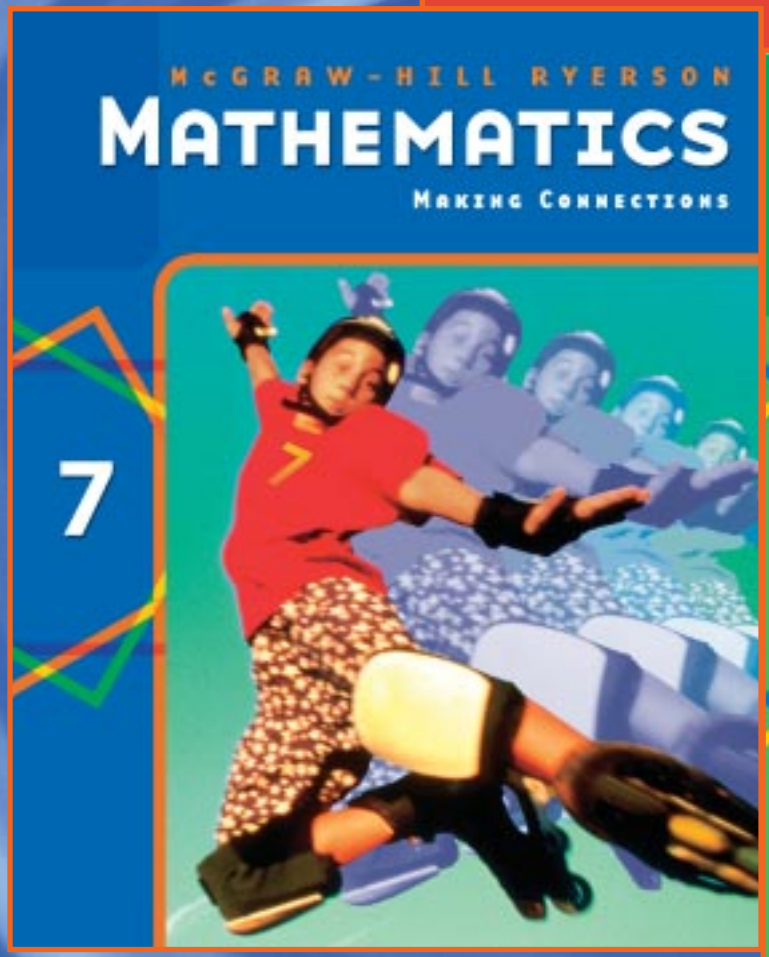
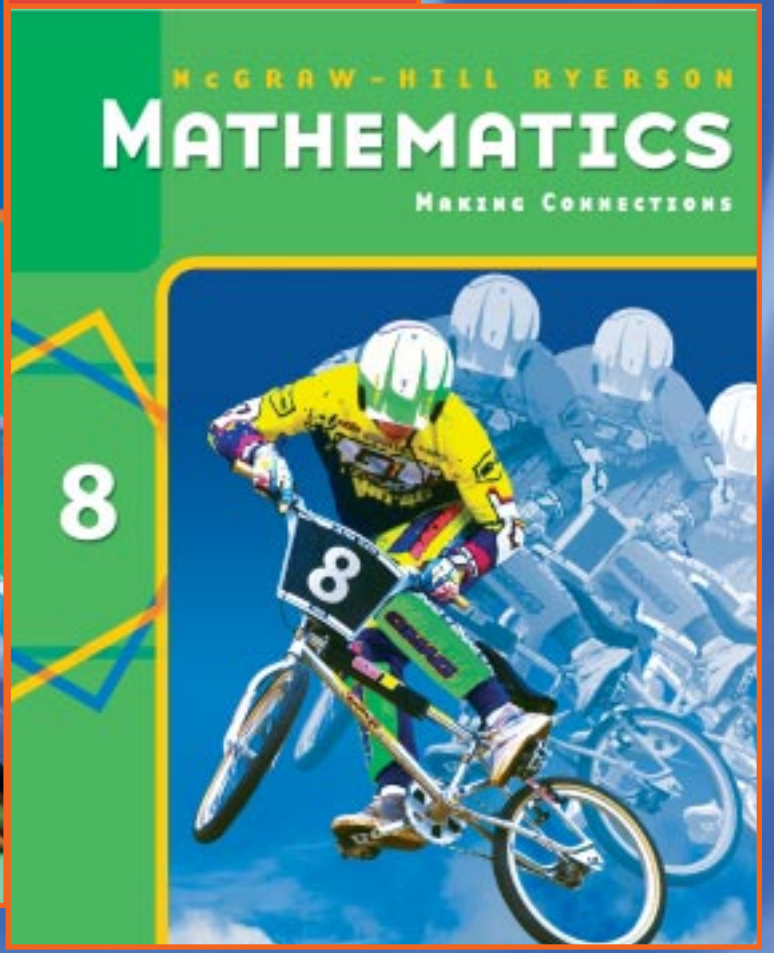
NEW!

