2nd Class *Maths and Me* Progression Continua Overview

This document outlines the Learning Experiences for each of the Strand Units for progression milestone (f), and where they are covered in *Maths and Me*.

Algebra > Patterns, Rules and Relationships

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Explores and records a broad range of patterns in a hundred square. (U&C)	**Unit 8** Addition and Subtraction 2, Lesson 2 **Unit 11** Patterns, Lesson 4
Explores patterns and numerical relationships in addition and subtraction facts up to at least 20. (U&C)	**Unit 2** Addition and Subtraction 1, Many lessons **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons
Describes quantitative change in growing and shrinking patterns. (C)	**Unit 11** Patterns, Lesson 3
Describes a rule for a pattern that refers to a relationship between each term and its position. (For example: the second figure has 1 square and 2 triangles, so the fifth has 5 squares and 10 triangles). (C)	**Unit 11** Patterns, Many lessons
Recognises and describes patterns that emerge in the addition and subtraction of odd/even numbers. (C)	**Unit 2** Addition and Subtraction 1, Lesson 3 **Unit 11** Patterns, Lesson 4
Represents patterns using manipulatives, illustrations and diagrams. (C)	**Unit 11** Patterns, Many lessons
Establishes the relationship between numbers and their position in a hundred square. (R)	**Unit 8** Addition and Subtraction 2, Lesson 2 **Unit 12** Addition and Subtraction 3, Lesson 5
Applies the rules that govern growing and shrinking patterns to extend to next terms, and to predict future values. (R)	**Unit 11** Patterns, Lesson 3
Building on examples of numbers below 100, generalises number rules (For example: even numbers end in 0, 2, 4, 6, or 8 no matter how big the number is). (R)	**Unit 11** Patterns, Lesson 4
Draws from patterns and properties to derive unknown number facts from core facts, (For example: doubles, multiples of 10). (A&PS)	**Unit 2** Addition and Subtraction 1, Lesson 4, 8 **Unit 8** Addition and Subtraction 2, Lesson 1, 6 **Unit 12** Addition and Subtraction 3, Lesson 5
Investigates and applies a function to a sequence of numbers (For example: add 2). (A&PS)	**Unit 11** Patterns, Lesson 3

Algebra > Expressions and Equations

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Explores multiple structures for number sentences (For example: c=a+b / a+b=c). (U&C)	**Unit 2** Addition and Subtraction 1, Lesson 1 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 18** Number Sentences, Lesson 1

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Investigates and tests the 'trueness' of number sentences. (U&C)	**Unit 18** Number Sentences, Lesson 1
Breaks pattern into component parts and compares how each term changes as the pattern progresses. (U&C)	**Unit 11** Patterns, Many lessons
Uses a symbol or picture to represent an unknown value in a number sentence. (C)	**Unit 4** Data 1, Many lessons **Unit 16** Data 2, Many lessons **Unit 18** Number Sentences, Lesson 3
Translates verbal problems involving addition and subtraction of increasing complexity into written number sentences or expressions [and vice versa]. (C)	**Unit 2** Addition and Subtraction 1, Lesson 1 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 18** Number Sentences, Lesson 4 **Unit 19** Addition and Subtraction 4, Many lessons
Recognises that symbols can also be used to stand for or represent a variable which can be known or unknown, and which can include a range of values (For example: Peter's age = my age + 6). (R)	**Unit 4** Data 1, Many lessons **Unit 16** Data 2, Many lessons **Unit 18** Number Sentences, Lesson 3
Solves a problem to determine an unknown value. (A&PS)	**Unit 2** Addition and Subtraction 1, Many lessons **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 18** Number Sentences, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Applies addition and subtraction facts to find an unknown value. (A&PS)	**Unit 2** Addition and Subtraction 1, Many lessons **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 18** Number Sentences, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons

