

6 MEASUREMENT

GRADE SIX MATH: MEASUREMENT LONG RANGE PLANNING - CESD

Please note:

- These documents may be used to **support planning** for the [Grade 6 math curriculum](#). [En Francais](#)
- Financial Literacy has been included here in order to share opportunities for **cross-curricular connections**.
- These documents **will be updated throughout the year**, aligning with the *suggested* [Grade 6 Long Range Plan](#). [En Francais](#)
- All included resources are available **at no cost**, however some may require you to download from an outside source.
- Resources from the New [Learn Alberta website](#) will require you to login with your google email to access them.

Organizing Ideas:

In order to reduce the size of these documents, each of the Organizing Ideas have their own documents, which you can access below.

- [Grade 6 Math - NUMBER - Long Range Planning-CESD](#)
- [Grade 6 Math - ALGEBRA - Long Range Planning-CESD](#)
- [Grade 6 Math - GEOMETRY - Long Range Planning-CESD](#)
- [Grade 6 Math - COORDINATE GEOMETRY - Long Range Planning-CESD](#)
- [Grade 6 Math - MEASUREMENT - Long Range Planning-CESD](#)
- [Grade 6 Math - PATTERNS - Long Range Planning-CESD](#)
- [Grade 6 Math - STATISTICS - Long Range Planning-CESD](#)
- [Grade 6 Math - FINANCIAL LITERACY - Long Range Planning-CESD](#)

Learning Outcomes:

Moved to tabs on left.

- [6M1 Students analyze area of parallelograms and triangles](#). Updated October 30, 2025
- [6M2 Students interpret and express volume](#). Updated October 30, 2025

Vocabulary Legend:

Student language - Important to know

NEW to Grade

Student language

NEW to Grade

Tier 2 words*

Hyperlinked with example or definition

(Professional Language - for the teacher)

Resource Legend:



Teacher Lesson plan  A book in Learning Services or IMC



Video



Printable

APLC/ARPD SUPPORTING DOCUMENTS

[Measurement Scope and Sequence K-6](#)

This resource provides the Scope and Sequence of outcomes for the Organizational Idea Measurement for Alberta K-6 Mathematics.

Curriculum Planning and Assessment Resources

- [Measurement 1](#)
- [Measurement 2](#)

Misc

- [Grades 4-6 Resources to Support the Teaching and Learning of Math Verbs](#)

REMEMBER

Rote memorization focuses on memorizing facts in isolation. This often leads to the belief that math is about memorization and seldom leads to long term retention.

Fluency with facts is developed when students are provided with many opportunities to

- work with facts in a variety of situations, using a variety of models and manipulatives
- connect unknown facts to known facts
- explore patterns within the facts

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Other

Important note about LearnAlberta Resources

In order to access LearnAlberta resources, *you must be logged into your LearnAlberta account and have added your teacher certificate number.* If you have not logged in or you have not added your teacher certificate number, you will end up with a "Page not found" error when clicking on one of the links.

General Manipulatives

Relational Rods

-  Relational Rods
 - Slide 1: Each of these 4 images show the number of relational rods in one bag.
 - Slide 2: Images of the relational rods that can be printed or used when making slideshows or handouts.
- [Polypad](#) (make a teacher account and make a copy!)
 - This is a simple interactive page that displays each relational rod that is infinitely cloned.

Assessment

Students need opportunities to demonstrate conceptual understanding in a variety of ways, both in formative and summative situations. High quality assessment practices provide opportunities for this when data is triangulated through observations, conversations and product.

