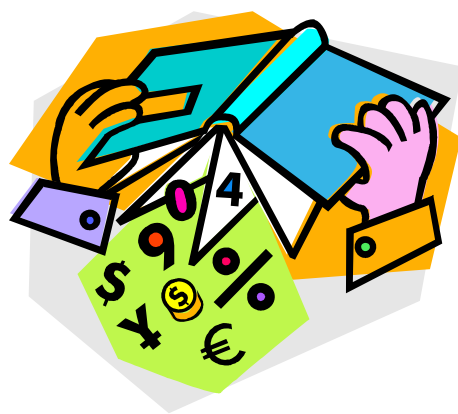


Workplace and Apprenticeship Mathematics 10, 20, 30:



Recommended Resources for the Renewed Curricula

*A list of professional materials available for borrowing
from the Stewart Resources Centre – February 2013*



The STF Stewart Resources Centre – CHECK US OUT!

In order to serve you better, we have compiled the following list of resources that directly address some of your professional needs. We hope you find this publication helpful, and we would be pleased to hear from you if you would like us to continue producing more specialized resource lists, or if you have suggestions on how we can improve our service to you. We want to serve you better!

We make it easy for you to use the Stewart Resources Centre:

- For rural schools, we mail our resources directly to you and provide a postage-paid mailing label for you to use to mail the resources back to us. (Audio-visual resources are excluded from the Canada Post library mailing rate, so you will need to pay postage to return these items.)
- For schools in Saskatoon, your resources arrive at your school through the weekly inter-school mail delivery. Materials may also be returned to us using this courier system.
- You don't need to know the exact titles for resources you need. Provide a topic and an approximate grade level at which you would like to use the materials, and we will do the rest!
- We are accessible 24 hours a day through the STF website: www.stf.sk.ca You may search our catalog online or e-mail us your resource requests at: src@stf.sk.ca
- Call us! STF members may call the Stewart Resources Centre toll-free at 1-800-667-7762, ext. 6323, or we can be reached at 373-1660, ext. 6323 for local calls.
- Visit us in person! We are open 8:30 a.m. to 5:00 p.m. from Monday to Friday.



WORKPLACE AND APPRENTICESHIP MATHEMATICS 10



Indicates item is a Ministry of Education's Core Learning Resource.



372.7 B932

Building a smokehouse : the geometry of prisms / Kagle, Melissa.

Calgary, AB: Detselig Enterprises, 2007.

Subjects: Yupik Eskimos – Alaska. Small buildings – Design and construction. Mathematics – Study and teaching (Secondary).

Summary: Students learn the properties of three-dimensional shapes by building smokehouse models. Students identify congruent faces, describe the angles between faces, and determine the number of faces in the three-dimensional shape. They explore the properties of triangular prisms as they frame their model smokehouse roofs. Students learn how to calculate surface area for the siding.

332.024 C212 OVERSIZE

The Canada Pension Plan : what's it got to do with me? : a financial management supplement for high school (3rd ed.)

Ottawa, ON: Government of Canada, 2009.

Subjects: Retirement – Planning. Canada Pension Plan – Study and teaching (Secondary).

Summary: This resource is designed to assist students in planning their finances. As students work through various case studies, they will revise budgets to reflect changing circumstances and to make financial decisions based on needs and wants.



510.7 C456

Changing the faces of mathematics : perspectives on Indigenous people of North America /

Hankes, Judith Elaine. Fast, Gerald R.

Reston, VA: NCTM, 2002.

Subjects: Mathematics – Study and teaching – Social aspects. Indians of North America – Education. Mathematical ability.

Summary: This resource is a collection of essays related to teaching mathematics in a culturally relevant way to First Nations people of North America. Examples include suggestions for teaching numbers and operations concepts using traditional games, and for introducing students to a variety of number systems specific to North American First Nations people.



510 C597

Constructive assessment in mathematics : practical steps for classroom teachers / Clarke, David.

Berkeley, CA: Key Curriculum Press, 1997.

Subjects: Mathematics – Study and teaching. Mathematics – Textbooks. Mathematics – Examinations. Mathematical ability – Testing.

