



**SCIENCE GRADES 9-10**

**A Reference for Selecting Learning  
Resources**

Manitoba Education and Training Cataloguing in Publication Data

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Winnipeg, Manitoba, Canada

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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 at  
<[www.edu.gov.mb.ca/k12/learnres/bibliographies.html](http://www.edu.gov.mb.ca/k12/learnres/bibliographies.html)>.

## **ACKNOWLEDGEMENTS**

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

*SCIENCE GRADES 9-10: A Reference for Selecting Learning Resources* 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 REVIEWS

Publishers submit resources for review to the Learning Resources Unit of Instruction, Curriculum and Assessment Branch 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 the basis of their fidelity with the rationale, philosophy, processes, and learning outcomes 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 outcomes for a particular grade.
- **Depth:** identifies learning resources that provide effective learning experiences in greater detail for a narrower grouping of student learning outcomes.
- **Breadth and Depth:** identifies comprehensive learning resources that provide both breadth and depth dimensions for an extensive grouping of student learning outcomes.
- **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 may be available for purchase at: <http://www.mtbb.mb.ca/catalogue/en>

For information or assistance regarding the purchase of learning resources, contact:

### **The Manitoba Learning Resource Centre (LRC)**

Box 910

Souris, MB R0K 2C0

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

Telephone: 204-483-5040

Fax: 204-483-5041

Email: [mtbb@gov.mb.ca](mailto:mtbb@gov.mb.ca)

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



## TITLES & DESCRIPTIONS

## Discovering Science

**Publisher :** McGraw-Hill Ryerson Limited

### Subject/Grade

	K	1	2	3	4	5	6	7	8	9	10	11	12
Science										✓			
English Language Arts										✓			
Health Education										✓			
Mathematics										✓			

This is a made-for-Canada textbook and is congruent with all of the Manitoba Curriculum clusters. Almost all of the labs you would need to assign are incorporated into this text. The review sections at the end of chapters are extensive and cover many levels of questioning. The teacher resource provides thorough background and guidance on the preparation for lessons and labs, and comes with a digital exam bank on CD. The test bank includes French language questions. The exam builder is easy to use and quickly generates tests using many different assessment instruments.

### Discovering Science 9 (Student Text)

<b>Author(s):</b>	Attwood, J. Randy, Fatkin, Glen, Lacy, Donald, Karner, Julie, Martha, Josef, Milross, James, Montgomery, Adrienne, Naso, Karen, Sandner, Lionel, Searle, Sandy, Ballou, Briar, Charleson, Karen, Marko, Natasha, Zike, Dinah	<b>Audience:</b>	Student
<b>Edition:</b>		<b>Suggested Use(s):</b>	Cluster 0, Cluster 1, Cluster 2, Cluster 3, Cluster 4, Mathematics, English Language Arts, Health Education
<b>Year:</b>	2009		
<b>Pagination:</b>	523 p		
<b>ISBN:</b>	978-0-07-072363-4		
<b>Format:</b>	Print		
<b>Publisher:</b>	McGraw-Hill Ryerson Limited	<b>Date Recommended:</b>	April 13, 2012

This is a made-for-Canada textbook and is congruent with all of the Manitoba Curriculum clusters. Almost all of the labs you would need to assign are incorporated into this text. The review sections at the end of chapters are extensive and cover many levels of questioning. The teacher resource provides thorough background and guidance on the preparation for lessons and labs, and comes with a digital exam bank on CD. The test bank includes French language



questions. The exam builder is easy to use and quickly generates tests using many different assessment instruments.

### Discovering Science 9: Teacher’s Resource (includes CD-ROM)

<b>Author(s):</b>	Attwood, Randy, Barrett, Shirley, Karner, Julie, Zike, Dinah	<b>Audience:</b>	Teacher
<b>Edition:</b>		<b>Suggested Use(s):</b>	Cluster 0, Cluster 1, Cluster 2, Cluster 3, Cluster 4, Mathematics, English Language Arts, Health Education
<b>Year:</b>	2009		
<b>Pagination:</b>	unp.		
<b>ISBN:</b>	978-0-07-072412-9		
<b>Format:</b>	Print		
<b>Publisher:</b>	McGraw-Hill Ryerson Limited	<b>Date Recommended:</b>	April 13, 2012

This is a made-for-Canada textbook and is congruent with all of the Manitoba Curriculum clusters. Almost all of the labs you would need to assign are incorporated into this text. The review sections at the end of chapters are extensive and cover many levels of questioning. The teacher resource provides thorough background and guidance on the preparation for lessons and labs, and comes with a digital exam bank on CD. The test bank includes French language questions. The exam builder is easy to use and quickly generates tests using many different assessment instruments.

