

Western and Northern Canadian Protocol (WNCP) Revisions to the K-12 Common Curriculum Framework

Western and Northern Canadian Protocol (WNCPP)

- WNCPP is a partnership between the Education Ministries in AB, BC, MB, NT, NU, SK and YT
- Formed to make “optimum use of limited educational resources”
- Primary mandate “to cooperate on matters relating to the basic education for students from kindergarten to grade 12”
- WNCPP projects: Aboriginal Language and Culture, English Language Arts, International Languages, Social Studies and Mathematics
- WNCPP Common Curriculum Framework (CCF) for Mathematics published in two documents:
 - 1995 – Kindergarten to Grade 9
 - 1996 – Grades 10 to 12

Common Issues Driving K-12 Mathematics CCF Revision

- Current CCF had been in effect for approximately 10 years and stakeholder feedback indicated a need to address issues as a collective including:
 - Too much content for allotted instructional time
 - Significant research has been done regarding the teaching and learning of mathematics since 1996
 - Post-secondary acceptance of secondary courses
 - Transitions between grades

K-12 Mathematics CCF Revision

- WNPCP partners initiated review of the Mathematics CCF in 2003
- Research phase for revision was completed in April 2004 suggesting the CCF:
 - Teach fewer topics in more depth
 - Group outcomes that address similar concepts
 - Avoid outcomes that are not mathematical or addressed in other subjects
 - Clarify outcome wording and provide a means allowing for better interpretation of the outcomes
 - Increase focus on early numeracy
 - Introduce pre-algebra earlier
 - Introduce some topics later
 - Ensure the flow of concept development
 - Use terminology consistently

WNCP K-9 CCF Revision Timelines

- Revision of K-9 Mathematics outcomes began in September 2004
- K-9 Consultation Draft and on-line survey posted on WNCP web site (www.wncp.ca) January 25, 2005
- Consultations within each jurisdiction on proposed changes to the K-9 CCF will occur between January and April 2005
- Revised K-9 CCF to be signed-off by June 2006, allowing for alignment with revisions to grades 10 to 12 to facilitate a smooth transition from the revised K-9 CCF to the revised 10-12 CCF

WNCP Grades 10-12 CCF Revision Timelines

- WNCP partners are seeking input from post-secondary institutions as well as business and industry on the mathematical attitudes, skills and competencies necessary for students to better make smooth transitions from secondary mathematics studies to post-secondary programs and the world of work
- Final report to be completed in May 2005
- Revision to the grades 10-12 CCF to begin in June 2005
- Consultations with teachers and other educational stakeholders to occur starting in 2006

K-9 CCF Overview of Changes

- Philosophical base of the curriculum remains the same with a focus on the seven mathematical processes (Communication, Connections, Estimation and Mental Mathematics, Problem Solving, Reasoning, Technology, Visualization)
- Reduction in content to facilitate more in-depth study of topics
- Illustrative Examples are replaced with Achievement Indicators
- Achievement Indicators are brief statements of what students should know and be able to do if they have obtained an acceptable understanding of a given outcome
- Achievement Indicators to be included in the final draft for each strand

Overview of changes – Number

- Number Concepts and Number Operations combined into one strand - Number
- Increased focus on early numeracy and number sense
- Use of coins and money to develop number concepts
- Increased emphasis on mental mathematics, estimation and on referents and benchmarks
- Fractions introduced later
- Less emphasis on formal algorithms in early grades and more emphasis on using personal strategies to develop understanding
- Use of calculators not prescribed until later (grade 4)

Overview of changes – Patterns

- Includes numerical and non-numerical repeating and growing patterns
- Increased linkages between patterns and algebra concepts

Overview of changes – Variables and Equations

- “Pre-algebra strategies” begin much earlier (grade 1)
- Greater emphasis on the concepts of equality and inequality
- Introduce variables earlier (first as symbols then as letters)
- Begin to write and solve equations earlier
- Factoring of polynomials moved to grades 10-12

Overview of changes – Relations and Functions

- No outcomes in K-9, this is not a change from the current CCF

Overview of changes – Measurement

- Focus on the concept of measurement in early years
- More in-depth study of topics and more explicit connections to other strands (area and multiplication)
- Use of referents emphasized
- Money outcomes moved to the number strand
- Temperature outcomes removed
- Development of the concept of “unit”
- Restricted units to those commonly used

Overview of changes – 3-D Objects and 2-D Shapes

- Narrower focus at each grade
- Study of specific shapes and objects placed in specific grades
- Removed optical illusions

Overview of changes – Transformations

- Transformations start in grade 4 instead of kindergarten to allow more time for study of number
- Tessellations start in grade 8 instead of grade 5
- Removed planes of symmetry, coloring and route problems, and terms of direction

Overview of changes – Data Analysis

- Less repetition from grade to grade resulting in reduction of outcomes
- Outcomes begin in grade 2 to allow more time to study number in K-1
- Moved scatterplots and lines of best fit to grades 10-12
- Deleted box and whisker plots

Overview of changes – Chance and Uncertainty

- Chance and Uncertainty starts in grade 5 instead of grade 1 to reduce repetition and allow more time for study of number

WNCP Authorized Mathematics Resources

- A Call for Resources to support the revised CCF will be issued as soon as possible to ensure that resources are available to support the implementation of the revised CCF

For Further Information Contact

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