Two book series that focus on identifying and analyzing student misconceptions are:

- "Uncovering Student Thinking About Mathematics" Cheryl Rose Tobey et al.
 - In the Common Core Grades 3-6: [Alberta Grades 3-6 alignment guide](#)
 - Grades K-8: [Alberta K-6 alignment guide](#)
- "Mine the Gap for Mathematical Understanding" by John SanGiovanni et al.
 - Grades 3-5: [Alberta Grades 3-6 alignment guide](#)
 - Grades 6-8: [Alberta Grades 4-6 alignment guide](#)

6M1 analyze area of parallelograms and triangles

GRADE SIX MATH: 6M1

LONG RANGE PLANNING - CESD

Measurement (M)

Attributes such as length, area, volume, and angle are quantified by measurement.

6M1 Students analyze area of parallelograms and triangles.

UNDERSTANDINGS	KNOWLEDGE	SKILLS & PROCEDURES
- The area of a parallelogram can be generalized as the product of the perpendicular base and height. - The area of a triangle can be interpreted relative to the area of a parallelogram.	- A parallelogram is any quadrilateral with two pairs of parallel and equal sides. - Any side of a parallelogram can be interpreted as the base. - The height of a parallelogram is the perpendicular distance from its base to its opposite side. - The area of a triangle is half of the area of a parallelogram with the same base and height. - Two triangles with the same base and height must have the same area.	- Rearrange the area of a parallelogram to form a rectangular area using hands-on materials or digital applications. - Determine the area of a parallelogram using multiplication. - Determine the base or height of a parallelogram using division. - Model the area of a parallelogram as two congruent triangles. - Describe the relationship between the area of a triangle and the area of a parallelogram with the same base and height. - Determine the area of a triangle, including various triangles with the same base and height. - Solve problems involving area of parallelograms and triangles.
UNDERSTANDINGS	KNOWLEDGE	SKILLS & PROCEDURES
An area can be decomposed in infinitely many ways.	Area of composite shapes can be interpreted as the sum of the areas of multiple shapes, such as triangles and parallelograms.	- Visualize the decomposition of composite areas in various ways. - Determine the area of composite shapes using the areas of triangles and parallelograms.

SPECIAL CARE AND ATTENTION

Clarification

Please note that students are not expected to work with Pythagorean's Theorem in order to determine the area of a triangle.

Clarification

Square roots are not an expectation of this curriculum.

VOCABULARY

Analyze	Describe	Height	Perpendicular base	Rearrange
Area	Determine	Infinite	Perpendicular	Relationship
Base	Division	Model	distance	Solve
Composite shape	Equal	Multiplication	Product*	Triangles
Congruent	Generalized	Parallelograms	Quadrilateral	Visualize
Decompose	Half	Parallel sides		

ASSESSMENTS

Formative Assessment

- "Area of Composite Figures" *Mine the Gap For Mathematical Understanding: Grades 6-8* pg. 269 (Note: Area of circles is above grade 6)

Summative Assessment

-  6M Assessment Questions

INSTRUCTION

High Leverage Instructional Strategies / Practices

Learning Experiences

Warmups

-  M1 Math WarmUps/Talks (Red Deer Public) *French versions not yet ready*

GRADE SIX MATH: 6M1

LONG RANGE PLANNING - CESD

Math Tasks ([Collated by CBE](#))

- Area of parallelograms and triangles
 - [Covering Ground](#) This series of tasks encourages students to investigate the relationship between the area of triangles, rectangles and parallelograms.
 - [Cut and Make](#) This task examines the area of composite shapes. This activity will help to strengthen the idea that area of one shape can help solve for the area of another. Note | The initial square could be printed on grid paper to support students in finding the total area.
 - [Triangle Formation](#) This task explores the relationship between triangles, their areas and the formation of other shapes including but not limited to rectangles, parallelograms and/or squares.
 - [Tangram Area](#) This is a challenging activity that explores the unique qualities of a parallelogram. Students can explore the dimensions of a parallelogram in relation to the dimensions of other shapes. Note | Students should be provided with physical tangram pieces or the image on paper to cut out.