Summary: Reinforcing the central purpose for assessing students, the three parts of this resource expand upon how assessment can foster student learning by valuing their strengths and identifying concepts not yet mastered. Integrating assessment into teaching and instruction, the selection and implementation of assessment strategies, and communicating assessment information to educational partners are addressed.

- Annotations have been excerpted from book descriptions provided by the publishers and from bibliographies distributed by the Saskatchewan Ministry of Education.

510 S244

Introducing mathematics / Sardar, Ziauddin. Van Loon, Borin.

New York, NY: Icon Books, 1999.

Subjects: Mathematics – Popular works.

Summary: This learning resource traces the history of mathematics in comic strip format. The authors describe the discoveries and concepts from mathematicians of the ancient world to modern times.

Mathematical topics such as geometry, calculus, number systems, and statistical reasoning are also explored.

510.71 N277

Mathematics assessment : a practical handbook for grades 9-12 / Greer, Anja S.

Reston, VA: NCTM, 1999.

Subjects: Mathematics – Study and teaching (Secondary) – Evaluation.

Summary: This resource considers new ways to assess students, focuses on assessment tasks, offers ways to plan and conduct a classroom assessment program, and discusses the scoring, grading, reporting, and use of assessment data. The editors provide opportunities for teachers to reflect on their teaching practice and how they use mathematical assessment in the classroom.



510 M147

Mathematics : making financial decisions 11 : student textbook / Brosseau, Jeff.

Toronto, ON: McGraw-Hill, 2001.

Subjects: Business mathematics – Textbooks. Finance, Personal – Mathematics. Mathematics – Textbooks.

Summary: This student-based resource provides current investigations in consumer mathematics. The real-world examples and applications contain Canadian content. The chapters focus on budgeting, interest annuities, mortgages, and exponential growth. Throughout the resource, sets of discussion problems and accompanying case studies provide an authentic learning context for applying the learned concepts.



793.74 P597

The mathematics of Oz : mental gymnastics from beyond the edge / Pickover, Clifford A.

New York, NY: Cambridge University Press, 2002.

Subjects: Mathematical recreations.

Summary: Dorothy must solve an array of brainteasers in order to escape the clutches of her abductors, a group of mathematically obsessed aliens. Each short chapter is a mathematical adventure in which Dorothy is presented with a mystery, a puzzle, or a problem to solve. The author rates the problems in terms of difficulty.

MathWorks 10



510 M433

MathWorks 10 : student resource / Borgen, Katharine.

MathWorks 10 : teacher resource / Borgen, Katharine.

Vancouver, BC: Pacific Educational Press, 2010.

Subjects: Mathematics – Study and teaching (Secondary).

Summary: The student text consists of seven chapters. Each chapter includes a project where students apply the mathematical concepts in a real-world scenario. Profiles of Canadians highlight the importance of math in the workplace and math is specifically used in a selection of jobs. Other features include mental math and estimation, building skill levels, extending thinking, and reflecting on learning. The teacher's guide includes teaching strategies, complete worked solutions, alternate solutions, sample chapter tests, graphic organizers, blackline masters, and ideas for assessment.

Navigations Series



512 N325

Navigating through algebra in grades 9-12 / Burke, Maurice Joseph.

Reston, VA: NCTM, 2001.

Subjects: Algebra – Study and teaching (Secondary).

Summary: This book focuses on algebra as a language of process, expands the notion of variable, develops ideas about the representation of functions, and extends students' understanding of algebraic equivalence and change. In the activities, students apply properties of functions by using median salary data, explore the meaning of equivalent equations, and use recursive or iterative forms to represent relationships.



516.0071 N325

Navigating through geometry in grades 9-12 / Day, Roger.

Reston, VA: NCTM, 2001.

Subjects: Geometry – Study and teaching (Secondary).

Summary: This book concentrates on topics such as the use of transformations, coordinates and matrices, and congruence and similarity. Activities that take students through geometric tasks require some use of technology, including interactive geometry software and a calculator or a computer with software that produces geometric images and graphs. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



510.712 N325

Navigating through measurement in grades 9-12 / Burke, Maurice J.

Reston, VA: NCTM, 2005.

Subjects: Measurement – Study and teaching (Secondary). Geometry – Study and teaching (Secondary).

