

Planning Guide

for Effective Mathematics Learning, Teaching, and Assessment over a 5-day cycle

Step #1

Know your learners, and

Know the learning

View the new learning from the eyes of the learner.

- What prior knowledge, understanding, and skills do your students bring to the new learning? (curriculum from previous grades)

What do you bring to the learning? Before beginning teaching and learning of math, reflect on your own knowledge and experience with the particular math concept, both as a student and a teacher. How does this translate to the vision for the learner?

Step #2

Plan for responsive and differentiated assessment and instruction

Unpack what students will need to know and be able to do (grade-specific curriculum). This will prepare you to co-develop success criteria and offer descriptive feedback.

- What is important to understand?
- What are the skills being developed?
- What strategies help you to be proficient with these skills?
- How can the learning be applied to practical, authentic situations?
- What does it look and sound like in action?
- How do you know when you are successful with this learning?
- How do you use this learning?

Think about how you can build opportunities into the lesson sequence to monitor the learning.

- What will help you to know that your students are “getting it”?



Step #3

Facilitate, assess and respond in a co-learning environment

Honours student voice

Multiple entry points for equitable participation

Multiple opportunities and ways to learn and demonstrate learning

Errors and failed attempts are seen as learning opportunities

Encourages risk-taking

Provides explicit instruction and support for learning how to learn

Timely, descriptive feedback

Transparency about what successful learning looks like through co-construction of success criteria

Values multiple ways of thinking

Culturally relevant

Cognitively challenging tasks and learning opportunities

Community of Math Learners

Student-centred Instruction and Assessment

Rooted in the Ontario Mathematics curriculum and Growing Success

Develops conceptual understanding

Connection of learning across strands and subjects

Linked to real-world experiences and applications

Evokes mathematical thinking and application of conceptual and procedural knowledge set out in the curriculum

Encourages students to pose new problems and discuss solutions

Responsive to learning needs

Activates and builds on learners' existing knowledge and skills

Promotes models, tools, and representations to explore concepts, make connections and communicate thinking

Embeds mathematical processes as essential aspects of learning and teaching

Step #4

Reflect on impact of assessment and instruction to determine next steps

- Who needs more time and support with these ideas?
- Where does this learning fit with upcoming lesson sequences?
- What is the next step in the learning related to this lesson sequence?
- Where can I make connections to this learning?

Step 1.	Reflection: What should my students currently understand and do?		What do my students need to learn?		Where are the students headed with this learning?	
	What is the previous learning that my students have had related to this concept? What should my students be able to do now?		What mathematical knowledge and skills will be addressed in this sequence? Is this learning connected to other concepts learning this year?		How does this learning connect to what my students will learn next year?	
Know the learner.						
Know the learning.	What do I want my students to know and be able to do after this sequence of lessons? How will I know that my students have learned?		LEARNING GOALS		SUCCESS CRITERIA	
Step 2. Plan for Instruction and Assessment	Building understanding of math concepts		Working towards proficiency with facts, skills, procedures		Creating engagement in the mathematical processes	
	What do I want my students to understand through this learning? How can they show me that they understand?		What proficiencies should my students be developing related to this learning? How will I know my students are becoming proficient?		How will I engage my students in doing the math? What mathematical models/tools can support this learning? What computational strategies are being developed? What mathematical language/conventions are important? How will students learn about and monitor their thought processes related to this learning?	
					Providing opportunities for reflecting on, monitoring and working towards goals	
					Fostering positive dispositions towards mathematics	
	What strategies will support students in monitoring their own learning? How will I have students make their own goals related to this learning?				What prior learning can I activate ? What authentic connections can I make? What will build math confidence? How can I help students to appreciate mathematics with this learning?	
Step 3. Instructional Strategies for co-learning	Problem Solving What scenarios will engage students in the math?		Direct Instruction Is there something about this concept that I must help students to name? e.g., properties Are there connections that I need to draw attention to?		Guided Investigation How can I help students to discover the curriculum?	
					Independent Practice What will be meaningful practice?	

