


Grade 4 Learning Advantage



100% Canadian content...

aligned with school curriculum

 Preparing for success		
Table of Contents: Grade 4		
Unit	Title	Pages
	Introduction for Parents	2-6
1	Science Matters p. 8 Science of Light p. 18 Machines p. 24 Forensic Science	7-26
2	Our Country Canada	27-38
3	Geometry p. 40 Angles p. 47 Three-dimensional Shapes p. 60 Symmetry	39-70
4	Medieval Life	71-99
5	You Are an Author p. 101 Grammar p. 108 Writing Process	100-138
6	Go Figure! p. 140 Place Value p. 142 Standard Form, Expanded Form p. 146 Number Patterns p. 154 Graphing (Nutrition) p. 162 Fractions p. 180 Map Coordinates	139-183
	Answer Pages	184-192

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Parent-friendly... List of curriculum expectations

Overall Curriculum Expectations for Grade Four

MATHEMATICS

Number Sense and Numeration

- read, represent, compare, and order whole numbers to 10 000, decimal numbers to tenths and simple fractions, and represent money amounts to \$1.00;

Measurement

- estimate, measure, and record length, perimeter, area, mass, capacity, volume, and elapsed time, using a variety of strategies;
- determine the relationships among units and measurable attributes, including the area and perimeter of rectangles;

Geometry

- identify quadrilaterals and three-dimensional figures and classify them by their geometric properties, and compare various angles to benchmarks;
- construct three-dimensional figures, using two-dimensional shapes;
- identify and describe the location of an object, using a grid map, and reflect two-dimensional shapes;

Patterning and Algebra

- describe, extend, and create a variety of numeric and geometric patterns, make predictions related to the patterns, and investigate repeating patterns involving reflections;
- demonstrate an understanding of equality between pairs of expressions, using addition, subtraction, and multiplication.

Data Management and Probability

- collect and organize, read, describe, and interpret discrete primary data and display the data using charts and graphs;
- predict the results of a simple probability experiment, then conduct the experiment and compare the prediction to the results.

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100% Canadian content...

Canadian Social Studies

And The Rest Is History!!

When Canada became a nation on July 1, 1867, only four provinces were a part of this new country.

1. On the map on the previous page, colour Ontario, Quebec, New Brunswick and Nova Scotia one colour.
2. Create a legend below the map to show this fact.

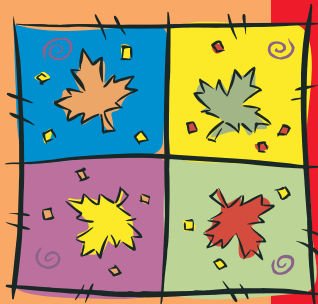
What about the other provinces and the territories?

Here are the dates that each joined the new confederation called Canada.

Alberta - 1905	Northwest Territories - 1870
Nunavut - 1999	British Columbia - 1871
Manitoba - 1870	Prince Edward Island - 1873
Saskatchewan - 1905	Yukon Territory - 1898
Newfoundland and Labrador - 1949	

3. Colour each province and territory on the map.
4. Label your map with the names of each province and territory.
5. Put those places and dates in order by writing them beside the time line on this page.
6. On the time line write five other dates that you know about. Some possible examples:
 - your birth year,
 - your parents' or grandparents' birth year,
 - the year the telephone was invented (1876 by Alexander Graham Bell at Brantford, Ontario),
 - the year basketball was invented (1891, by James Naismith at McGill University in Montreal),
 - the last year the Toronto Maple Leafs won the Stanley Cup (1967),
 - the World Wars (1914-1918 and 1939-1945)
 - or find out about any date you wish, and put it on the date line.

||
1865
||
1875
||
1885
||
1895
||
1905
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1915
||
1925
||
1935
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1945
||
1955
||
1965
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1975
||
1985
||
1995
||
2005
||



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Uses current educational theory...

integrated learning (Medieval theme/ geometry skills)

A GeoMagic Castle



Match the numbers on the drawing to the shapes listed below.

- cylinder _____
- cone _____
- sphere _____
- pyramid _____
- rectangular prism _____



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Uses current educational theory...
tactile learning activities



Headdresses

Did you know...?

Kings and queens of the middle ages wore crowns on their heads.

Knights wore a metal helmet when in battle or for a jousting tournament.

A lady of the middle ages always wore a headpiece. Sometimes it was a wreath made of flowers, a veil or a cone hat. A cone-shaped hat was also called a **hennin**.

Make a knight's helmet or a lady's hennin (or both if you wish).



- ★ bristol board
- ★ scissors
- ★ glue or tape
- ★ aluminum foil
- ★ ribbon or tissue paper

A Lady's Hennin

Step 1: To make a lady's cone hat, draw and cut out a shape on the bristol board as shown.



Step 2: Make a cone shape to fit your head. Fasten it together.

Step 3: Attach ribbons or tissue paper strips to the point of the cone.

Step 4: Decorate as you wish.



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Uses current educational theory...
information provided to engage pupil inquiry



Magic Words...

Did you know...?