### Expert Space: Content & Tools for 21st Century Learners

<b>Edition:</b>	Canadian Edition	<b>Audience:</b>	Student, Teacher
<b>Year:</b>	2009	<b>Suggested Use(s):</b>	Social Studies, Visual Arts, English Language Arts
<b>Pagination:</b>	unp.		
<b>ISBN:</b>			
<b>Format:</b>	Web-Base Resource		
<b>Publisher:</b>	Scholastic Canada Ltd.	<b>Date Recommended:</b>	April 13, 2012

#### *Subject/Grade*

	K	1	2	3	4	5	6	7	8	9	10	11	12
Science					✓	✓	✓	✓	✓	✓	✓		
English Language Arts					✓	✓	✓	✓	✓	✓	✓		
Music					✓	✓	✓	✓	✓	✓	✓		
Social Studies					✓	✓	✓	✓	✓	✓	✓		
Visual Arts					✓	✓	✓	✓	✓	✓	✓		

This supplementary web based resource is about a space within the internet where you can find a variety of science information with which to inform and engage your students from grades 4 to 10. It covers Physical Sciences, the Human Body, Technology, Earth Sciences, Life Sciences, etc. One strength is the quality of the videos and articles imbedded in its multi-media sections. It is not noticeably graded yet it matches grade level clusters and thematic topics within the Science and Social Studies domains. There are other cross-curricular connections with the ELA, Visual Arts and Music domains. Designed by Grolier, it provides teachers with lesson plans and projects as well as collections of resources that students will find interesting on topics such as extreme weather and outer space.

## **System Requirements**

### **General Requirements:**

- T1 Connection or higher at building level (minimum), T3 Connection or higher at building level (recommended); if connecting to the Internet via a school district network, at least a T3 connection or higher at the building level
- Flash Version 9.0 or higher (Macromedia Flash is a free download at [www.adobe.com](http://www.adobe.com))
- Speakers or headsets

### **PC:**

- Operating System: Windows 98, 2000, XP
- Processor: Pentium 4 or higher (2.33 GHz)
- Memory: 256 MB of RAM
- Browser: Internet Explorer 6 (& for XP), Firefox 2.x
- Display: 15-inch monitor with the resolution set at 1024 x 768 with 16-bit colors or higher selected

### **Macintosh:**

- Operating System: OS X 10.3 or higher
- Processor: PowerPC G5 1.8 GHz or faster processor or Intel Core Duo 1.33 GHz or faster processor
- Memory: 256 MB of RAM
- Browser: Safari 2.x or higher, Firefox 2.x
- Display: 15-inch monitor with the resolution set at 1024 x 768 with “thousands of colors” selected

### **Remote Access:**

- DSL, cable modem or higher connection
- All other requirements are the same for remote access

\*\*Please note that Expert Space anchor and Skill Builder videos cannot be downloaded so if users cannot stream video, they will not be able to use this portion of Expert Space.

\*\*Video performance will vary based on factors like connection speed, number of concurrent users, and other network traffic.

## **Manitoba Science 10**

**Publisher :** McGraw-Hill Ryerson Limited

### *Subject/ Grade*

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Science											✓		

The student textbook is aligned with the scope and sequence of Manitoba Science 10 specific learning outcomes and provides additional supports for the following: 1) Step-by-step problem-solving techniques; 2) Science, Technology, Society and Environment (STSE) connections and applications; 3) “chapter launch” activation activities to engage students’ interests; 4) lab activities and investigation activities; 5) career connections, and; 6) Manitoba contexts throughout. The design and layout of the student edition is easy to navigate with repeating features in each unit and complementary features in the appendices related to safety in the science classroom, literacy skills for science content-area reading, and to scientific inquiry skills. Each unit features a “preparation” section at the beginning which identifies prior learning for students and access and review of prior knowledge which can be applied to their subsequent learning experiences.

