Chapter 4 Planning Chart: Patterns and Relationships
Cross-Curricular Competency: Achieves his/her potential. Recognizing and stating patterns is a challenging skill. The lessons in this chapter provide students with opportunities to improve their pattern-related skills and become increasingly better math students and thinkers.
Broad Area of Learning: Citizenship and Community Life. Questions 11 and 12 in Lesson 4 present contexts for discussion of helping others in one's community.

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
Getting Started: Finding Calendar Patterns, pp. 120–121			Assessment Opportunity In Question 7, change "scatter plot" to "graph".
Lesson 1: Exploring Number Patterns, p. 122	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic)	
Math Game: Nim, p. 123	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic)	Optional
Lesson 2: Applying Pattern Rules, pp. 124–127	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic)	
Mental Imagery: Folding Squares, p. 127			Optional
Lesson 3: Using a Table of Values to Represent a Sequence, pp. 128–131	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic)	
Mid-Chapter Review: pp. 132–133			Assessment Opportunity
Lesson 4: Solve Problems Using a Table of Values, pp. 134–137	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic)	
Lesson 5: Using a Scatter Plot to Represent a Sequence, pp. 138–141	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic) *Algebra* • Overall representation of a situation by means of a graph	Throughout lesson, change all references to "scatter plot" to "graph".

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
Curious Math: The Fibonacci Sequence, p. 142	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic)	Optional
Chapter Self-Test: p. 143			Self-Assessment Opportunity Change all references to "scatter plot" to "graph".
Chapter Review: pp. 144–145			Assessment Opportunity Change all references to "scatter plot" to "graph".
Chapter Task: Design a Beaded Necklace, p. 146	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic) *Algebra* • Overall representation of a situation by means of a graph	Assessment Opportunity Change reference to "scatter plot" in prompt C to "graph".
Math in Action: Games Designer, pp. 147–148	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties	*Arithmetic: Different Ways of Writing and Representing Numbers* • Using a variety of representations (e.g. numerical, graphic) *Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation* • Mental computation: the four operations, especially with numbers written in decimal notation, using equivalent ways of writing numbers and the properties of operations • Written computation: the four operations involving numbers that are easy to work with (including large numbers) and sequences of simple operations performed in the proper order (numbers written in decimal notation), using equivalent ways of writing numbers and the properties of operations	Optional