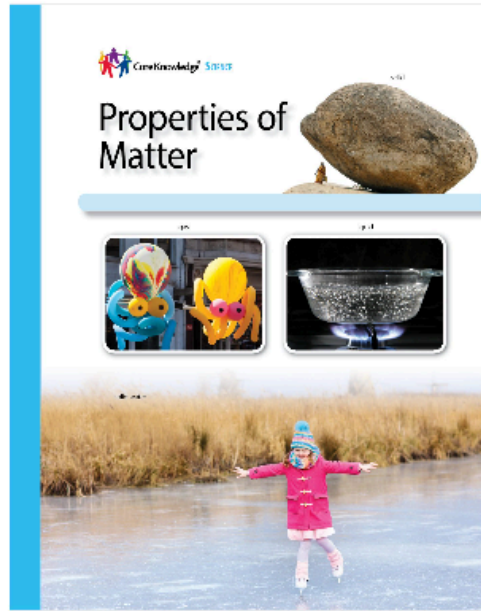
Engineers and engineering designers use knowledge of the properties of matter, as they use materials in design solutions, to make things that are useful to people. This series of lessons incorporates learning goals that support the principles and practices of engineering design, such as defining problems, testing materials, and evaluating possible solutions.

Gizmos New Learn Alberta(Teacher Login Required)
 ExploreLearning Gizmos Site:

New Learn Alberta:

ExploreLearning Gizmos Site:

Request a Gizmos account: alberta@explorellearning.com

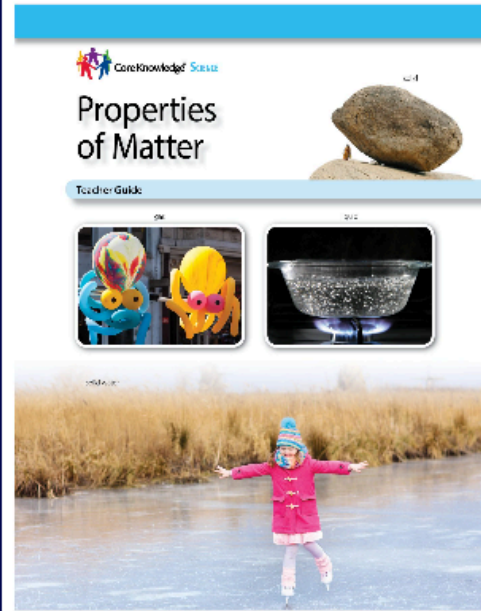


CKSci Unit 1: Properties of Matter

STUDENT BOOK

The Student Books offer engagingly written and richly

[Link](#)

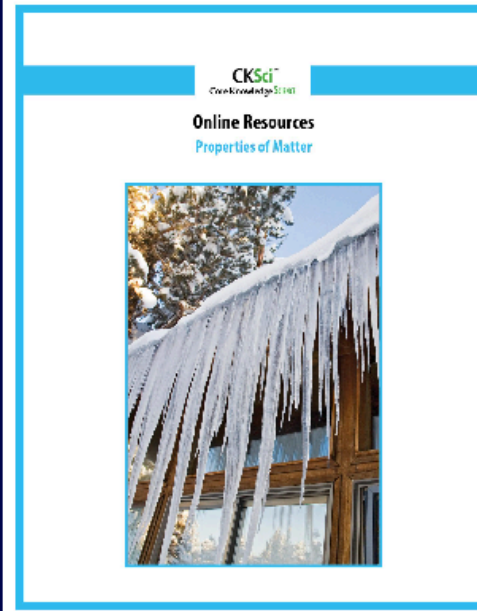


CKSci Unit 1: Properties of Matter

TEACHER GUIDE

The Teacher Guide provides detailed lesson plans for each

[Link](#)



CKSci Unit 1: Properties of Matter

ONLINE RESOURCES

The Online Resources includes a Pacing Guide, Material Supply List,

[Link](#)

For Grade 1, the Chapters 1, 2, 4, 5 would be the best fit. Other parts of the resources are covered in other grades.

Click to jump!