Learning

-  CESD - Teacher Created Resources
 - Area of a Parallelograms and Triangles
 - Focus on Parallelograms:  Adapted CKMath_G6U1_Lesson4_Presentation (adapted from CoreKnowledge) and  Area of a Parallelogram (created by CESD Teacher)
 - Student "Workbook":  Grade 6 Area of Parallelograms and Triangles - adapted from CKMath_G6U1_A...
- Math is Visual
 - [Visualizing the Area of a Parallelogram Formula](#)
 - [Understanding Area of a Triangle Conceptually](#)
 - [Visualizing the Area of a Triangle Formula](#)
 - [Area of Composite Figures with Non-standard Units](#)
-  CoreKnowledge Math Units: (This is an amazing in-depth free resource.)
 - [Area and Surface Area](#) (See the adapted version for Alberta Curriculum which focuses on area of parallelograms and triangles within the CESD - Teacher Created Resources above)
 - Focus:
 - Reasoning to find area (6M1)
 - Parallelograms (6M1)
 - Triangles (6M1)
 - Polygons (6M1)
 - ~~Surface Area~~ (above Grade 6)
 - Squares and Cubes (6N3, 6M2)
 - ~~Designing a Tent~~ (above Grade 6)
 - If you download the entire unit, you will find
 - Teacher Guide: lesson plans, student tasks, family support materials, assessments, cool downs, and instructional masters.
 - Student Book: Student Tasks
 - Other: PowerPoints
-  Edmonton Catholic
 - Pacing Guide
 - [Year at a Glance](#) (CESD organized)
 - April
 -  Grade 6 April .pdf
 - Curriculum Crates: These are amazing in-depth resources.
 -  Gr. 6 Math - Students analyze area of parallelograms and triangles (Using What You Know to Solve P...
-  NCETM's Related lessons: [CESD K-6 Alignment document for 'Multiplication and Division'](#)
 - [MULTIPLICATIVE CONTEXTS: AREA AND PERIMETER 1](#)
 - This is addressed within 'Teaching point 6'.
 - Note: 'Teaching point 1', 'Teaching point 2', and 'Teaching point 3' are addressed in grade 3.
 - Note: 'Teaching point 4' and 'Teaching point 5' are addressed in grade 5.
- [Math with Mr. J - Area of a Parallelogram](#) Models rearranging the parallelogram to form a rectangle and using 2 congruent triangles.
- [Math with Mr. J - Area of a Triangle](#)
- [Math with Mr. J - Area of a Composite Shape](#)
-  Decompose and Compose to Find the Area of Composite Shapes
-  Find the area of a figure by decomposing it

GRADE SIX MATH: 6M1

LONG RANGE PLANNING - CESD

- [Area of a Triangle: StudyJams! Math | Scholastic.com](#) Area of a Right Triangle
- [Area of Irregular Figures: StudyJams! Math | Scholastic.com](#) Area of Composite Shapes
- [What are Composite Shapes? Definition, Formula of Area, Examples](#) - composite shapes, definitions and examples

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Gizmos on LearnAlberta

- [Area of Parallelograms](#) Students create rectangles to assist in calculating the area of parallelograms.
 - [Teacher version that has answer key](#)
- [Area of Triangles](#) This interactive Gizmos on LearnAlberta focuses on finding the area of triangles. The lesson includes a teacher guide, a student exploration page with an answer key, access to the interactive, and a vocabulary page.
 - [Teacher version that has answer key](#)