From McGraw-Hill Ryerson

Researched and Developed Specifically for grades 7-9 Students

McGRAW-HILL RYERSON
MATHEMATICS
MAKING CONNECTIONS





Creating Pathways to Mathematical Success for Intermediate Students

McGraw-Hill Ryerson

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Resources developed with students and teachers in mind by a team of classroom teachers and consultants, committed to helping all learners develop a strong foundation for mathematics success

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A Special Thanks To...

all the focus group participants, field test teachers, and students across the province, whose tremendous feedback and insight, has supported the development of an engaging and exciting new mathematics program.

Lesson Design

McGraw-Hill Ryerson's new mathematics program is designed to activate students' learning through a balanced approach to mathematics instruction.

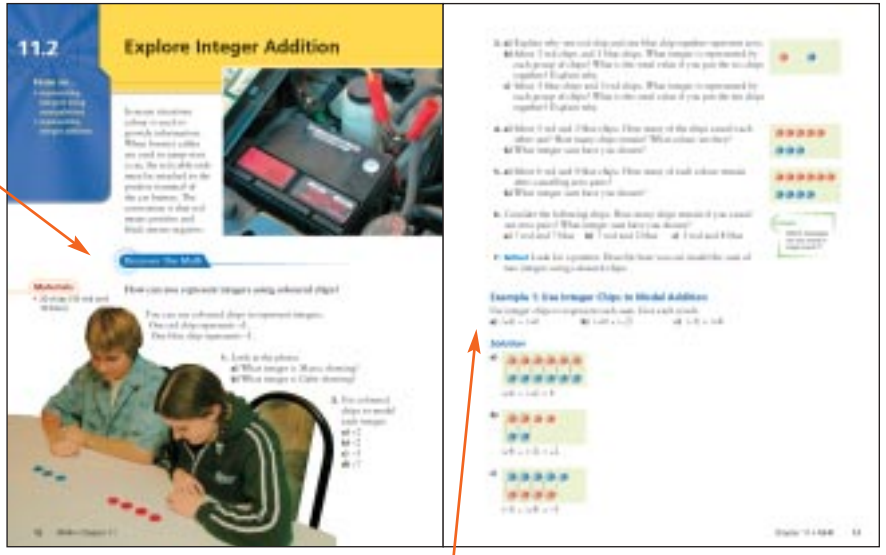
+ *Consistent lesson design modelled on John Van de Walle's* ***three-part lesson model***
+ *A sound method of presenting mathematical concepts*
+ *Ease of navigation for students, parents, and teachers alike*

1. Discover the Math

Discover the Math is the math lesson. The introduction preceding it is designed to engage students by making connections between the mathematics in the section and students' personal experience of the real world.

Discover the Math can consist of the following lesson types.

- Concrete Explorations
- Semi-concrete Explorations
- Direct Instruction



Examples with solutions follow the investigation to provide some models of how the math is applied to real problems.

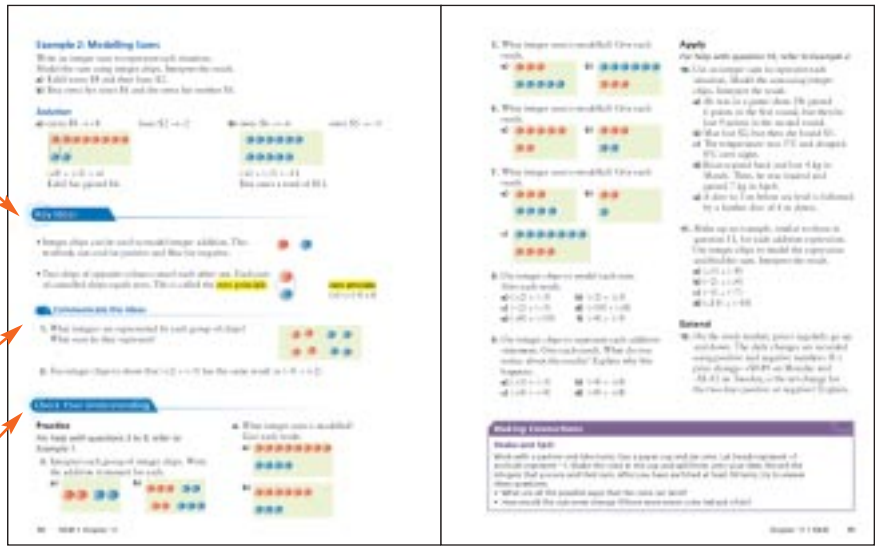
2. Key Ideas

Key Ideas summarizes the key concepts of the lesson for students, using both text and visuals.