KUSPs

[1M1.1](#)

[1M1.2](#)

[Literature Connections](#)

KUSPs 1M1.2

Prerequisite Knowledge

- Students know that an object is anything that can be perceived using one or more of the five senses.
- Students know the five senses.
- Students know that properties of objects that can be perceived using one or more of the five senses include colour, size, shape, texture, temperature, sound, scent & taste.

Misconceptions

- Students may believe that heavier objects also take up more space (area).
- Students may believe the larger the object the more it weighs.
- Students may believe that you can not change the properties of solid objects.
- Students may believe that when you change the appearance of any object (chewing a stick of gum) that it is no longer made of the same materials.

I Know Statements

- I know that properties that can be changed include length, area, weight (mass), shape & texture.
- I know that actions that physically change properties of an object include bending, twisting, stretching, cutting & breaking.
- I know that not all objects respond the same way to bending, twisting, stretching, cutting, or breaking

I Understand Statements

- I understand that physical changes to objects do not change what the objects are made of.

Student Language | Essential [Vocabulary & Concepts](#)

- Discuss
- Describe
- Predict
- Explore
- Change
- Physical Change
- Bending
- Twisting
- Stretching
- Cutting
- Breaking

I Can Statements | Skills

- I can predict how actions can physically change properties of various objects.
- I can explore actions that physically change properties of various objects.
- I can describe physical changes that result from various actions
- I can discuss why physical changes do not change what an object is made of.

KUSP 1M1.2

1M1.2 Students analyze properties of objects and investigate how they can be changed.				
Learner Outcome				
Knowledge	Understanding	Skills & Procedures	Sample Activities & Resources What is Surface, Deep and Transfer	Assessments (formative)
<p>Properties that can be changed include</p> <ul style="list-style-type: none"> ● length ● area ● weight (mass) ● shape ● texture <p>Actions that physically change properties of an object include</p> <ul style="list-style-type: none"> ● bending ● twisting ● stretching ● cutting ● breaking <p>Not all objects respond the same way to bending, twisting, stretching, cutting, or breaking.</p>	<p>Physical changes to objects do not change what the objects are made of.</p>	<p>Predict how actions can physically change properties of various objects.</p> <p>Explore actions that physically change properties of various objects.</p> <p>Describe physical changes that result from various actions</p> <p>Discuss why physical changes do not change what an object is made of.</p>	<p style="text-align: center;">Sample Surface Level Activities</p> <p>Property Change Physical Change Prediction Exploration Description</p> <ul style="list-style-type: none"> ● Introduction to Property & Change <ul style="list-style-type: none"> ○ Property ● Introduction to Change <ul style="list-style-type: none"> ○ Change ● Introduction to Physical Change and Action That Physically Change Objects <ul style="list-style-type: none"> ○ This activity is an example using images. Teacher should use “hands-on” examples with actual objects. ● Card Sort for Physical Changes Grade 1 Matter <ul style="list-style-type: none"> ○ See Slides 50-56 in the slide deck and accompanying video: Grade 1 Matter <hr/> <p style="text-align: center;">Sample Deep Level Activities</p> <ul style="list-style-type: none"> ● See Slides 5-24 in the document below. <ul style="list-style-type: none"> ○ Plan: How Objects Change Properties of Objects ● Bringing It Together: Grade 1 Mini-Unit (Video & Slide Deck) ● Can You Change it? ● Changing Properties Experiment ● How Can You Change it? Experiment ● Do you Think You Can Change it? : Hypothesis Activity <hr/> <p style="text-align: center;">Local/Nearby Options for Experiential Learning Excursions Infusing Indigenous Knowledge</p> <ul style="list-style-type: none"> ● Infusing Indigenous Knowledge into Curriculum (Grades 1-12) 	<p style="text-align: center;">Sample Formative Assessment</p> <ul style="list-style-type: none"> ● Edmonton Catholic Curriculum Crate <ul style="list-style-type: none"> ○ Conversations <ul style="list-style-type: none"> ● Students through various experiences will build tier 3 vocabulary necessary to describe properties of states of matter. ● Properties that have the ability to be changed include <ul style="list-style-type: none"> ○ size ○ length ○ shape ○ texture ● Actions that physically change the properties of an object include <ul style="list-style-type: none"> ○ bending ○ twisting ○ stretching ○ cutting ○ breaking ○ Products <ul style="list-style-type: none"> ○ Students will create a “solids” action change chart ○ Students will create “origami hearts” as exploring paper folding ○ Students will observe water/liquid ○ Students will inflate and record observations with gas/air balloons ● How did it change? Assessment

