Choosing Resources

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The new *Program of Studies for Mathematics K–9* was signed by the Minister of Education, in April 2007. Optional implementation for K and Grades 1, 4, and 7 began in September 2007, with mandatory implementation to follow a year later. The program of studies is available on the government website at www.education.gov.ab.ca/k_12/curriculum/bysubject/math/Kto9Math.pdf (accessed April 15, 2008).

The new program of studies is significantly different from the one that preceded it. Some estimates say that more than 50 per cent of the program is new in content, grade assignment or both. This means that resources that matched the old program do not match the new one.

Successful implementation of the new mathematics curriculum depends on teacher knowledge and strong resources that support appropriate teaching of the curriculum outcomes, concepts and skills. Teacher knowledge should be addressed through widely available professional development and through support provided in the authorized resources.

During the past few years many schools have purchased unauthorized resources that do not cover all the objectives of the program of studies and that, therefore, may have an inappropriate approach. In addition, they do not provide the required context, problem solving and support for teacher learning.

Soon schools and school districts will be choosing new resources for the new curriculum. Many of you will be asked for your input. What are the criteria that you should use in making your decision?

The first and most important criterion is to select a WNCP- and Alberta-authorized resource. These resources have been assessed as being a perfect match to the program of studies. In the Learning Resources Centre catalogue, these resources have an Alberta flag and WNCP symbol in the provincial status column. They also have a publication date of 2007 or later. One of the authorized resources also has a warning that it does not adequately address problem solving. Schools would be ill-advised to select such a limited resource.

When you have narrowed down your choices to authorized resources, what questions should you ask so that you can make a final decision? An excellent resource not only covers curriculum objectives but also promotes understanding and a positive attitude to mathematics. It includes contexts that are relevant to young learners and problems that are engaging. The following questions, taken from the MCATA brochure on mathematical literacy, may help you make your final choice.

Do the textbooks and other resources

- use models and demonstrations that support conceptual understanding?
- model multiple solution paths for both students and teachers?
- require the justification of answers and processes?
- require students to understand concepts and explain their thinking in order to do well on assessment tasks?
- suggest ways to have students share their reasoning and communicate their work in different ways?
- provide opportunities for students to work on problems that are engaging and interesting to them?
- include activities that require the critiquing of real-world mathematical information?
- include mathematical situations and tasks that would be encountered in everyday life?
- provide explicit suggestions for links to other subject areas?
- provide support for teachers to help students to learn to think rather than focus on procedures?
- suggest explicit ways for teachers to build students' confidence in mathematics?
- provide tasks based on the diverse ways that students learn mathematics?
- contain tasks based on sound and significant mathematics?
- provide practice in context such as investigating significant problems, exploring mathematical patterns or developing game strategies?
- use technology in ways that expand what the student is able to understand and do?

If the resources that you are considering meet all or most of these criteria, you can be confident that they will support you and your students as you work together on the new program of studies.