Summary: Throughout history, the need for more sophisticated measurements has led to the discovery of more sophisticated mathematics. This book highlights this important idea in activities that help students explore an array of measurement strategies and techniques. Investigations probe ancient methods for performing such tasks as measuring the speed of ships at sea and estimating the distance of the sun from the earth. Students apply simple formulas to measure complex shapes, explore iterative processes that lead to measurement formulas, and develop an original formula for measuring the size of a tree. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



510.712 N325

Navigating through number and operations in grades 9-12 / Burke, Maurice J.

Reston, VA: NCTM, 2006.

Subjects: Geometry – Study and teaching (Secondary). Measurement – Study and teaching (Secondary).

Summary: This book's activities probe rational and irrational numbers and investigate properties of integers and complex numbers. They explore numbers and operations embedded in physical objects and show how simple problems can lead to sophisticated considerations. Students examine the usefulness of irrational numbers in designing musical scales and of prime numbers in devising encryption schemes, for example, and they discover powerful ideas from graph theory in a concrete context of dikes, towers, and enclosed regions. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



519.2 N325

Navigating through probability in grades 9-12 / Bright, George W.

Reston, VA: NCTM, 2004.

Subjects: Mathematical statistics – Study and teaching (Middle school). Probabilities – Study and teaching (Middle school).

Summary: This book assists high school teachers in honing their students' thinking by introducing them to two approaches to probability and exploring both approaches in real-world contexts. The first approach, which interprets probability as relative frequency over the long run, uses actual or simulated data from many experiments to arrive at empirical probabilities. The second approach analyzes outcomes abstractly to arrive at theoretical probabilities. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.

510.71 K17

Out of the labyrinth : setting mathematics free / Kaplan, Robert. Kaplan, Ellen

New York, NY: Oxford University Press, 2007.

Subjects: Mathematics – Study and teaching.

Summary: Written as a guide for parents and educators, this book argues that math should be taught as the highest form of intellectual play rather than as a step-by-step acquisition of skills and facts. The authors emphasize that math is meant to be explored and savoured, and that it does not require special talent or ability.



510.76 J67

Problem solving strategies : crossing the river with dogs and other mathematical adventures (2nd ed.) / Johnson, Ken. Herr, Ted.

Problem solving strategies : crossing the river with dogs and other mathematical adventures (2nd ed.) : **instructor's resource book** / Johnson, Ken. Herr, Ted.

Emeryville, CA: Key Curriculum Press, 2001.

Subjects: Problem solving. Mathematics.

Summary: This resource is designed to demonstrate various methods that can be used to solve the same problem. Each chapter concentrates on the application of a particular strategy. The corresponding sets of problems provide a multitude of authentic applications for this strategy. The importance of students communicating their different solutions and their logical reasonings are stressed throughout this resource. The accompanying instructor's resource book and answer key supplements this resource.

510.712 T253

Teaching mathematics through problem solving : grades 6-12 / Schoen, Harold L. (Ed.).

Reston, VA: National Council of Teachers of Mathematics, 2003.

Subjects: Mathematics – Study and teaching (Secondary). Problem-based learning.

Summary: This volume is a professional research-based resource that promotes a problem-solving approach to mathematics instruction. This approach engages students in making sense of problematic tasks in which mathematical concepts are embedded. The writers address issues and perspectives related to this approach, provide suggestions on how to select and use appropriate tasks and learning tools, and provide examples of the use of this approach in various classroom settings.

510.71 R795

Uncovering student thinking in mathematics : grades 6-12 / Rose, Cheryl M. Arline, Carolyn.

Thousand Oaks, CA: Corwin, 2008.

Subjects: Mathematics – Study and teaching (Middle school). Mathematical ability – Testing.

Summary: The authors provide 30 formative assessment probes to reveal common understandings and misunderstandings in student thinking. This book: discusses standards, research results, and

practical craft knowledge; describes the purpose, structure, and development of mathematics assessment probes; helps teachers build on students' current understandings while addressing their identified difficulties; and offers examples of the faulty thinking students are likely to exhibit and typical obstacles they may encounter.

WORKPLACE AND APPRENTICESHIP MATHEMATICS 20



Indicates item is a Ministry of Education's Core Learning Resource.