			<ul style="list-style-type: none"> • Main Website: Grade 1 Science <hr/> <p style="text-align: center;">Other Resources</p> <ul style="list-style-type: none"> • Youtube: Hydraulic Press Moments • Youtube: Crushing Crunchy and Soft Things Compilation • YouTube: Top Shredding Moments • Youtube: How Can You Change The Shape of An Object? 	
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Resources new

Additional Websites and Resources to Support learning

Indigenous Related:

[Learning Circle: Classroom Activities on First Nations in Canada ages 4-7.](#)

Unit 4: Colours....learn how plants are used to make colours and explore the beadwork of Indigenous Peoples.

[Learning from the Land \(teacher information\)](#)

[Sense-ational Water](#) Students use their five sense to discover more about Indigenous Peoples' unique relationship with water and how water connects all creatures. Students solve and create riddles that focus on using the five senses to provide important clues about water.

Additional Websites and Resources to Support Learning

Indigenous Related:

- The [Learning Circle](#): Classroom Activities on First Nations in Canada - Ages 4 to 7 - **The Learning Circle** has been produced to help meet Canadian educators' growing need for elementary-level learning exercises on First Nations. It is the second in a series of four classroom guides on First Nations in Canada.
- [Learning from the Land \(teacher information\)](#) - Although there is much diversity between First Nations, Métis, and Inuit, a deep and abiding connection to the land is common. Dr. Leroy Littlebear says that "The land is a sacred trust from the Creator. The land is the giver of life like a mother. The ecological aspect of Indigenous knowledge is all about the land. The land is a source of identity for Aboriginal People. CASS Resource.

General: Grade 1: Matter Specific

- [Grade 1 Matter](#) - developed by Red Deer Public Schools(SLEAKs, SPAMs and SWAGs)
- View the **Matter - Grade 1** [Video and slide deck](#) found on the ARPDC site for additional suggestions and resources.

Resources Developed by School Divisions/Educational Institutions

[Edmonton Catholic Pacing Guides](#)

[Edmonton Catholic Curriculum Crates](#)

[Edmonton Catholic Schools](#): Academic Vocabulary: Kindergarten to Grade 3

Edmonton Public [Science Snippets K-3](#)

Edmonton Public [Scope and Sequence](#)

[LearnAlberta Curriculum](#)

APRDC [New Curriculum Professional Learning Resources](#)

[Alberta Science Curriculum Teacher Resources \(CMASTE\)](#): Click on the Teaching Resources Tab at the top of The Home Page.

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- [Let's Talk Science](#) - Bring critical thinking and curiosity to life in your K-12 classroom with our library of curriculum-aligned, bilingual, and ready-to-use resources. Save valuable prep time while creating engaging and relevant learning experiences for every student. [Matter videos and activities.](#)
- [PBS Learning Media](#) - [PBS Learning Media](#) - a large selection of science related resources. Review by subject, subtopic and grade. For Grade 1 selections check out the following general [link](#) or [Go Beyond:Review](#)
- [Hand2Mind Science Activities](#) - Lessons and Investigations for K-5 students [Sort Toys By Properties](#)
- Sorting By Property - [K5 Learning](#) - These surface level activities will allow students practice at sorting objects
- [Alberta Parks](#) - [Alberta Parks](#) - ABC [Nature Walk](#)