Story writing allows you, the author, to wave your magic wand and weave words together to tell a story. When words are woven together in a story, they can be magical! The audience, the readers, might feel frightened, happy, sad, or excited -- just because of what you have written.

To make your story **REALLY** exciting or **REALLY, REALLY** magical, be sure to use **adjectives and adverbs**.

Adjectives are words that describe nouns.

An **adverb** can describe...

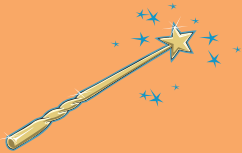
> **a verb** (the word in a sentence that tells what happened).

> **an adjective**

or even

> **another adverb**

Some adverbs tell "how" or "when."



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Kid-friendly... Colourful graphics

Medieval Times



What came after the Middle Ages?

We might call it the **Modern Age**. It began with the Renaissance (a French word that means "rebirth"). You probably know that Columbus found his way to North America in the year 1492. In Italy at that time, great artists like Leonardo and Michelangelo were creating masterpieces, and scientists like Galileo were discovering the mysteries of the universe.

The world has changed a lot in the last 500 years, but we still think of ourselves as living in modern times.

Did you know...?



The Middle Ages were from the 6th century to the 15th century, or the years 500 to 1500. Calculate how long ago this was.

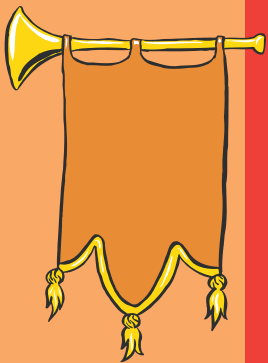
How long ago was the year 500?

How long ago was 1500?

The Middle Ages or medieval times are often associated with mystery.

In England, it was a time of castles, kingdoms, knights, lords and ladies. There was armour to wear, feasts to enjoy, castles to defend, and jousts to be won.


If you could travel back in time to the middle ages what might your life be like? Let's find out!




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Kid-friendly... Guided practice



Show a different right angle on this clock.
The diagram below will help you to see that angles can be measured from different perspectives.




1. Show two different right angles on this clock.




Angle a and angle b are not right angles. They are called "Obtuse angles." They both have more than 90° . The small $^\circ$ beside the number 90 is the symbol for "degrees."

2. As Straight As An Arrow!
Here's another type of angle.




This is called a *straight angle*. It measures 180 degrees.

Show three other straight angles using these clocks:



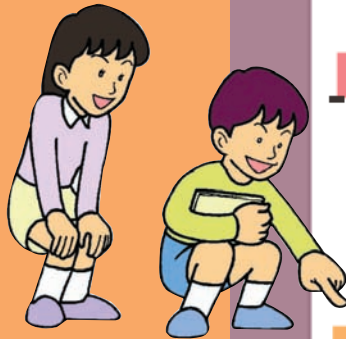
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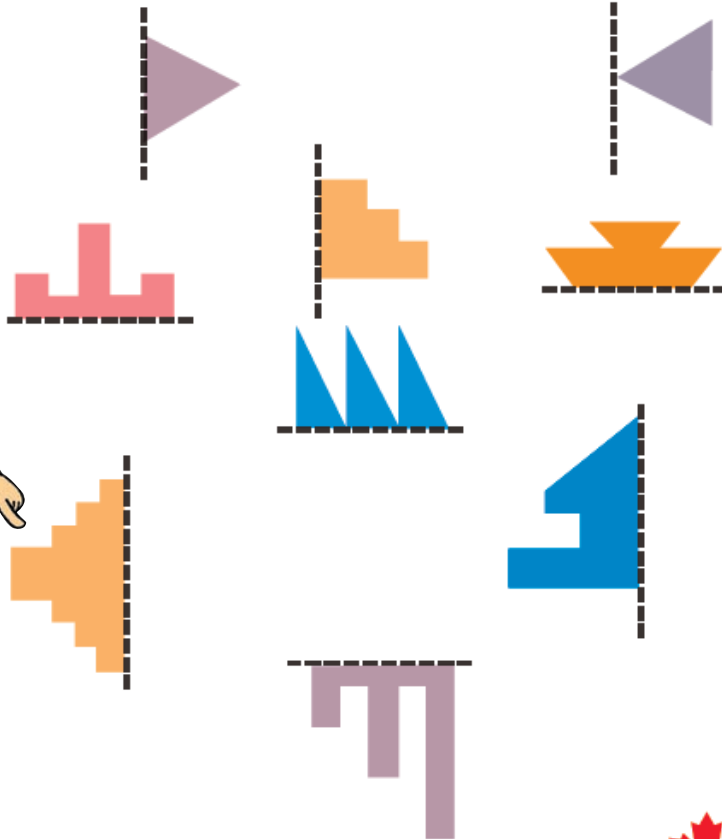


Kid-friendly... confidence-building activities



Try It Out!

Draw the missing part so the pattern becomes symmetrical.



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Kid-friendly...

Challenging activities for inquisitive minds

For the magic square on page 140,
what is the magic total? _____

How many times is each number used? _____

Now, create your own magic
with magic squares!