332.024 C212 OVERSIZE

The Canada Pension Plan : what's it got to do with me? : a financial management supplement for high school (3rd ed.)

Ottawa, ON: Government of Canada, 2009.

Subjects: Retirement – Planning. Canada Pension Plan – Study and teaching (Secondary).

Summary: This resource is designed to assist students in planning their finances. As students work through various case studies, they will revise budgets to reflect changing circumstances and to make financial decisions based on needs and wants.



510.7 C456

Changing the faces of mathematics : perspectives on Indigenous people of North America /

Hankes, Judith Elaine. Fast, Gerald R.

Reston, VA: NCTM, 2002.

Subjects: Mathematics – Study and teaching – Social aspects. Indians of North America – Education. Mathematical ability.

Summary: This resource is a collection of essays related to teaching mathematics in a culturally relevant way to First Nations people of North America. Examples include suggestions for teaching numbers and operations concepts using traditional games, and for introducing students to a variety of number systems specific to North American First Nations people.



510 C597

Constructive assessment in mathematics : practical steps for classroom teachers / Clarke, David.

Berkeley, CA: Key Curriculum Press, 1997.

Subjects: Mathematics – Study and teaching. Mathematics – Textbooks. Mathematics – Examinations. Mathematical ability – Testing.

Summary: Reinforcing the central purpose for assessing students, the three parts of this resource expand upon how assessment can foster student learning by valuing their strengths and identifying concepts not yet mastered. Integrating assessment into teaching and instruction, the selection and implementation of assessment strategies, and communicating assessment information to educational partners are addressed.

516 J17

Geometry : seeing, doing, understanding (3rd ed.) / Jacobs, Harold R.

New York, NY: W.H. Freeman and Co., 2003.

Subjects: Geometry.

Summary: Jacobs allows students to use guided discovery to develop geometric intuition. The text includes examples and exercises that are relevant to students. Students will use inductive and deductive reasoning through the study of geometry. Jacobs has structured the materials so that students discover the ideas for themselves.

510 S244

Introducing mathematics / Sardar, Ziauddin. Van Loon, Borin.

New York, NY: Icon Books, 1999.

Subjects: Mathematics – Popular works.

Summary: This learning resource traces the history of mathematics in comic strip format. The authors describe the discoveries and concepts from mathematicians of the ancient world to modern times.

Mathematical topics such as geometry, calculus, number systems, and statistical reasoning are also explored.

510.71 N277

Mathematics assessment : a practical handbook for grades 9-12 / Greer, Anja S.

Reston, VA: NCTM, 1999.

Subjects: Mathematics – Study and teaching (Secondary) – Evaluation.

Summary: This resource considers new ways to assess students, focuses on assessment tasks, offers ways to plan and conduct a classroom assessment program, and discusses the scoring, grading, reporting, and use of assessment data. The editors provide opportunities for teachers to reflect on their teaching practice and how they use mathematical assessment in the classroom.



510 M147

Mathematics : making financial decisions 11 : student textbook / Brosseau, Jeff.

Toronto, ON: McGraw-Hill, 2001.

Subjects: Business mathematics – Textbooks. Finance, Personal – Mathematics. Mathematics – Textbooks.

Summary: This student-based resource provides current investigations in consumer mathematics. The real-world examples and applications contain Canadian content. The chapters focus on budgeting, interest annuities, mortgages, and exponential growth. Throughout the resource, sets of discussion problems and accompanying case studies provide an authentic learning context for applying the learned concepts.



793.74 P597

The mathematics of Oz : mental gymnastics from beyond the edge / Pickover, Clifford A.

New York, NY: Cambridge University Press, 2002.

Subjects: Mathematical recreations.

Summary: Dorothy must solve an array of brainteasers in order to escape the clutches of her abductors, a group of mathematically obsessed aliens. Each short chapter is a mathematical adventure in which Dorothy is presented with a mystery, a puzzle, or a problem to solve. The author rates the problems in terms of difficulty.

MathWorks 11



510 M433

MathWorks 11 : student resource / Bedwin, Christa. Borgen, Katharine.

MathWorks 11 : teacher resource / Bedwin, Christa. Borgen, Katharine.

Vancouver, BC: Pacific Educational Press, 2011.

Subjects: Mathematics – Study and teaching (Secondary).