General: Grade 1: Sites good for a variety of Organizing Ideas

- [Earth and the Environment](#) - a Kindergarten Cross Curricular Unit - the resource outlines how we might connect the science topics of the earth to mathematics, writing and centre creation. Created by Ontario Teachers Federation: *It's About Time* Series
- [Science North](#) - this site provides Kindergarten teachers with a weekly lesson and video covering the major Organizing Ideas. Check the site for resources that match your unit plan.-
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- *K5 Learning* provides [free worksheets and additional](#) ones through subscription - sign up for free membership if using the resources.(surface level activities)
- [cK-12 - Free STEM teaching resources](#) - provides a set of online science textbooks as open educational resources. (none to match Senses)
- **Ag for Life:** <https://resources.agricultureforlife.ca/en-ca/for-educators/curriculum-linked-resources>
We have full permission to use these resources as well as the National Agriculture resources. Please let them know if there are topics missing and they will help support possible development.
- **Alberta Agriculture** - Agriculture education k-12 <https://www.alberta.ca/agricultural-education.aspx>
Resources here are based on the old Topics but there are still some amazing linkages to our new curriculum. Most activities are black and white which teachers will appreciate since not everyone can copy in color! If we use the materials, download the PDF to your drive or put it in the Assessment folder that I shared with you, name it with the outcome number and name they used in the title and then hyperlink. Cite the source and hyperlink them to the page you download from.
- [Ulnooweg Education Centre](#) offers science units and an Indigenous Perspective Sign in for a free account through the Resources section into [Backyard Science](#): Select the resources you would like to review.
- [Matter Concepts](#)
- [Salisbury Greenhouse](#) - Native Plants in Alberta
- [Plants, People and Climate Change | Little Green Thumbs 2023](#) - check this link for [Activities](#)
- **Ontario Science Centre:** [Stem Education Toolkit](#) - contains resources to assist in starting your students in their inquiry journey, beginning with their question. It also has several assessment tools readily available.
- **Ontario Science Centre:** [Curriculum Resources](#) - selected curriculum resources that include a video presentation and corresponding documents that provide easy-to-follow instructions and extension activities using everyday materials.

resources that are organized by the coordinators of RDPSD. This is certainly a dynamic document in that it is always changing; if you have any suggestions for modifications, please do not hesitate to contact the RDPSD science coordinator. Contact [Nate Siler](#) if you have any questions.

Lesser Slave Watershed Council [Classroom Presentations](#)
[Lesser Slave Forest Education Society](#) (they are updating their programs to match the new curriculum)

Comox Valley School District #71 - [Science Resources](#). BC Ministry of Education

Government of Canada Science Resources:

[Activity Books:](#)

Science is all around us and can be discovered, explored and used in so many ways! This new Activity Book showcases the diversity of the world of science through activities in health, energy, environment, agriculture, meteorology, astronomy, the living world and much more!

[Canadian Science - History and Achievements](#)

Select from 67 different entries of the history and achievements of Canadians in Science.

[Resource links](#)

Select from pages of activities, maps, lesson plans, videos etc. to support students of all age levels in science education.

Websites and Resources to Support Planning

Inclusion - Best Practices Meeting the Needs of [All Learners in Science](#)

Differentiation: Preview vocabulary and pre teach to students. Use various forms of media to present vocabulary including simplified explanations, visuals in the form of diagrams to label and connect concepts.

Primary Connections (teacher guides, units of study and sample assessment rubrics based on Australian Science Curriculum but offers great links and activities to our curriculum)
No applicable one's for this KUSP

An Alternate Suggestion:

Core Knowledge - [Properties of Matter](#)

Focus:

In this unit, students learn that matter, the “stuff” of which everything is made, exists in many forms. Students will practice sorting and grouping materials by characteristics, called properties, and investigate how the properties of different types of matter make them useful for different tasks. Students take measurements, which permit simple comparisons of different objects.

Students explore concepts that include the following:

- Different forms of matter exist and can be solid, liquid, or gas depending on the temperature.
- Matter can be described and classified by its observable and measurable properties. (Grade 1)
- Different properties of matter are suited to different purposes.
- A variety of objects can be built up from a small set of pieces.
- Heating and cooling a substance may cause an observable change that may or may not be reversible.