8		6
4		2

The magic total
is 15

14		6
	12	
18		10

The magic total
is 36

5		
	6	
		7

The magic total
is 18

	7	

The magic total
is 21

	8	
	24	

The magic total
is 48

		21
15		

The magic total
is 54

3	8	7

The magic total
is _____

27	18	
72	36	0
9		

The magic total
is _____

Make your own,
for a magic total
of 60


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Kid-friendly... reasonable drills


Untangle the Angle!


Name each of these angles!
They are either right, straight, acute or obtuse angles.


1.  _____


2.  _____


3.  _____


4.  _____


5.  _____


6.  _____

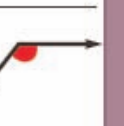
7.  _____


8.  _____




9.  _____

10.  _____

11.  _____

12.  _____

13.  _____



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Kid-friendly... Interesting activities



★ straws
★ plasticene

Straw Shapes

A three-dimensional shape is called a **polyhedron**. Most polyhedrons have **faces**, **edges** (the lines that define the faces) and **vertices**. (A **vertex** is the point where edges meet.)

Construct each of these shapes using straws. Before you begin, **estimate how many** straws you will need for each three-dimensional shape. Use balls of plasticene to hold your polyhedron together.



I will need _____ straws to make a cube.

After you have built your polyhedron, count how many straws you used, and how many balls.

I needed _____ straws.

A cube has _____ faces, _____ edges, and _____ vertices.



I will need _____ straws to make a pyramid.

After you have built your polyhedron, count how many straws you used, and how many balls.

I needed _____ straws.

A pyramid has _____ faces, _____ edges, and _____ vertices.



I will need _____ straws to make a triangular prism.

After you have built your polyhedron, count how many straws you used, and how many balls.

I needed _____ straws.

A triangular prism has _____ faces, _____ edges, and _____ vertices.

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Parent-friendly... Encourages parent involvement

Abracadabras or Snickerdoodles?



★ measuring cup
★ measuring spoons

Be sure to ask an adult for help before you do any cooking!

Here are the ingredients for two recipes.

One is for Abracadabra Squares and the other is for Snickerdoodle cookies.

By the way, the word **abracadabra** was first used by a Latin poet in the second century (between the years 100 and 199).

Snickerdoodles were baked in the New England states in the 19th century (1800-1899), probably by people of German or Dutch heritage.

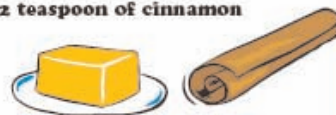
Abracadabra Squares

- 1 cup of sugar
- 1/2 cup of shortening
- 1 cup of applesauce
- 1 teaspoon of vanilla
- 2 cups of flour
- 1 teaspoon of baking soda
- 1/2 teaspoon salt
- 1/4 teaspoon ground nutmeg
- 1/8 tsp of ground cloves
- 1 cup of raisins
- 4 teaspoons of butter
- 1/2 cup of crushed bran flakes



Snickerdoodles Cookies

- 1/2 cup of butter
- 3/4 cup of brown sugar
- 1 egg
- 1 teaspoon of vanilla
- 1 1/2 cups of whole-wheat flour
- 1/2 teaspoon baking soda
- 1/2 teaspoon cream of tartar
- 1/4 teaspoon salt
- 3 3/4 teaspoon of sugar
- 1/2 teaspoon of cinnamon



We left these recipes in British imperial measurements (rather than metric units) because you need to understand fractions to use these recipes.

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Parent-friendly... Family follow-up activities

A Real Work of Art

If you'd rather try a more difficult art activity related to the flag of Canada, do this:



- ★ bristol board
- ★ scissors
- ★ magazines
(Be sure to get permission to cut them up!)
- ★ glue
- ★ ruler, pencil



On the bristol board, use a pencil to draw the outline of the Canadian flag. The dimensions of the flag are always in a ratio of 2:1, so if your design is 40 cm wide, it should be 20 cm tall.

Instead of just colouring the red parts, design a collage using parts of pictures from magazines to fill the red parts of the flag, including the maple leaf, and the white parts of the flag.

You might choose

- > to look for pictures that are mostly red and white, or
- > to look for pictures of scenes and people, some darker and some lighter in colour, and make a flag that is composed of all the many things that go to make up Canada -- our beautiful forests, our shining seas, our cities, and the great variety of people who call Canada their home.

When you have collected enough pictures to cover every square centimetre of your flag, put them in place and glue them together.

When you have finished, you might smooth down your work of art by spreading glue over the entire surface of the flag.

After everything is dry, show your work of art to your family and friends!

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Kid-friendly... Activities for classroom sharing

Medieval Puppet Play

You are going to change one of the stories you have already written into a puppet play.

For this activity, you will create a stage and finger puppets.

Use your imagination to **make a puppet stage** by using the following materials:



- ★ 2 chairs
- ★ a broomstick or a mop stick
- ★ towels
- ★ 2 safety pins

Decorate your puppet stage to show the setting for the story that you wrote.



Make Finger Puppets!

Draw the faces of some of the characters in one of your stories (or trace their pictures from earlier in this unit), and glue them to popsicle sticks, or glue the characters' faces to paper and wrap the puppet like a ring around your fingers.