Summary: The student text consists of seven chapters. Each chapter includes a project where students apply the mathematical concepts in a real-world scenario. Profiles of Canadians highlight the importance of math in the workplace and math is specifically used in a selection of jobs. Other features include mental math and estimation, building skill levels, extending thinking, and reflecting on learning. The teacher's guide includes teaching strategies, complete worked solutions, alternate solutions, sample chapter tests, graphic organizers, blackline masters, and ideas for assessment.

Navigations Series



512 N325

Navigating through algebra in grades 9-12 / Burke, Maurice Joseph.

Reston, VA: NCTM, 2001.

Subjects: Algebra – Study and teaching (Secondary).

Summary: This book focuses on algebra as a language of process, expands the notion of variable, develops ideas about the representation of functions, and extends students' understanding of algebraic equivalence and change. In the activities, students apply properties of functions by using median salary data, explore the meaning of equivalent equations, and use recursive or iterative forms to represent relationships.



516.0071 N325

Navigating through geometry in grades 9-12 / Day, Roger.

Reston, VA: NCTM, 2001.

Subjects: Geometry – Study and teaching (Secondary).

Summary: This book concentrates on topics such as the use of transformations, coordinates and matrices, and congruence and similarity. Activities that take students through geometric tasks require some use of technology, including interactive geometry software and a calculator or a computer with software that produces geometric images and graphs. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



510.712 N325

Navigating through measurement in grades 9-12 / Burke, Maurice J.

Reston, VA: NCTM, 2005.

Subjects: Measurement – Study and teaching (Secondary). Geometry – Study and teaching (Secondary).

Summary: Throughout history, the need for more sophisticated measurements has led to the discovery of more sophisticated mathematics. This book highlights this important idea in activities that help students explore an array of measurement strategies and techniques. Investigations probe ancient methods for performing such tasks as measuring the speed of ships at sea and estimating the distance of the sun from the earth. Students apply simple formulas to measure complex shapes, explore iterative processes that lead to measurement formulas, and develop an original formula for measuring the size of a tree. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



510.712 N325

Navigating through number and operations in grades 9-12 / Burke, Maurice J.

Reston, VA: NCTM, 2006.

Subjects: Geometry – Study and teaching (Secondary). Measurement – Study and teaching (Secondary).

Summary: This book's activities probe rational and irrational numbers and investigate properties of integers and complex numbers. They explore numbers and operations embedded in physical objects and show how simple problems can lead to sophisticated considerations. Students examine the usefulness of irrational numbers in designing musical scales and of prime numbers in devising encryption schemes, for example, and they discover powerful ideas from graph theory in a concrete context of dikes, towers, and enclosed regions. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



519.2 N325

Navigating through probability in grades 9-12 / Bright, George W.

Reston, VA: NCTM, 2004.

Subjects: Mathematical statistics – Study and teaching (Middle school). Probabilities – Study and teaching (Middle school).

Summary: This book assists high school teachers in honing their students' thinking by introducing them to two approaches to probability and exploring both approaches in real-world contexts. The first

approach, which interprets probability as relative frequency over the long run, uses actual or simulated data from many experiments to arrive at empirical probabilities. The second approach analyzes outcomes abstractly to arrive at theoretical probabilities. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.

510.71 K17

Out of the labyrinth : setting mathematics free / Kaplan, Robert. Kaplan, Ellen
New York, NY: Oxford University Press, 2007.

Subjects: Mathematics – Study and teaching.

Summary: Written as a guide for parents and educators, this book argues that math should be taught as the highest form of intellectual play rather than as a step-by-step acquisition of skills and facts. The authors emphasize that math is meant to be explored and savoured, and that it does not require special talent or ability.



510.76 J67

Problem solving strategies : crossing the river with dogs and other mathematical adventures (2nd ed.) / Johnson, Ken. Herr, Ted.

Problem solving strategies : crossing the river with dogs and other mathematical adventures (2nd ed.) : **instructor's resource book** / Johnson, Ken. Herr, Ted.

Emeryville, CA: Key Curriculum Press, 2001.

Subjects: Problem solving. Mathematics.