Communicate the Ideas, a subsection of **Key Ideas**, provides some communication-based questions to encourage students to communicate their understanding of the lesson material in the **Discover the Math**.

3. Check your Understanding

Check Your Understanding consists of exercise sets, which include Practise, Apply, and Extend. These sets include exercises for all performance levels and cover all four categories of the achievement chart.



The **Lesson Design** of McGraw-Hill Ryerson's new program supports the lesson structure of **TIPS***

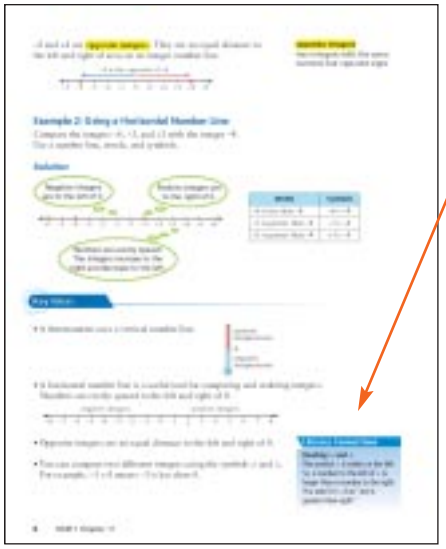
TIPS' MATCH Lesson Design	McGraw-Hill Ryerson: Making Connections
Minds On	Chapter Opener, Section Opener discussion,
	Discover the Math focus questions
Ac**T**ion	Discover the Math investigations
Consolidate	Key Ideas and Communicate the Ideas
	Reflect Questions
Home Activity or Further Classroom Consolidation	Check Your Understanding, Chapter Problems,
	Making Connections feature boxes
For more detail refer to TIPS Section 6: Administrator's Package. Pages 6 & 13	

* Both the **Targeted Implementation and Planning Support document (TIPS)** and McGraw-Hill Ryerson's new math program focused solely on the Intermediate Learner.

Pathways to Success

"Learning styles is the way in which a learner begins to concentrate on, process, and retain new and difficult information." (Dunn & Dunn, 1993)

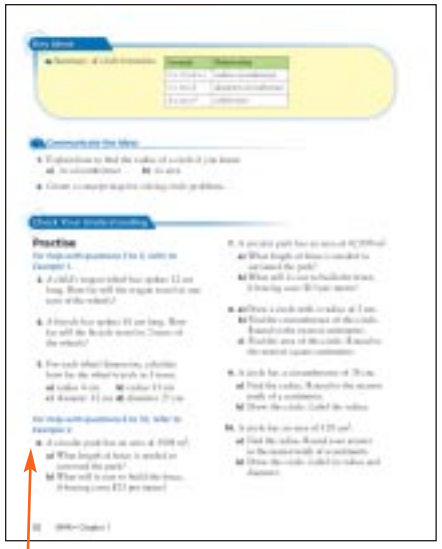
Excellent visuals and multiple representations of concepts and instructions support **visual learners**, **ESL students**, and **struggling readers**.

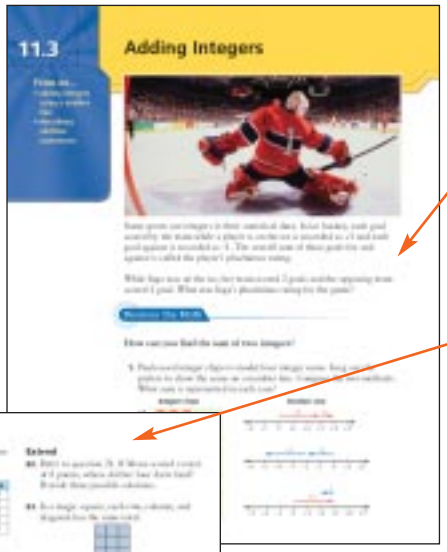


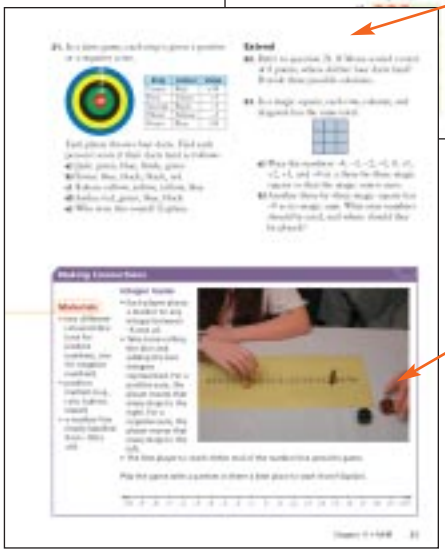
Literacy Connections boxes and key terms bolded, highlighted, and defined in the margin support **struggling readers** and promotes mathematics literacy for all learners.