Practice/Review

- https://drive.google.com/file/d/15PuiOD9MPg3kJn0tJeZEDJCYmHgPdpX0/view?usp=drive_link Volume practice
- [Area of a Parallelogram](#) - Math Salamanders. Area of a parallelogram process, video and examples.
- [Area of a Parallelogram](#) Math Salamanders. Links to several area of a Parallelogram worksheets and answers.
- [Area: Parallelograms | Corbettmaths](#) Area of a parallelogram. Has a linked YouTube video and QR code - would make a good google classroom assignment or homework.
- [Area of a Triangle](#) - K5 Learning. Several linked worksheets with answers.
- [Area of a Triangle](#) - MW4K - Several linked worksheets with answers
- [Area of Right Triangle](#) - How to find the area of a right triangle. Process, video and examples
- [Area of a Right Triangle](#) - Math Salamanders. Area of a right triangle worksheets with answers.
- [Area of a Triangle](#) Area of a triangle worksheet. Has a linked YouTube Video and QR Code - would make a good google classroom assignment or homework.
- [Area of a Triangle](#) Several linked worksheets with answers
- [Area of Parallelograms and Triangles](#) Math Monks. Area of parallelogram and triangle worksheet with answers.
- [Composite Shapes](#) Composite Shapes - What are they and how to measure area.
- [Decomposing Composite Shapes](#) Composite shapes decomposition- How to
- [Area of Composite Shapes](#) - Worksheet generator. Be sure to unselect the options with circles.
- [Area of Complex Shapes](#) - Worksheet with answers

Opportunities to Connect Outcomes:

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Resources

Books

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INDIGENOUS RESOURCES

From ARPD

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PROFESSIONAL LEARNING

6M2 interpret and express volume

GRADE SIX MATH: 6M2 **LONG RANGE PLANNING - CESD**

Measurement (M)

Attributes such as length, area, volume, and angle are quantified by measurement.

6M2 Students interpret and express volume.

UNDERSTANDINGS	KNOWLEDGE	SKILLS & PROCEDURES
- Volume is a measurable attribute that describes the amount of three-dimensional space occupied by a three-dimensional shape. - The volume of a prism can be interpreted as the result of perpendicular motion of an area. - Volume remains the same when decomposed or rearranged. - Volume is quantified by measurement. - Volume is measured with congruent units that themselves have volume and do not need to resemble the shape being measured. - The volume of a right rectangular prism can be perceived as cube-shaped units structured in a three-dimensional array.	- Volume can be measured in non-standard units or standard units. - Volume is expressed in the following standard units, derived from standard units of length: - cubic centimetres - cubic metres - A cubic centimetre (cm^3) is a volume equivalent to the volume of a cube measuring 1 centimetre by 1 centimetre by 1 centimetre. - A cubic metre (m^3) is a volume equivalent to the volume of a cube measuring 1 metre by 1 metre by 1 metre. - The volume of a right rectangular prism can be interpreted as the product of the two-dimensional base area and the perpendicular height of the prism.	- Recognize volume in familiar contexts. - Model volume of prisms by dragging or iterating an area using hands-on materials or digital applications. - Create a model of a three-dimensional shape by stacking congruent non-standard units or cubic centimetres without gaps or overlaps. - Express volume in non-standard units or cubic centimetres. - Visualize and model the volume of various right rectangular prisms as three-dimensional arrays of cube-shaped units. - Determine the volume of a right rectangular prism using multiplication. - Solve problems involving volume of right rectangular prisms.

SPECIAL CARE AND ATTENTION

VOCABULARY

Area Congruent Create Cube Cubic centimetres Cubic metres Decompose Determine	Equivalent Express Interpret Iteration Measurable attribute Measure / Measurement	Multiplication Non-standard <u>unit</u> Perpendicular height Perpendicular motion <u>Prism</u> / Right rectangular prism Product*	Quantify Rearrange Recognize Resemble Solve	Standard units Three-dimensional array Units Volume
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ASSESSMENTS

GRADE SIX MATH: 6M2

LONG RANGE PLANNING - CESD

Formative Assessment

- "Volume of the Box" *Uncovering Student Thinking About Mathematics in the Common Core: Grades 3-5* pg. 164