Summary: This resource is designed to demonstrate various methods that can be used to solve the same problem. Each chapter concentrates on the application of a particular strategy. The corresponding sets of problems provide a multitude of authentic applications for this strategy. The importance of students communicating their different solutions and their logical reasonings are stressed throughout this resource. The accompanying instructor's resource book and answer key supplements this resource.

510 G553

Real-life math : everyday use of mathematical concepts / Glazer, Evan M. McConnell, John W.
Westport, CT: Greenwood Press, 2002.

Subjects: Mathematics.

Summary: This book is a reference guide promoting real-world connections to nearly 50 mathematical concepts. It provides background explanations and many examples of concept applications, although descriptions of how to perform the calculations are not included.

510.712 T253

Teaching mathematics through problem solving : grades 6-12 / Schoen, Harold L. (Ed.).
Reston, VA: National Council of Teachers of Mathematics, 2003.

Subjects: Mathematics – Study and teaching (Secondary). Problem-based learning.

Summary: This volume is a professional research-based resource that promotes a problem-solving approach to mathematics instruction. This approach engages students in making sense of problematic tasks in which mathematical concepts are embedded. The writers address issues and perspectives related to this approach, provide suggestions on how to select and use appropriate tasks and learning tools, and provide examples of the use of this approach in various classroom settings.

510.71 R795

Uncovering student thinking in mathematics : grades 6-12 / Rose, Cheryl M. Arline, Carolyn.
Thousand Oaks, CA: Corwin, 2008.

Subjects: Mathematics – Study and teaching (Middle school). Mathematical ability – Testing.

Summary: The authors provide 30 formative assessment probes to reveal common understandings and misunderstandings in student thinking. This book: discusses standards, research results, and practical craft knowledge; describes the purpose, structure, and development of mathematics assessment probes; helps teachers build on students' current understandings while addressing their identified difficulties; and offers examples of the faulty thinking students are likely to exhibit and typical obstacles they may encounter.

WORKPLACE AND APPRENTICESHIP MATHEMATICS 30



Indicates item is a Ministry of Education's Core Learning Resource.

510.712 S635

Big ideas from Dr. Small : creating a comfort zone for teaching mathematics grades 9-12 /

Small, Marian. Lin, Amy.

Toronto, ON: Nelson, 2011.

Subjects: Mathematics – Study and teaching (Secondary).

Summary: This resource provides suggestions to secondary level teachers on how to teach the curriculum while focusing on the big ideas of mathematical concepts. By considering the big ideas when planning instruction and assessment, students are able to relate the new knowledge to previously learned concepts.



510.7 C456

Changing the faces of mathematics : perspectives on Indigenous people of North America /

Hankes, Judith Elaine. Fast, Gerald R.

Reston, VA: NCTM, 2002.

Subjects: Mathematics – Study and teaching – Social aspects. Indians of North America – Education. Mathematical ability.

Summary: This resource is a collection of essays related to teaching mathematics in a culturally relevant way to First Nations people of North America. Examples include suggestions for teaching numbers and operations concepts using traditional games, and for introducing students to a variety of number systems specific to North American First Nations people.



510 C597

Constructive assessment in mathematics : practical steps for classroom teachers / Clarke, David.

Berkeley, CA: Key Curriculum Press, 1997.

Subjects: Mathematics – Study and teaching. Mathematics – Textbooks. Mathematics – Examinations. Mathematical ability – Testing.

Summary: Reinforcing the central purpose for assessing students, the three parts of this resource expand upon how assessment can foster student learning by valuing their strengths and identifying concepts not yet mastered. Integrating assessment into teaching and instruction, the selection and implementation of assessment strategies, and communicating assessment information to educational partners are addressed.

516 J17

Geometry : seeing, doing, understanding (3rd ed.) / Jacobs, Harold R.

New York, NY: W.H. Freeman and Co., 2003.

Subjects: Geometry.

Summary: Jacobs allows students to use guided discovery to develop geometric intuition. The text includes examples and exercises that are relevant to students. Students will use inductive and deductive reasoning through the study of geometry. Jacobs has structured the materials so that students discover the ideas for themselves.

510 S244

Introducing mathematics / Sardar, Ziauddin. Van Loon, Borin.

New York, NY: Icon Books, 1999.

Subjects: Mathematics – Popular works.