McGraw-Hill Ryerson Mathematics: Making Connections *program accommodates the broad range of needs and learning styles—Level 1 through Level 4—including those students requiring accommodations, students with limited proficiency in English, and gifted learners.*

"Mathematics can and must be learned by all students." (NCTM, 2000)







Worked examples and referenced examples support **all learners**.

Relevant contexts including multi-cultural examples engage students and provide a purpose for the mathematics being learned.

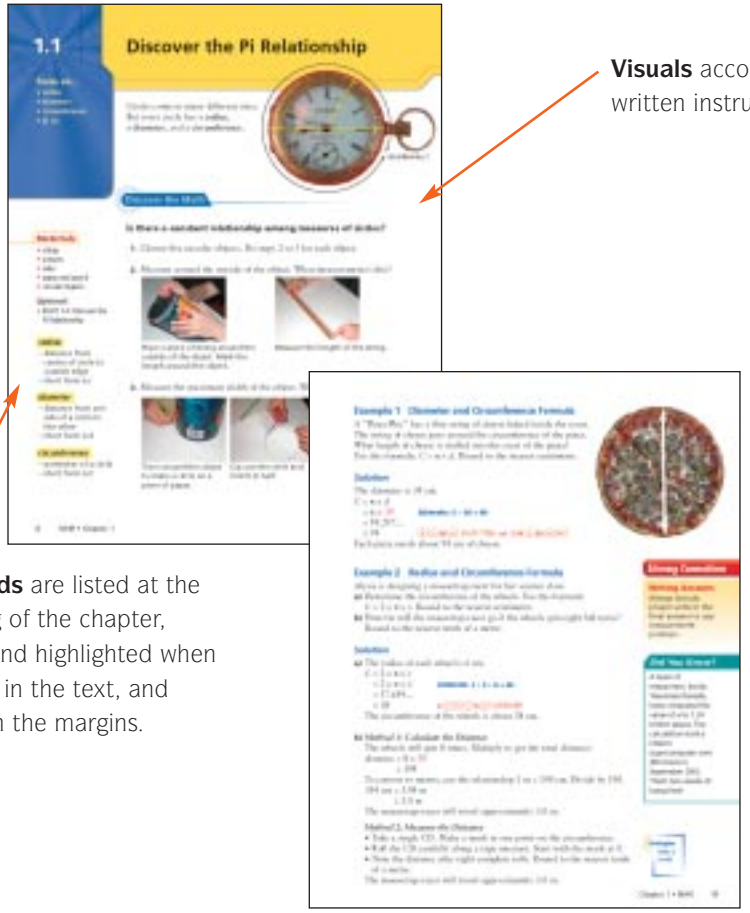
Extend questions, and math games provide additional challenge for **gifted learners**.

Making Connections
Provides additional opportunities for hands-on and minds-on learning—balance between concrete and semi-concrete learning opportunities

*The Teacher's Resource provides support in addressing multiple intelligences and learning styles—additional activities and Blackline Masters, Accommodation suggestions, ESL Support, and teaching strategies. Cross references to **TIPS** are also provided in the Teacher's Resource.*

Numeracy & Literacy

"Achieving success in literacy is an important priority for students placed at risk. It reduces the gap between high-and low-performing students, while maintaining high standards for all learners." (Ontario Ministry of Education and Training, 2003).



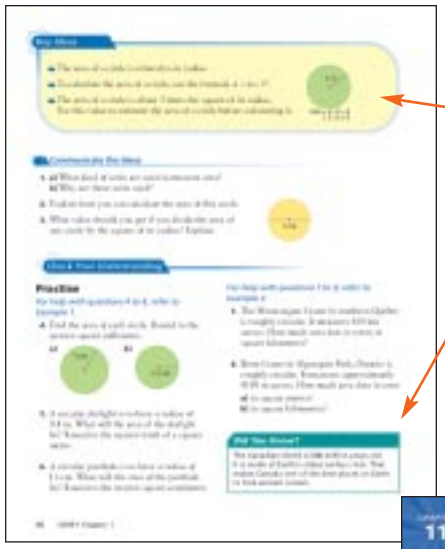
Visuals accompany each step of written instructions.

Key Words are listed at the beginning of the chapter, bolded, and highlighted when first used in the text, and defined in the margins.

Emphasis is placed on meaningful **real world context** and **applications** so students can see the purpose of the math.