Engineers and engineering designers use knowledge of the properties of matter, as they use materials in design solutions, to make things that are useful to people. This series of lessons incorporates learning goals that support the principles and practices of engineering design, such as defining problems, testing materials, and evaluating possible solutions. **(See below)**

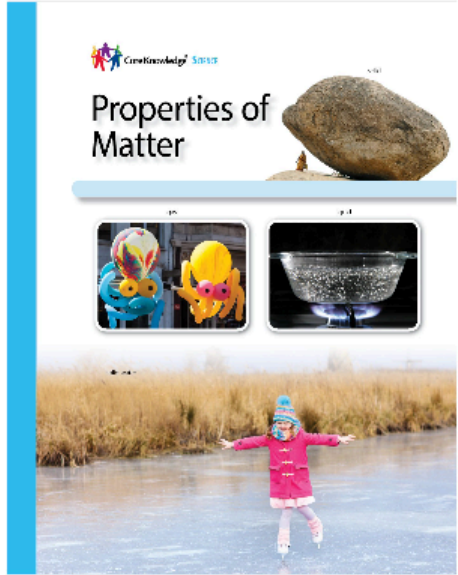
Gizmos New Learn Alberta(Teacher Login Required)

ExploreLearning Gizmos Site:

New Learn Alberta:

ExploreLearning Gizmos Site:

Request a Gizmos account: alberta@explorellearning.com

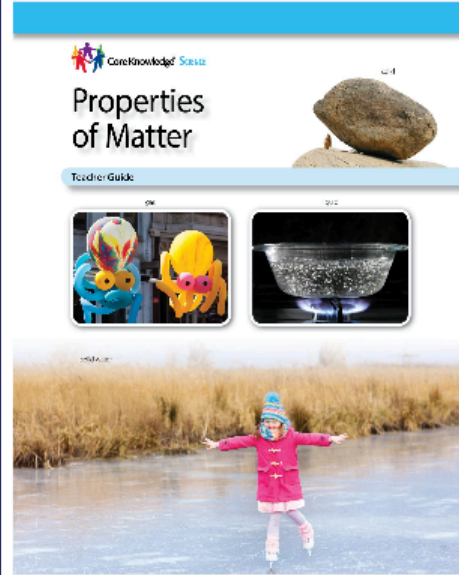


CKSci Unit 1: Properties of Matter

STUDENT BOOK

The Student Books offer engagingly written and richly

[Link](#)

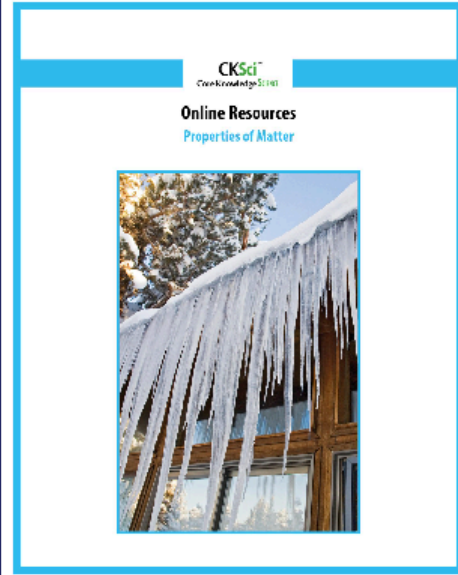


CKSci Unit 1: Properties of Matter

TEACHER GUIDE

The Teacher Guide provides detailed lesson plans for each

[Link](#)



CKSci Unit 1: Properties of Matter

ONLINE RESOURCES

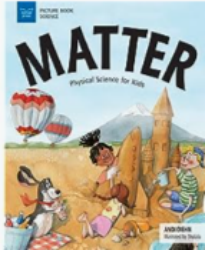

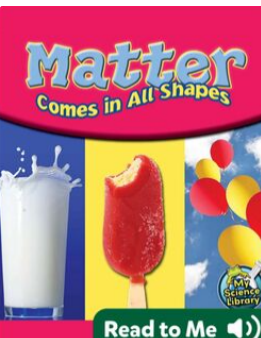
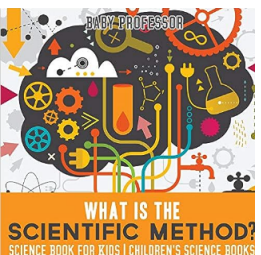
The Online Resources includes a Pacing Guide, Material Supply List,