Summary: This learning resource traces the history of mathematics in comic strip format. The authors describe the discoveries and concepts from mathematicians of the ancient world to modern times. Mathematical topics such as geometry, calculus, number systems, and statistical reasoning are also explored.

510.71 N277

Mathematics assessment : a practical handbook for grades 9-12 / Greer, Anja S.

Reston, VA: NCTM, 1999.

Subjects: Mathematics – Study and teaching (Secondary) – Evaluation.

Summary: This resource considers new ways to assess students, focuses on assessment tasks, offers ways to plan and conduct a classroom assessment program, and discusses the scoring, grading, reporting, and use of assessment data. The editors provide opportunities for teachers to reflect on their teaching practice and how they use mathematical assessment in the classroom.



510 M147

Mathematics : making financial decisions 11 : student textbook / Brosseau, Jeff.

Toronto, ON: McGraw-Hill, 2001.

Subjects: Business mathematics – Textbooks. Finance, Personal – Mathematics. Mathematics – Textbooks.

Summary: This student-based resource provides current investigations in consumer mathematics. The real-world examples and applications contain Canadian content. The chapters focus on budgeting, interest annuities, mortgages, and exponential growth. Throughout the resource, sets of discussion problems and accompanying case studies provide an authentic learning context for applying the learned concepts.



793.74 P597

The mathematics of Oz : mental gymnastics from beyond the edge / Pickover, Clifford A.

New York, NY: Cambridge University Press, 2002.

Subjects: Mathematical recreations.

Summary: Dorothy must solve an array of brainteasers in order to escape the clutches of her abductors, a group of mathematically obsessed aliens. Each short chapter is a mathematical adventure in which Dorothy is presented with a mystery, a puzzle, or a problem to solve. The author rates the problems in terms of difficulty.

MathWorks 12



510 M433

MathWorks 12 : student resource / Angst, Cheryl. Borgen, Katharine.

MathWorks 12 : teacher resource / Angst, Cheryl. Borgen, Katharine.

Vancouver, BC: Pacific Educational Press, 2012.

Subjects: Mathematics – Study and teaching (Secondary).

Summary: The student text consists of eight chapters. Each chapter includes a project where students apply the mathematical concepts in a real-world scenario. Profiles of Canadians highlight the importance of math in the workplace and math is specifically used in a selection of jobs. Other features include mental math and estimation, building skill levels, extending thinking, and reflecting on learning. The teacher's guide includes teaching strategies, complete worked solutions, alternate solutions, sample chapter tests, graphic organizers, blackline masters, and ideas for assessment.

Navigations Series



512 N325

Navigating through algebra in grades 9-12 / Burke, Maurice Joseph.

Reston, VA: NCTM, 2001.

Subjects: Algebra – Study and teaching (Secondary).

Summary: This book focuses on algebra as a language of process, expands the notion of variable, develops ideas about the representation of functions, and extends students' understanding of algebraic equivalence and change. In the activities, students apply properties of functions by using median salary data, explore the meaning of equivalent equations, and use recursive or iterative forms to represent relationships.



516.0071 N325

Navigating through geometry in grades 9-12 / Day, Roger.

Reston, VA: NCTM, 2001.

Subjects: Geometry – Study and teaching (Secondary).

Summary: This book concentrates on topics such as the use of transformations, coordinates and matrices, and congruence and similarity. Activities that take students through geometric tasks require some use of technology, including interactive geometry software and a calculator or a computer with software that produces geometric images and graphs. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



510.712 N325

Navigating through measurement in grades 9-12 / Burke, Maurice J.

Reston, VA: NCTM, 2005.

Subjects: Measurement – Study and teaching (Secondary). Geometry – Study and teaching (Secondary).

Summary: Throughout history, the need for more sophisticated measurements has led to the discovery of more sophisticated mathematics. This book highlights this important idea in activities that help students explore an array of measurement strategies and techniques. Investigations probe ancient methods for performing such tasks as measuring the speed of ships at sea and estimating the distance of the sun from the earth. Students apply simple formulas to measure complex shapes, explore iterative processes that lead to measurement formulas, and develop an original formula for measuring the size of a tree. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



510.712 N325

Navigating through number and operations in grades 9-12 / Burke, Maurice J.