Literacy Connections boxes provide students with practical strategies that will support their use of the text inside as well as outside the math classroom.

McGraw-Hill Ryerson Mathematics: Making Connections *program supports the development of life-long Numeracy and Literacy skills in the Intermediate classroom.*



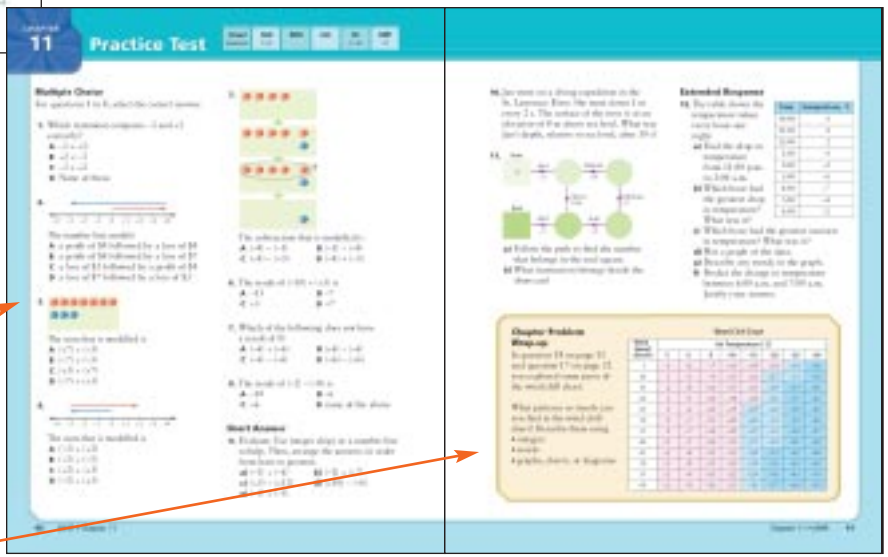
Key Ideas offers lesson summaries in text and visual form. **Communicate the Ideas**, and **Apply** in **Check Your Understanding** provide students with opportunities to write in their journals or to communicate their ideas orally.

Did You Know and **Making Connections** boxes emphasize cross-curricular connections.

A **balanced assessment design** is heightened with **cross-strand assessment** opportunities and coverage of both conceptual understanding and procedural skill.

Each **Practice Test** format mirrors **Grade 9 EQAO Numeracy Test format** (Multiple Choice, Short Answer, Extended Response).

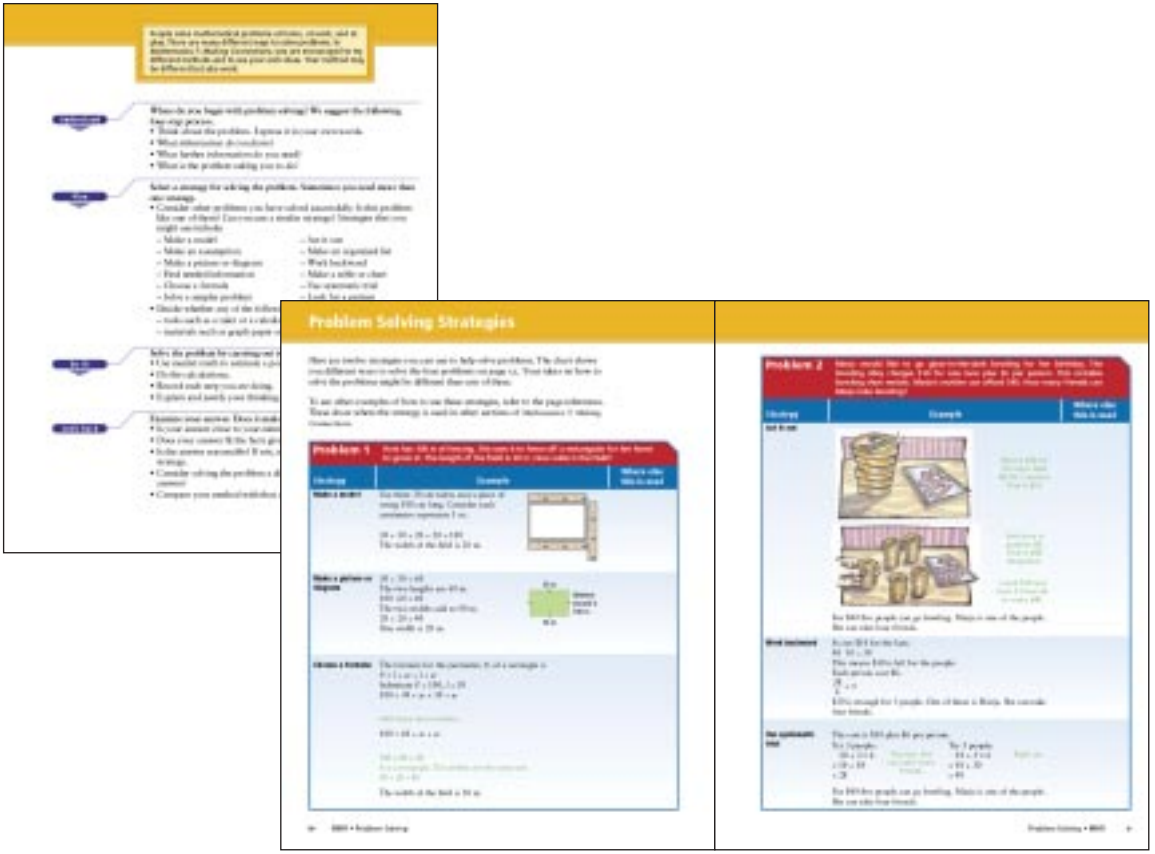
Chapter Problem Wrap-Up provides a summative assessment task