The digital teacher resource is complementary to the student edition of the text and can be used as a planning guide. It features background knowledge for each topic, suggested responses to student textbook questions, activity guides with troubleshooting and helpful hints, and black line masters. The teacher resource also consists of a .pdf version of the student text in an interactive format. The Exam View Assessment Suite computerized assessment bank allows teachers to select questions from a question bank for each chapter or custom-design by adding their own. Teacher feedback or additional instructions may be added. Teachers may also assemble annotated activities, labs, videos, graphics and animation into a coherent lesson plan or save these to their own drive or desktop. The teacher resource section assembles all text and visual materials by chapter. Copies of the BLM's are in a useful MS Word format for labs activities. These greatly enhance the textbook in the Manitoba Skills and Attitudes specific learning outcomes (Cluster “0”), and in lesson differentiation for varied learning styles. Answer keys for chapter reviews are in .pdf format and chapter outlines are provided in an editable MS PowerPoint format. All of these features are useful to the teacher, particularly the modifiable and editable nature of the resource materials, teacher-created assessment questions and customised assignments.

### **McGraw-Hill Ryerson Manitoba Science 10**

**Author(s):** Anderson, Michelle,  
Bocknek, Jonathan,

**Audience:** Student  
**Suggested Use(s):** Social Studies,

Goodchild, Sara,  
Hamilton, Katherine,  
Smith, Trevor, Stewart,  
Ken, Weber, Christine

Mathematics, English  
Language Arts, Health  
Education

**Year:** 2014  
**Pagination:** 434 p  
**ISBN:** 978-125927541-8  
**Format:** Print

**Publisher:** McGraw-Hill Ryerson  
Limited

**Date Recommended:** April 28, 2015

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### **McGraw-Hill Ryerson Manitoba Science 10: Computerized Assessment Bank CD-ROM**

**Author(s):** Barbara Mckinley, Ken  
Stewart, Christine Weber

**Audience:** Teacher

**Suggested Use(s):** Mathematics, Health  
Education

**Year:** 2014  
**Pagination:** unp.  
**ISBN:** 978-125927545-6  
**Format:** CD-ROM

**Publisher:** McGraw-Hill Ryerson  
Limited

**Date Recommended:** April 28, 2015

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### **McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool for Teachers (Online)**

**Year:** 2014  
**Pagination:** unp.  
**ISBN:** 978-125926991-2  
**Format:** Access code

**Audience:** Teacher

**Suggested Use(s):** Mathematics, Health  
Education

**Publisher:** McGraw-Hill Ryerson  
Limited

**Date Recommended:** April 28, 2015

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### **McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool Student (Online)**

**Year:** 2014  
**Audience:** Student



**Pagination:** 487 p  
**ISBN:** 978-0-13-312610-5  
**Format:** Print

**Publisher:** Pearson Canada                      **Date Recommended:** April 13, 2012  
**Distributor:** Pearson Canada Inc.

Pearson Science 9 provides strong correlations to the Manitoba's science curriculum and extensive inclusion of aboriginal perspectives. The electronic version of the Teacher Resource Guide gives you a PDF of the print, as well as word files of the black line masters, activities, quizzes, tests and assessment rubrics. These tests and activities can all be edited by the teacher. A PDF of the student text is also included.

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### **Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)**

<b>Author(s):</b>	Hounjet, Camille, Kvamme, Bob, Mohr, Penny, Phillipchuk, Kelly, View, Ted, Pyne-Rudzik, Eileen	<b>Audience:</b>	Teacher
<b>Edition:</b>	Manitoba Edition	<b>Suggested Use(s):</b>	Cluster 0, Cluster 1, Cluster 2, Cluster 3, Cluster 4, Mathematics, English Language Arts, Health Education
<b>Year:</b>	2012		
<b>Pagination:</b>	unp.		
<b>ISBN:</b>	978-0-13-312727-0		
<b>Format:</b>	Print		

**Publisher:** Pearson Canada                      **Date Recommended:** April 13, 2012  
**Distributor:** Pearson Canada Inc.