Reston, VA: NCTM, 2006.

Subjects: Geometry – Study and teaching (Secondary). Measurement – Study and teaching (Secondary).

Summary: This book's activities probe rational and irrational numbers and investigate properties of integers and complex numbers. They explore numbers and operations embedded in physical objects and show how simple problems can lead to sophisticated considerations. Students examine the usefulness of irrational numbers in designing musical scales and of prime numbers in devising encryption schemes, for example, and they discover powerful ideas from graph theory in a concrete context of dikes, towers, and enclosed regions. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.



519.2 N325

Navigating through probability in grades 9-12 / Bright, George W.

Reston, VA: NCTM, 2004.

Subjects: Mathematical statistics – Study and teaching (Middle school). Probabilities – Study and teaching (Middle school).

Summary: This book assists high school teachers in honing their students' thinking by introducing them to two approaches to probability and exploring both approaches in real-world contexts. The first approach, which interprets probability as relative frequency over the long run, uses actual or simulated data from many experiments to arrive at empirical probabilities. The second approach analyzes outcomes abstractly to arrive at theoretical probabilities. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.

510.71 K17

Out of the labyrinth : setting mathematics free / Kaplan, Robert. Kaplan, Ellen
New York, NY: Oxford University Press, 2007.

Subjects: Mathematics – Study and teaching.

Summary: Written as a guide for parents and educators, this book argues that math should be taught as the highest form of intellectual play rather than as a step-by-step acquisition of skills and facts. The authors emphasize that math is meant to be explored and savoured, and that it does not require special talent or ability.



510.76 J67

Problem solving strategies : crossing the river with dogs and other mathematical adventures (2nd ed.) / Johnson, Ken. Herr, Ted.

Problem solving strategies : crossing the river with dogs and other mathematical adventures (2nd ed.) : **instructor's resource book** / Johnson, Ken. Herr, Ted.

Emeryville, CA: Key Curriculum Press, 2001.

Subjects: Problem solving. Mathematics.

Summary: This resource is designed to demonstrate various methods that can be used to solve the same problem. Each chapter concentrates on the application of a particular strategy. The corresponding sets of problems provide a multitude of authentic applications for this strategy. The importance of students communicating their different solutions and their logical reasonings are stressed throughout this resource. The accompanying instructor's resource book and answer key supplements this resource.

510 G553

Real-life math : everyday use of mathematical concepts / Glazer, Evan M. McConnell, John W.
Westport, CT: Greenwood Press, 2002.

Subjects: Mathematics.

Summary: This book is a reference guide promoting real-world connections to nearly 50 mathematical concepts. It provides background explanations and many examples of concept applications, although descriptions of how to perform the calculations are not included.

510.712 T253

Teaching mathematics through problem solving : grades 6-12 / Schoen, Harold L. (Ed.).
Reston, VA: National Council of Teachers of Mathematics, 2003.

Subjects: Mathematics – Study and teaching (Secondary). Problem-based learning.

Summary: This volume is a professional research-based resource that promotes a problem-solving approach to mathematics instruction. This approach engages students in making sense of problematic tasks in which mathematical concepts are embedded. The writers address issues and perspectives related to this approach, provide suggestions on how to select and use appropriate tasks and learning tools, and provide examples of the use of this approach in various classroom settings.

510.71 R795

Uncovering student thinking in mathematics : grades 6-12 / Rose, Cheryl M. Arline, Carolyn.

Thousand Oaks, CA: Corwin, 2008.

Subjects: Mathematics – Study and teaching (Middle school). Mathematical ability – Testing.

Summary: The authors provide 30 formative assessment probes to reveal common understandings and misunderstandings in student thinking. This book: discusses standards, research results, and practical craft knowledge; describes the purpose, structure, and development of mathematics assessment probes; helps teachers build on students' current understandings while addressing their identified difficulties; and offers examples of the faulty thinking students are likely to exhibit and typical obstacles they may encounter.



Saskatchewan Teachers' Federation
2317 Arlington Avenue
Saskatoon SK S7J 2H8
Telephone: 306-373-1660 or 1-800-667-7762
Facsimile: 306-374-1122
Email: src@stf.sk.ca Website: www.stf.sk.ca