The Teacher's Resource provides ESL and Accommodation suggestions.

Problem Solving

"Problem solving is not only a goal of mathematics, but also a major means of doing so."
(TIPS Section 1, Developing Mathematical Literacy)



Methods and strategies for problem solving are described and modelled at the beginning of the student text and then referenced throughout

A variety of problem solving opportunities are provided for students.

Each chapter begins with an investigation of a real-life problem.

At the end of every two chapters, students are presented with a **Task**. These cross-strand tasks require students to apply what they have learned in the two previous chapters to solve real life broad-based problems.

The last question in the **Apply** section of **Check Your Understanding** is a **Try This!** question that allows multiple entry points.

In the **Extend** section of **Check Your Understanding** and in the **Extended Response** section at the end of every chapter there are problems for students to solve that challenge higher levels of thinking and extend thinking beyond the curriculum.

Icons are also used to validate student thinking.

Icons are placed throughout text to encourage students to use different strategies.

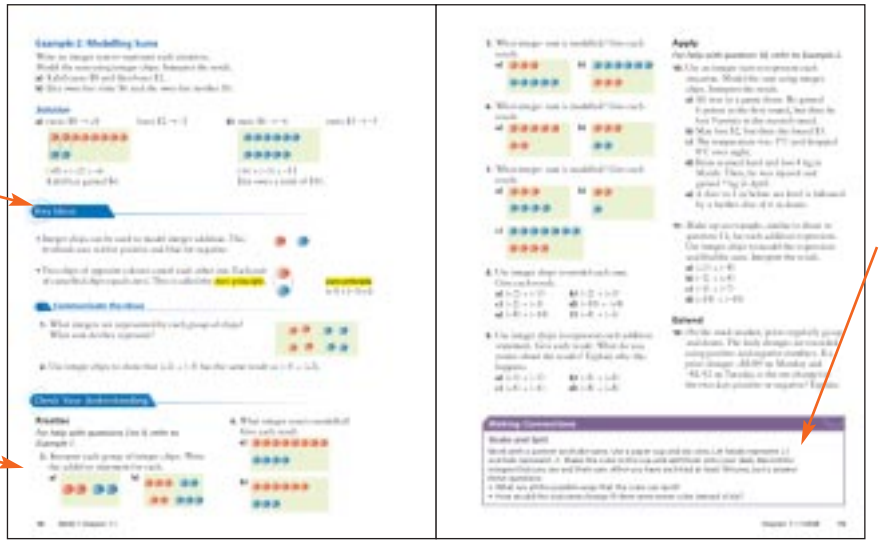
Problem solving is integral to all mathematics; students need to engage in problem exercises to learn concepts and procedures for understanding. McGraw-Hill Ryerson has made the problem-based learning approach the focus of its program.

Home Connections

The home activities of the McGraw-Hill Ryerson program serve several purposes: to support learning and to inform parents of the program, its goals, and their child's progress.

Student Text
Clear summaries of the key concepts appear in the **Key Ideas** throughout the student text.

Worked examples have **page references** for further support.



Key Words and **Glossary** explain terms.

The **Making Connections** boxes and the **Workbook** feature opportunities for students to take math home.

Support Material

Letters to the Parent are provided in the Teacher's Resource for the parent/guardian; they describe the curriculum and lessons so parents understand the objectives and content of each chapter.

Rubrics and **Student Exemplars** for each of the four 4 levels are provided.

Student Workbook

Website with Student and Parent Centres includes at-home activities, student self-assessment, fun weblinks, and much more!

