



TEACHER PROFESSIONAL REFERENCE:
MATHEMATICS GRADES K -12

A Reference for Selecting Learning
Resources

Manitoba Education and Training Cataloguing in Publication Data

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Any websites referenced in this document are subject to change without notice. Educators are advised to preview and evaluate websites and online resources before recommending them for student use.

This resource is available on the Manitoba Education and Training
www.edu.gov.mb.ca/k12/learnres/shortlists.html

A C K N O W L E D G E M E N T S

Manitoba Education and Training acknowledges the individuals involved in the review and selection of learning resources to support provincial curriculum implementation. Appreciation is also extended to school divisions within Manitoba that support teachers' participation in the review. Finally, publishers, producers, and distributors are thanked for their submission of learning resources for consideration.

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INTRODUCTION

REFERENCE FOR SELECTING LEARNING RESOURCES

TEACHER PROFESSIONAL REFERENCE: MATHEMATICS GRADES K-12 is a reference tool provided by Manitoba Education and Training to help educators select student and teacher learning resources to support the curriculum. Learning resources may be purchased through the Manitoba Learning Centre (LRC) (formerly known as the Manitoba Text Book Bureau (MTBB)).

LEARNING RESOURCES REVIEWS

Publishers submit resources for review in response to the department's request for new learning resources to support provincial curricula. Teachers, nominated by superintendents of school divisions, are selected as teacher-evaluators. Using a collaborative review process, the teacher-evaluators examine the materials according to the resource-selection criteria to make recommendations regarding the suitability of the resources for Manitoba students and teachers.

RESOURCE SELECTION CRITERIA

Learning resources are selected based on their fidelity with the rationale, philosophy, processes, and learning expectations identified in each curriculum. Four evaluation criteria are used in selecting learning resources:

- **Curriculum Fit/Content/Philosophy:** the degree to which the content and processes of the resource align with the curriculum, thus providing support for curriculum implementation.
- **Instructional Design:** the degree to which the resource provides for multiple approaches to learning, has a wide range of use, is current, and reflects current pedagogical theory and practice.
- **Social Considerations:** the degree to which the resource is free of bias and stereotyping. The resource is examined for Canadian content, the use of culturally diverse examples, and accurate portrayal of First Nations, Inuit, and Métis peoples. Cautionary notes are added to alert teachers to potentially sensitive curriculum-fit issues or potential community concerns related to the resource.
- **Technical Design:** the degree to which the resource is visually appealing and has a logical and consistent form.

When selecting learning and teaching resources, teachers should consider how the resources meet the learning requirements of students, the perspectives of the student population, and local decisions related to the delivery of potentially sensitive content.

TERMS AND DEFINITIONS

The following terms and definitions are used to describe the learning resources:

- **Breadth:** identifies learning resources that address a wide range of student learning expectations for a particular grade.
- **Depth:** identifies learning resources that provide effective learning experiences in greater detail for a narrower grouping of student learning expectations.
- **Breadth and Depth:** identifies comprehensive learning resources that provide both breadth and depth dimensions for an extensive grouping of student learning expectations.
- **Teacher Reference:** identifies resources that assist teachers in implementing the curriculum, including background information for teacher use; may identify teaching suggestions and learning activities.
- **Teacher Guide:** identifies a separate guide for teachers or a teacher's edition of a **Student Text**.

PURCHASE OF LEARNING RESOURCES

The learning resources described in the bibliography are available for purchase through the Manitoba Learning Resources Centre (LRC) (formerly known as the Manitoba Text Book Bureau). For information or assistance regarding the purchase of learning resources, contact:

The Manitoba Learning Resource Centre (LRC)

Toll free: 866-771-6822 (Manitoba and Saskatchewan)

Telephone: 204-483-5040

Fax: 204-483-5041

Email: mtbb@gov.mb.ca

Online catalogue: <<http://www.mtbb.mb.ca>>



TITLES & DESCRIPTIONS

Open Questions for Rich Math Lessons

Publisher : Rubicon Publishing

Subject/Grade

	K	1	2	3	4	5	6	7	8	9	10	11	12
Mathematics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			

Open questions are problems that invite a variety of solutions or approaches from students and provides a way for students to demonstrate their thinking and understanding of mathematics. *Open Questions For Rich Math Lessons* provides examples of the number strand for teachers to incorporate open questions into their problem-solving lessons. Marian Small has created examples that allow teachers to reveal student thinking by providing three ways to integrate open questions. The *Getting Started* questions generate classroom discussion about mathematical ideas. The *Working On It* questions engage students in main learning activities. The *Consolidating* questions are questions to use for assessment purposes. Marian Small has developed the questions to bring out important points associated to specific outcomes from the WNCP curriculum. The questions are designed to have a variety of applications but should be used to develop reasoning and communication skills of students.

Open Questions for Rich Math Lessons: Grade Levels K,1,2,3

Author(s): Marian Small, Gladys Sterenberg **Audience:** Teacher
Year: 2016
Pagination: 143 p.
ISBN: 978-1-77058-985-8
Format: Print
Publisher: Rubicon Publishing **Date Recommended:** August 18, 2016

Open Questions for Rich Math Lessons: Grade Levels 4,5,6

Author(s): Marian Small, Gladys Sterenberg **Audience:** Teacher
Year: 2016
Pagination: 144 p.
ISBN: 978-1-77058-986-5
Format: Print
Publisher: Rubicon Publishing **Date Recommended:** August 18, 2016

Open Questions for Rich Math Lessons: Grade Levels 7, 8, 9

Author(s): Marian Small, Gladys Sterenberg

Audience: Teacher

Year: 2016

Pagination: 96 p.

ISBN: 978-1-77058-987-2

Format: Print

Publisher: Rubicon Publishing

Date Recommended: August 18, 2016

A U D I E N C E

Teacher

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels 4,5,6

Open Questions for Rich Math Lessons: Grade Levels 7, 8, 9

Open Questions for Rich Math Lessons: Grade Levels K,1,2,3

GRADE

Kindergarten

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels K,1,2,3

Grade 1

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels K,1,2,3

Grade 2

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels K,1,2,3

Grade 3

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels K,1,2,3

Grade 4

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels 4,5,6

Grade 5

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels 4,5,6

Grade 6

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels 4,5,6

Grade 7

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels 7, 8, 9

Grade 8

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels 7, 8, 9

Grade 9

Open Questions for Rich Math Lessons

Open Questions for Rich Math Lessons: Grade Levels 7, 8, 9

D I S T R I B U T O R D I R E C T O R Y

Manitoba Learning Resource Centre (LRC)(formerly known as the Manitoba Text Book Bureau (MTTB))

Toll free: 866-771-6822 (Manitoba and Saskatchewan)

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