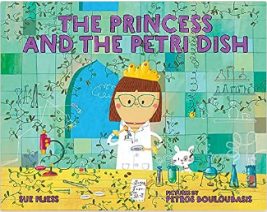
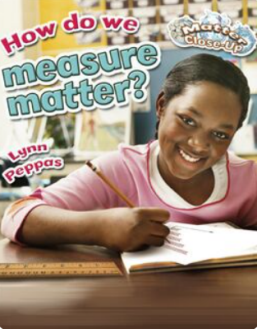
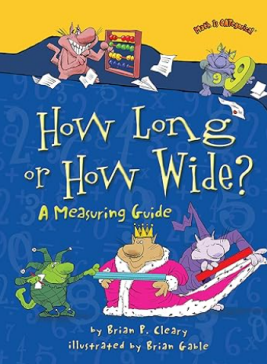
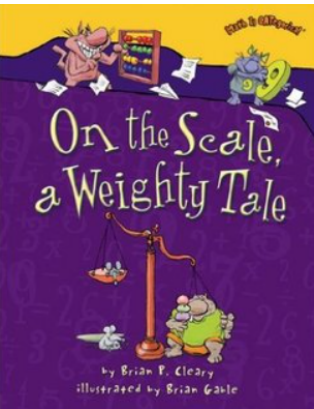
[Link](#)


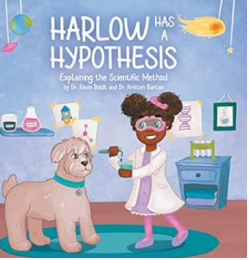
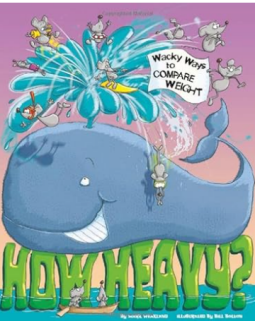
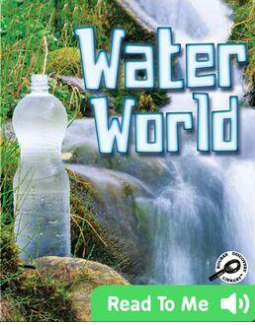
For Grade 1, the Chapters 1, 2, 4, 5 would be the best fit. Other parts of the resources are covered in other grades.

Literature Connections

KUSPs	1M1.1	1M1.2					
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Title & Author	Format (Picture Book, Novel, Non-fiction, other)	Publisher & ISBN	Book & Numbered Outcome Link
<p><i>Matter: Physical Science for Kids</i> by Andi Diehn and Hui Li</p> <p>What's the matter? Everything is matter! Everything you can touch and hold is made up of matter—including you, your dog, and this book! Matter is stuff that you can weigh and that takes up space, which means pretty much everything in the world is made of matter. Explore the definition of matter and the different states of matter, plus the stuff in our world that isn't matter, such as sound and light. Simple vocabulary, detailed illustrations, easy science experiments, and a glossary all support learning for kids ages 5 to 8.</p>	Picture Book, Non-Fiction	<p>Nomad Press</p> <p>10-1619306441 13-978-1619306448</p>	 <p>KM1, 1M1 EPIC,</p>
<p><i>Looking Up</i> by Torrey Maloof</p> <p>Look up at the night sky. What do you see? This nonfiction reader introduces students to the subject of scientific observation, and teaches students about the things we use to observe and learn about the world around us. Aligned to state and national standards, the book contains easy-to-read text and nonfiction text features like an index, a glossary, captions, bold font, and detailed images to keep students connected to the text. A hands-on science experiment helps students apply what they have learned and develops critical thinking skills.</p>	Picture Book, Non-Fiction	<p>Teacher Created Materials Science Readers:Content and Literacy Series</p> <p>Available through Pearson Canada</p> <p>10-9781480746916 13-978-1480746916</p>	 <p>KM1-4M1</p>
<p><i>Matter Comes in All Shapes</i> by Amy S. Hansen</p> <p>Investigating What Matter Is!</p>	Picture Book, Non-Fiction	<p>Rourke Educational Media</p> <p>13-9781612366647</p>	 <p>KM/1M EPIC</p>
<p><i>What is the Scientific Method?</i> by Baby Professor</p> <p>The scientific method is used to solve many great mysteries in natural science. It is a long process that includes systematic observation, measurement and experiment. It is then followed by formulation, testing and modification of hypotheses.</p>	Picture Book, Non-Fiction	<p>Baby Professor</p> <p>10-1541912217 13- 978-1541912212</p>	 <p>1M - 6M</p>