*A variety of home connections materials are provided in the **McGraw-Hill Ryerson Mathematics: Making Connections** program.*

Combined Grade Solutions

McGraw-Hill Ryerson recognizes that many schools and teachers face the challenges of combined grades. Key consideration has been given to combined grades in the development and design of the **McGraw-Hill Ryerson Mathematics: Making Connections** *program.*

	McGraw-Hill Ryerson MATHEMATICS 7: Making Connections	**McGraw-Hill Ryerson MATHEMATICS 8: Making Connections**
	Get Ready for Grade 7	Get Ready for Grade 8
Chapter 1	Measurement and Number Sense	Measurement and Number Sense
Chapter 2	Two-Dimensional Geometry, With Patterning	Two-Dimensional Geometry
Chapter 3	Number Sense: Fraction Operations	Number Sense: Fraction Operations
Chapter 4	Probability	Probability
Chapter 5	Number Sense: Fractions, Decimals, and Percents	Number Sense: Rates, Ratios, and Percents
Chapter 6	Patterning	Patterning and Algebra
Chapter 7	Exponents	Exponents
Chapter 8	Three-Dimensional Geometry and Measurement	Three-Dimensional Geometry and Measurement
Chapter 9	Collect and Organize Data	Organize and Display Data
Chapter 10	Analyze and Interpret Data	Analyze and Interpret Data
Chapter 11	Number Sense: Integers	Integers
Chapter 12	Patterning and Equations	Patterning and Equations
Chapter 13	Geometry of Transformations	Geometry of Angle Properties

Student Texts

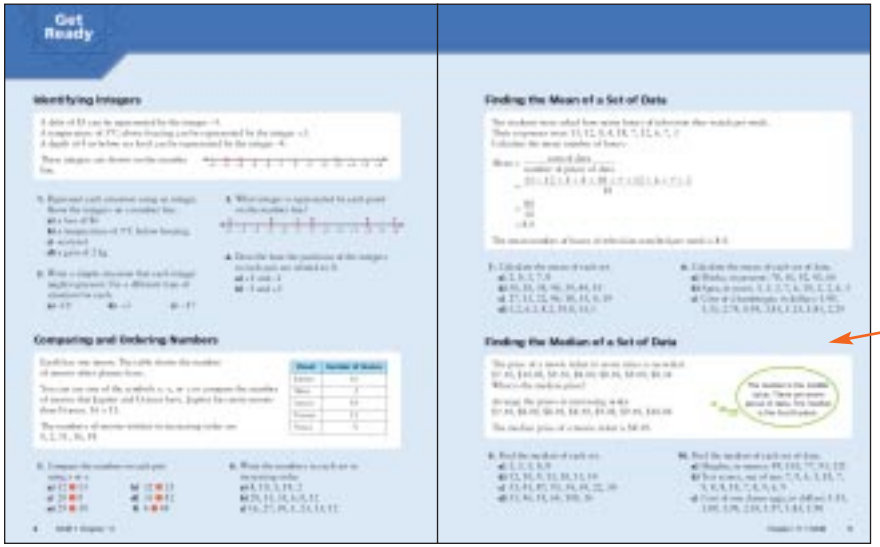
Tables of Contents for grades 7 and 8 have been aligned in terms of sequencing and scope of topics to support ease of use in a combined grade class.

Teacher's Resource

The Teacher's Resource provides strategies for teaching, planning, and managing combined grades.

Assessment & Evaluation

Assessment in **McGraw-Hill Ryerson Mathematics: Making Connections** *is designed not only to provide teachers with data regarding student achievement, but also to accommodate the broad range of students' needs.*



Diagnostic Assessment materials are provided for teachers to help them identify weaknesses and gaps in student learning and to aid them in programming appropriately.

Get Ready for Grade 7 and Get Ready for Grade 8 occur prior to the first chapter in each of the textbooks. They review key skills and concepts of the previous grade which students need to be successful with the mathematics of the new grade level.

The **Get Ready** section, at the beginning of each chapter, also reviews concepts and skills that are important prerequisites for students' success in the upcoming chapter.

Blackline Masters providing lessons to develop understanding of these topics as well as additional practice are also included in the Teacher's Resource.

Extra practice questions and tests are provided in the **Computerized Assessment Bank**

A variety of assessment strategies and tools are employed to accommodate the diversity of abilities and learning styles of students.

