

# MathNow

Grades One to Three

*Math Now is a balanced program designed to support all students in becoming mathematically literate.*



Math Now explorations contain many rich learning and assessment tasks that all have several **Mathematical Process Expectations** embedded in them.

Math Now illustrates and encourages utilizing a variety of **learning styles**, reflecting all eight of Gardner's intelligences.

**Differentiated Learning** suggestions appear in boxes on the sidebars of the Teacher's Guide throughout the lessons and alongside most assessment opportunities.

Math Now provides ample opportunities for learners to develop the skills needed to become successful in using **mental math strategies** for making quick **estimates** and judging the reasonableness of results.

Math Now offers a range of environments and situations to support student learning and teacher training/instruction, including:

- conceptual understanding combined with procedural fluency;
- strong support in Teacher's Guide for ongoing assessment to evaluate students' achievement and to match reporting needs;
- problem solving progressively introduced, reinforced and consolidated;
- use of manipulatives and real-world contexts; and
- learning mathematical concepts reinforced through practice.

# Math Now ..... 100% curriculum-based ❖ Easy-to-use

## An example of a Grade 3 investigation — Numbers, Numbers Everywhere (Teacher's Guide)

Expectations Assessed	Specific Expectations	Expectations Assessed
1 2 3 4 5 6 7 8 9 A	<b>Number Sense and Numeracy</b>	1 2 3 4 5 6 7 8
	<b>Quantity Relationships</b>	
	represent, compare, and order whole numbers to 1000, using a variety of tools (e.g., base ten materials or drawings of them, number lines with increments of 100 or other appropriate amounts);	
	read and print in words whole numbers to one hundred (e.g., books, speed limit signs);	
	identify and represent the value of a digit in a number position in the number (e.g., use base ten materials 324 represents 3 hundreds);	
	compose and decompose three-digit numbers into a variety of ways, using concrete materials (e.g., decompose 327 into 3 hundreds, 2 tens, and 7 ones);	
	represent and explain, using concrete materials, the numbers 1, 10, 100, and 1000 (e.g., use base ten relationship between a decade and a century, or a millennium);	
	<b>Counting</b>	
	count forward by 1's, 2's, 5's, 10's, and 100's to 100 points, and by 25's to 1000 starting from multiples of 100; skip count by 10's with and without skip count by 10's using dimes);	
	count backwards by 2's, 5's, and 10's from 100 using 10 as starting points, and count backwards by 100's number less than 1000, using a variety of tools (e.g., calculators, coins) and strategies;	
	<b>Operational Sense</b>	
	solve problems involving the addition and subtraction using a variety of mental strategies (e.g., to add 37 the ones, then combine the tens and ones, like this: 13, 50 + 13 = 63);	
	use estimation when solving problems involving addition and subtraction to help judge the reasonableness of a solution;	
	<b>Patterning and Algebra</b>	
	<b>Patterns and Relationships</b>	
	identify, extend, and create a repeating pattern involving (e.g., size, colour, orientation, number), using a variety of blocks, attribute blocks, drawings) (Sample pattern using three colours and two shapes.);	
	identify and describe, through investigation, number addition, subtraction, and multiplication, represented on a number line or a hundreds chart (e.g., the multiple in a hundreds chart);	
	create a number pattern involving addition or subtraction represented on a number pattern that starts at 0 on each time.);	
	<b>Data Management and Probability</b>	
	<b>Probability</b>	
	predict the frequency of an outcome in a simple game (e.g., "I predict that an even number will come up 5 times when I roll a number 1-6"); perform the experiment, and compare the results with mathematical language;	
	demonstrate, through investigation, an understanding of the relationship between the frequency of an event and the probability of that event occurring (e.g., using a coin or a spinner);	

ST: student textbook

Letter to parents/guardians (page B2/2)

**Differentiated Learning Language(s)**

Provide students with an opportunity to read the letter in advance. This will help ELL students explain the contents to parents whose first language is not English.

**Remediation**

For some students, the skills in this investigation are easy to acquire. For others, supervised repetition is necessary. Application of these ideas at home reinforces the learning and helps enhance success at school in activities with other students.

**Math Curriculum** — Cross references, by explorations to all expectations covered and assessed

**Big Ideas** — Provide a central theme for an investigation where various strands interrelate

**Essential Questions** — Foster inquiry, understanding, and transfer of learning

**Family Connections** — Provide families with information about what is happening in the math classroom and provide ways for families to participate. Letter to parents/guardians and family game ideas found in BLM

**Introduction** — Provides background information of math concepts

**Differentiated Learning** — Provides information for adapting the activity for students with specific learning differences

**Listings on Sidebar** — Learning Styles, Materials list, time required and group size, all cross referenced to Math Now components

**Math Clinic** — Reinforces math concepts through relevant practice

**Tell Me More** — Provides historical facts, interesting stories, and tidbits of math; introduces careers and famous mathematicians

**Assessment and Answers** — Wide range of assessment tools and rubrics provided in Teacher's Guide and BLM with solutions

**Big Ideas**

- Reinforcing understanding of whole numbers to 1000 and their place value through exploration and problem solving using base ten materials and hundreds charts.
- Reading and printing whole number words to one hundred and reading and printing numerals to 100.
- Looking for patterns in whole numbers using hundreds charts and cubes.
- Using probability to explore and build whole numbers.

**Essential Questions**

- When can we add, subtract, or multiply?
- How do we write numbers in words?
- What are some different ways we can represent numbers?
- How can we compare numbers?
- Why are there patterns in the number line?
- What events are possible in a trial? Why, of equal chance, did you get that?

**Launching the Investigation**

Use the introduction in the student textbook (ST pages 28-29) to read and discuss the ideas that will be presented in this investigation in a safe, supportive, and engaging way.