<p><i>The Princess and The Petri Dish</i> by Sue Fliess and Petros Bouloubasis</p> <p>Pippa isn't your usual princess. She prefers petri dishes to perfecting her curtseying. And when she realizes that she doesn't like peas, she gets a bright idea that consumes her and almost the whole kingdom.</p>	Picture Book, Non-Fiction	Albert Whitman & Company 10-0807566446 13-978-0807566442	 <p>1SM1 Author Reads</p>
<p><i>How Do We Measure Matter?</i> by Lynn Peppas</p> <p>This innovative title supports both maths and science standards. Readers learn to identify different tools used to measure matter, such as balances, rulers, and thermometers. Easy to follow text helps readers gain hands-on experience measuring, collecting and recording data, and graphing their results.</p>	Picture Book, Non-Fiction	Crabtree Classics 10-077870775X 13-978-0778707752	 <p>K-1M Reading level grade 2 EPIC</p>
<p><i>How Long or How Wide?</i> by Brian P. Cleary and Brian Gable</p> <p>A rhyming text filled with funny examples explains how to use and compare metric and U.S. customary units of length. Readers are also introduced to the tools they need to measure length—rulers, metre sticks, and more.</p>	Picture Book, Non-Fiction	Millbrook Press 10-1580138446 13-978-1580138444	 <p>1M1.1 YouTube Read Aloud</p>
<p><i>On the Scale, a Weighty Tale</i> by Brian P. Cleary and Brian Gable</p> <p>On the Scale presents basic weights and measures through age-appropriate examples employing both English and metric units of measurement. Peppy rhymes, goofy illustrations, and kid-friendly examples make light work of this heavy topic and add energy and humor.</p>	Picture Book, Non-Fiction	Millbrook Press 10-1580138454 13-978-1580138451	 <p>1M1.1</p>

<p><i>How Long? Wacky Ways to Compare Length</i> by Jessica Gunderson and Igor Sinkovec</p> <p>How long is a dinosaur? How long is a ship? How long is a rocket's Earth to moon trip? A fun and silly book that compares things familiar to the target audience and will lead to informative lessons about measurements.</p>	<p>Picture Book, Non-Fiction</p>	<p>Picture Window Books 10-1479519146 13-978-1479519149</p>	 <p>1M1.1</p>
<p><i>Harlow has a Hypothesis: Explaining the Scientific Method</i> by Dr. Kristen Barton and Dr. Kevin Boldt</p> <p>Harlow is a curious girl who loves to ask questions and search for their answers. When her dog, Huxley, barks at her, she sets out to use the scientific method to find out what he needs. Join Harlow as she tests her hypotheses to help her furry companion.</p>	<p>Picture Book, Non-Fiction</p>	<p>Tellwell Talent 10-0228879914 13-978-0228879916</p>	 <p>SM</p>
<p><i>How Heavy?</i> by Mark Weakland and Bill Bolton</p> <p>Compares various heavy objects to lighter objects in unique, illustrated ways. A rhyming text and bright cartoonlike illustrations highlight the impressiveness (and surprising nature) of these relative weights.</p>	<p>Picture Book, Non-Fiction</p>	<p>Picture Window Books 10-147951912X 13-978-1479519125</p>	 <p>1M1.1 YouTube Read Aloud</p>
<p><i>Water World</i> by Precious McKenzie</p> <p>Informational book focusing on the importance of clean water.</p>	<p>Picture Book, Non-Fiction</p>	<p>Carson Dellosa Pub Co Inc 10-1617419710 13-978-1617419713</p>	 <p>3ES1.3 EPIC</p>