Summative Assessment

-  6M Assessment Questions

INSTRUCTION

High Leverage Instructional Strategies / Practices

Learning Experiences

Warmups

-  M2 Math WarmUps/Talks (Red Deer Public) *French versions not yet ready*

Learning

-  CESD's Files - Created by CESD teachers
 -  Volume of Right Rectangular Prisms
- Math is Visual
 - [Multiplicative Comparison with Volume](#)
-  CoreKnowledge Math Units: This is an amazing in-depth free resource.
 - [Measuring Length, Time, Liquid Volume, and Weight](#)
 - Focus:
 - ~~Measurement Data on Line Plots~~ (Grade 5)
 - Weight and Liquid Volume (Grade 6)
 - Note: Weight is not part of grade 6 curriculum
 - ~~Problems Involving Time~~ (Grade 3)
 - Measurement Problems in Context (There might be some related to this grade)
 - [Finding Volume](#)
 - Focus:
 - Unit Cubes and Volume
 - Expressions for Finding Volume
 - *Volume of Solid Figures* (Focuses on combined rectangular prisms which is above Grade 6 but may be an interesting opportunity for extension).
 - [Putting it all together](#)
 - Focus:
 - Multiply and Divide Whole Numbers (6N4)
 - Apply Volume Concepts
 - Fraction and Decimal Operations (6N6, Grade 5)
 - Creation and Design (Misc)
 - [Area and Surface Area](#)
 - Focus:
 - Reasoning to find area (6M1)
 - Parallelograms (6M1)
 - Triangles (6M1)
 - Polygons (6M1)
 - ~~Surface Area~~ (above Grade 6)
 - Squares and Cubes (6N3, 6M2)
 - ~~Designing a Tent~~ (above Grade 6)
 - If you download the entire unit, you will find
 - Teacher Guide: lesson plans, student tasks, family support materials, assessments, cool downs, and instructional masters.
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GRADE SIX MATH: 6M2

LONG RANGE PLANNING - CESD

- [Volume of Rectangular Prisms | Math with Mr. J](#)
- [Finding Volume with Unit Cubes | How to Find Volume](#)

Gizmos on LearnAlberta

- [Balancing Blocks \(Volume\)](#) Students explore volume of regular and irregular prisms using a block model.
 - [Teacher version with answer key](#)
- [Prisms and Cylinders](#) Students calculate the volume of prisms and cylinders.
 - [Teacher version with answer key](#)

Math Tasks ([Collated by CBE](#))

- Rectangular prisms and volume - Standard measures
 - [Cubic Competition](#) (p. 78) This Problem of the Week from the University of Waterloo provides opportunities to explore the relationship between area and volume. Note| Surface area is not an outcome but can be explored.
 - [Making Boxes](#) This task examines the relationship between measurement and the impact various measurements have on the total volume of a prism/container.
 - [Volume of Rectangles](#) An Open Middle task that explores the relationship between a right rectangular prism(s) and using multiplication to solve for volume.
 - [Three Rectangular Prisms](#) An Open Middle task that explores the relationship between of how dimensions can vary but total volume can be similar
- Rectangular prisms and volume - Non-standard measures
 - [Sugar Cubes](#) A multi-day/lesson activity that explores the relationship of a cubic non-standard manipulative and the volume of rectangular prisms.
 - [Dandy Candies](#) A video based 3-Act task that explores the relationship of volume modeling the volume of various right rectangular prisms as three-dimensional arrays of cube-shaped units.
 - [Making Cuboids](#) A precursor problem to finding volume of cuboids that concentrates on the length of the edges of cuboids rather than on the faces or vertices.

Practice/Review

- [Metric Volume](#) - Math is Fun. Examples and questions at the bottom.
- [Volume of Rectangular Prism](#) - Worksheets linked with answers
- [Rectangular Prisms](#) Math Salamander Examples and worksheets
- [Volume Cubes](#) Worksheet with answers
- [Rectangular Prisms](#) K5 Learning Several linked worksheets with answers

Opportunities to Connect Outcomes:

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Resources

Books

Other

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INDIGENOUS RESOURCES

From ARPDC

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PROFESSIONAL LEARNING