- explore numbers in the real world
- learn to write number words to one hundred and
- explore numbers to 100

The introductory activity allows students to explore numbers in their own way by counting a set of objects.

This investigation includes eight explorations; each one takes one or two class periods to complete. Generally, the first class period allows you to introduce and outline an exploration of a concept. There is a summative assessment at the end of the investigation. This unit should take about five weeks to complete.

**Family Connections**

At the beginning of the investigation, the letter to parents/guardians (BLM page B2/2) may be sent home. The letter explains the work that will be covered over the next few weeks, and gives a good example of how support may be provided.

Before sending the letter home, take a few moments in class to read it with the students. Have them personalize the letter by drawing the picture. The students can do other activities related to the letter.

**Exploration 2.1 Guess My Number**

During this exploration, students will review and consolidate work from Grade 2 by solving number riddles and comparing numbers less than 100. It is important that students are comfortable with numbers less than 100 in order for them to move on to higher numbers in the next exploration.

**Specific Expectations**

**Number Sense and Numeracy:**

- read and print numerals from 0 to 1000 (3m1.1)
- read and print number words to one hundred (3m1.2)

**Introduction**

Note: Keep the number cards used during this activity. You will be able to use them throughout the year in warm-up activities to any lesson on numbers up to a reinforcement activity. These can be replaced with larger numbers once students have gained sufficient understanding of numbers up to 1000.

- Prepare an overhead of a hundreds chart using **Hundreds Chart** (BLM page B2/2) or a large hundreds chart with removable numbers.
- Prepare sheets of paper, each with a different two-digit number written in large print.
- Briefly review even and odd numbers. For example, all doubled numbers are even numbers.

**Explore**

- Direct students to the introductory visual in the textbook (ST page 12) and read the dialogue bubbles together. Explain that Margaret and Jose are playing a game called Guess My Number that you want to play with the class.
- Place a hundreds chart on the overhead projector and introduce the lesson with the following directions:
  - I am thinking of a number between 1 and 100.
  - Guess my number in ten questions or less.
  - I can answer your questions only with "yes" or "no."
 As students ask questions, cross off the numbers on the chart on the overhead in random numbers from a chart with removable numbers.
- After the students have guessed the number, ask them to identify the questions that eliminated the most numbers. Make a list of helpful types of questions on the clipboard. Ask students to use these types of questions to improve their chances of guessing the number, and then repeat the activity with a different number.
- Tell students they will play **Guess My Number** with each other.
- Divide the class into pairs and provide each student with **More Hundreds Charts** (BLM page B2/4). Students take turns choosing a number and asking yes-or-no questions to guess a number.

**Math Clinic** Textbook page 13

Answers:

- seventeen
- eighty-one
- seventy-five
- fifty-three
- ninety-six

2. a) 58 b) 11 c) 36 d) 77 e) 21

**Tell Me More** Textbook page 13

As a class, read about the Mayan number system in the student textbook. Have the students work in small groups to discuss the solutions to the activity.

**Differentiated Learning Language(s)**

Use the quality customer representation, writing a letter with a pencil, and use the writing the letter.

Answers: The base symbol represents 5. The solutions are 4, 7, and 11.

**Assessment** Expectations Assessed: 3m1.1, 3m1.2

Reading and printing numerals to 100 are being assessed in this exploration; numbers greater than 100 will be assessed in later explorations. The students' work for a quick diagnostic assessment to see if students are able to read and print numerals from 0 to 1000 as well as to read and print number words to one hundred.

Use the following symbols to record your observations for each student on a class list:

- ✓ (quickly and accurately)
- √ (competent but hesitant)
- √ (misses some or inaccurate)
- ✓ (minimal or limited)

You may wish to include comments about the level of assistance (if any) that individual students require.

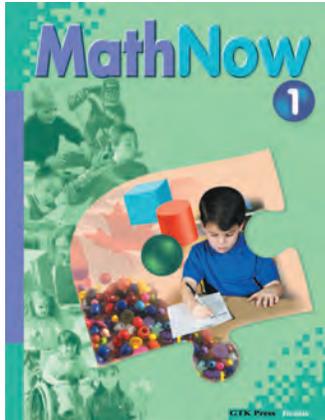
- > (with a lot of assistance)
- < (with some assistance)
- I (independently)
- I+ (level 4 work)

**Differentiated Learning Language(s)**

After thinking the results of the assessment, provide extra practice for students who are having difficulty. This could include peer coaching.

**Use the Guess My Number Rubric** (BLM page B2/7) to assess students' ability to read and print numerals to 100 as well as to read and print number words to one hundred.





### **Math Now Grade 1**

***Student Textbook***

(ISBN 978-1-55317-101-0)

***Workbook***

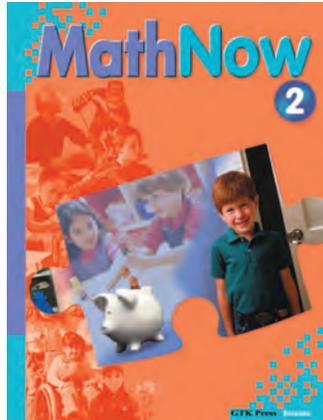
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***Student Textbook***

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***Workbook***

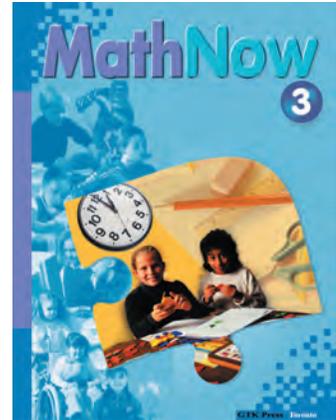
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### **Math Now Grade 3**

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