Pearson Science 9 provides strong correlations to the Manitoba's science curriculum and extensive inclusion of aboriginal perspectives. The electronic version of the Teacher Resource Guide gives you a PDF of the print, as well as word files of the black line masters, activities, quizzes, tests and assessment rubrics. These tests and activities can all be edited by the teacher. A PDF of the student text is also included.

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# A U D I E N C E

## Student

Discovering Science

*Discovering Science 9 (Student Text)*

Expert Space: Content & Tools for 21st Century Learners

Manitoba Science 10

*McGraw-Hill Ryerson Manitoba Science 10*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool Student (Online)*

Pearson Science

*Pearson Science 9 (Student Edition)*

## Teacher

Discovering Science

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Expert Space: Content & Tools for 21st Century Learners

Manitoba Science 10

*McGraw-Hill Ryerson Manitoba Science 10: Computerized Assessment Bank  
CD-ROM*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool for Teachers  
(Online)*

*McGraw-Hill Ryerson Manitoba Science 10: Teacher's Resource*

Pearson Science

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

# GRADE

## Grade 9

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Expert Space: Content & Tools for 21st Century Learners

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## Grade 10

Expert Space: Content & Tools for 21st Century Learners

Manitoba Science 10

*McGraw-Hill Ryerson Manitoba Science 10*

*McGraw-Hill Ryerson Manitoba Science 10: Computerized Assessment Bank CD-ROM*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool for Teachers (Online)*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool Student (Online)*

*McGraw-Hill Ryerson Manitoba Science 10: Teacher's Resource*



# SUGGESTED USE

## Cluster 0

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## Cluster 1

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## Cluster 2

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## Cluster 3

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## Cluster 4

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## English Language Arts

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Expert Space: Content & Tools for 21st Century Learners

Manitoba Science 10

*McGraw-Hill Ryerson Manitoba Science 10*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## Health Education

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Manitoba Science 10

*McGraw-Hill Ryerson Manitoba Science 10*

*McGraw-Hill Ryerson Manitoba Science 10: Computerized Assessment Bank CD-ROM*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool for Teachers (Online)*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool Student (Online)*

*McGraw-Hill Ryerson Manitoba Science 10: Teacher's Resource*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

## Mathematics

Discovering Science

*Discovering Science 9 (Student Text)*

*Discovering Science 9: Teacher's Resource (includes CD-ROM)*

Manitoba Science 10

*McGraw-Hill Ryerson Manitoba Science 10*

*McGraw-Hill Ryerson Manitoba Science 10: Computerized Assessment Bank CD-ROM*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool for Teachers (Online)*

*McGraw-Hill Ryerson Manitoba Science 10: CONNECTSchool Student (Online)*

*McGraw-Hill Ryerson Manitoba Science 10: Teacher's Resource*

Pearson Science

*Pearson Science 9 (Student Edition)*

*Pearson Science 9: Teacher's Resource Kit (includes CD-ROM)*

**Social Studies**

Expert Space: Content & Tools for 21st Century Learners

Manitoba Science 10

*McGraw-Hill Ryerson Manitoba Science 10*

**Visual Arts**

Expert Space: Content & Tools for 21st Century Learners

## **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)  
Toll free: 866-771-6822 (Manitoba and Saskatchewan)  
Telephone: 204-483-5041  
Email: [mtbb@gov.mb.ca](mailto:mtbb@gov.mb.ca)  
Online catalogue: <http://www.mtbb.mb.ca>

McGraw-Hill Ryerson Limited  
300 Water St  
Whitby ON L1N 9B6  
Phone: (888) 793-7706  
Fax: (905) 430-5194  
[www.mheducation.ca/school](http://www.mheducation.ca/school)

Pearson Canada Inc.  
195 Harry Walker Parkway  
Newmarket ON L3Y 7B4  
Phone: (800) 667-6942  
Fax: (416) 447-2551  
[www.pearsonschoolcanada.ca](http://www.pearsonschoolcanada.ca)

Scholastic Canada Ltd.  
175 Hillmount Road  
Markham ON L6C 1Z7  
Phone: (905) 887-7323  
Fax: (905) 887-3643  
[www.education.scholastic.ca](http://www.education.scholastic.ca)