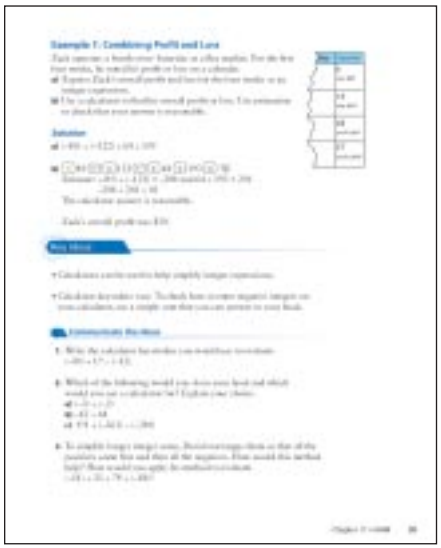
Formative Assessment resources provide ongoing assessment as to how students are doing and how they might improve.

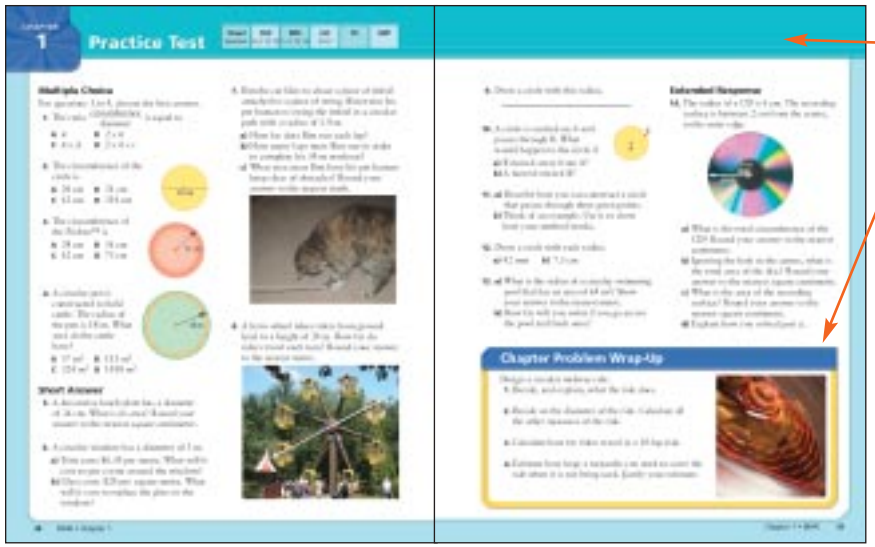
Reflect questions in the Discover the Math section provide teachers with information about students understanding of the concepts under investigation.

Communicate the Ideas also informs teachers how well students understand and can formulate the central concept or "big idea."

Questions in **Check Your Understanding** are of a formative nature giving teachers with information about students' levels of knowledge.

Journal opportunities are provided in the Teacher's Resource





Summative Assessment tools are designed to assist in making judgements about a student's achievement and facilitate reporting. Summative assessment is achieved in a variety of ways.

Practice Test at the end of each chapter allow students to identify their strengths and weaknesses.

Chapter Problem Wrap-ups reveal whether synthesis of concepts and procedures has occurred. They include answers and four by four rubrics.

Cross-strand Performance Tasks (after every second chapter) provide opportunity to show what students have learned in a meaningful way. They include exemplars and four by four rubrics.

Program Components

*The **McGraw-Hill Ryerson Mathematics: Making Connections** program provides flexible teaching tools to deliver grade 7 and 8 mathematics efficiently and effectively.*

Student Text

+ Three-part consistent easy-to-navigate lesson design that considers the needs of all learners, including ESL students
+ Balance of engaging hands-on explorations, guided investigations, and direct instruction
+ Activities designed to facilitate ease of teaching, making use of easy-to-access concrete materials
+ Opportunities for all performance levels to be successful and challenged
+ Support for development of language and literacy skills

Student Workbook

+ Extra practice for key concepts
+ Extension of text lessons for completion at home
+ Games and fun activities
+ Study skills and self tests
+ Vocabulary and key ideas reviews

Computerized Assessment Bank

+ Multi-format questions ranging from multiple choice and short answer to extended response
+ Questions at varying levels cover all expectations and achievement chart categories

Solutions Manual

+ Detailed worked solutions for all text exercises

Teacher's Resource

+ **FREE** access to our on-line Teacher, Parent, and Student Centres
+ Detailed chapter planning charts
+ Cross references to Targeted Implementation & Planning Support (TIPS)
+ Teaching suggestions for all lessons, including strategies for teaching in a combined grade class
+ Accommodations for ESL, and other learning styles
+ Student exemplars for Chapter Performance Tasks
+ Assessment and Evaluation support
+ Teaching notes highlighting common difficulty areas and common errors
+ Editable Blackline Masters on CD-ROM include: extra practice for all lessons, sample tests, accommodations, self checks, and literacy support and strategies

Websites

www.mcgrawhill.ca/books/math7
www.mcgrawhill.ca/books/math8

+ Additional numeracy support
+ Curriculum correlations
+ Weblinks, interactive activities, and student self-assessment material

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