Instructional Focus

Learning in Mathematics is richer and more engaging when instruction and assessment develop a direct relationship between conceptual and procedural understanding. Students should be engaged in making connections among concepts both within and across topics to make mathematical learning experiences meaningful.

Teachers should consider the following points when planning for instruction and assessment.

- Outcomes need to be organized into units of study. Each course suggests at least one possible order but teachers need to decide which order works best in their unique context.
- The mathematical processes that are identified with the outcome are intended to help teachers select effective pedagogical approaches for the teaching and learning of the outcome.
- All seven mathematical processes must be integrated throughout teaching and learning approaches, and should support the intent of the outcomes.
- Wherever possible, meaningful contexts should be used in examples, problems, and projects.
- Instruction should flow from simple to complex and from concrete to abstract.
- Students are expected to have consistent access to technology for all mathematics courses.
- The assessment plan for the course should be a balance of assessment *for* learning, assessment *as* learning and assessment *of* learning.
- The assessment plan for the course should be a balance of multiple assessment tools including:
  - assignments
  - journal entries
  - performance tasks
  - portfolios
  - projects
  - quizzes
  - tests
- Positive, timely, descriptive feedback should be used to allow students to deepen their understanding of the mathematical concepts, and processes.
- Teachers should organize reports about learning in Mathematics by outcome rather than by assessment tool to show a profile of student strengths and challenges. Grading should reflect achievement of the outcomes, separate from effort, participation, or attitude.

The focus of student learning should be on developing a conceptual and procedural understanding of mathematics. Students' conceptual understanding and procedural understanding must be directly related.