Data and Chance > Data

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Explores and recognises the relationship between different ways of representing same data (For example: using tables, charts and graphs). (U&C)	**Unit 16** Data 2, All lessons
Recognises and identifies where data symbols represent multiple values. (U&C)	**Unit 4** Data 1, Lesson 3 **Unit 16** Data 2, Lesson 3
Represents and displays data using simple tables, graphs and charts, and interprets results and draws conclusions. (C)	**Unit 4** Data 1, All lessons **Unit 16** Data 2, All lessons
Designs symbols to represent multiple information or values on a data display. (C)	**Unit 4** Data 1, Lesson 3 **Unit 16** Data 2, Lesson 3, 4
Critically analyses the nature and objectivity of simple data sets. (R)	**Unit 4** Data 1, Lesson 2 **Unit 16** Data 2, Lesson 2 and many lessons
Checks and evaluates the accuracy and reasonableness of own methods of data collection and representations. (R)	**Unit 4** Data 1, Lesson 4 **Unit 16** Data 2, Lesson 4

Refines own methods. (R)	**Unit 4** Data 1, Lesson 4 **Unit 16** Data 2, Lesson 4
Applies an investigation cycle of problem-posing, planning, data gathering, representation, analysis and conclusion. (A&PS)	**Unit 4** Data 1, Lesson 4 **Unit 16** Data 2, Lesson 4
Compares two data values and/or samples involving themselves. (A&PS)	**Unit 4** Data 1, Lesson 1 **Unit 16** Data 2, Lesson 1

Data and Chance > Chance

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Uses examples of everyday situations to talk about the likelihood of events happening and use the language of chance and probability. (C)	**Unit 4** Data 1, Many lessons **Unit 16** Data 2, Many lessons

Measures > Measuring

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Identifies base units for length [metre], weight [kilogram], capacity [litre] and area [square metre]. (U&C)	**Unit 10** Measuring 1, Many lessons **Unit 13** Measuring 2, Lesson 2, 4 **Unit 17** Measuring 3, Lesson 3
Compares the measurements of objects using the same base unit (For example: comparing the lengths of objects relative to a metre stick). (U&C)	**Unit 10** Measuring 1, Lesson 3 **Unit 13** Measuring 2, Lesson 5 **Unit 17** Measuring 3, Lesson 2
Discusses and records estimations and measurements using appropriate base units and symbols. (C)	**Unit 10** Measuring 1, Lesson 1, 2 **Unit 13** Measuring 2, Lesson 2, 4 **Unit 17** Measuring 3, Lesson 3
Make comparative statements or judgements. (C)	**Unit 10** Measuring 1, Lesson 3 **Unit 13** Measuring 2, Lesson 5 **Unit 17** Measuring 3, Lesson 2
Estimates using base units with increasing accuracy. (R)	**Unit 10** Measuring 1, Many lessons **Unit 13** Measuring 2, Many lessons **Unit 17** Measuring 3, Many lessons
Evaluates the reasonableness of measurements with reference to estimations and personal benchmarks. (R)	**Unit 10** Measuring 1, Lesson 1, 2 **Unit 13** Measuring 2, Lesson 7 **Unit 17** Measuring 3, Lesson 1
Uses base units and appropriate instruments to solve rich practical tasks and problems involving measurement. (A&PS)	**Unit 10** Measuring 1, Many lessons **Unit 13** Measuring 2, Lesson 7 **Unit 17** Measuring 3, Many lessons
Devises strategies to measure the attributes of a wide range of objects. (A&PS)	**Unit 10** Measuring 1, Many lessons **Unit 13** Measuring 2, Lesson 1, 3 **Unit 17** Measuring 3, Lesson 1

Measures > Time

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Recognises the relationship between analogue and digital forms. (U&C)	**Unit 5** Time 1, Many lessons **Unit 14** Time 2, Many lessons
Recognises and expresses time in half and quarter hours on analogue and digital clocks. (U&C)	**Unit 5** Time 1, Lesson 4, 5, 6 **Unit 14** Time 2, Many lessons
Demonstrates understanding of am and pm. (U&C)	**Unit 14** Time 2, Lesson 1
Reads and records time in one-hour, half-hour and quarter-hour intervals on analogue and digital clocks. (C)	**Unit 5** Time 1, Lesson 4, 5, 6 **Unit 14** Time 2, Many lessons
Reads day, date and month using calendar and identifies the season. (C)	**Unit 5** Time 1, Lesson 3
Explores different ways of presenting time using a variety of strategies (For example: using open number lines or empty clock faces). (C)	**Unit 5** Time 1, Many lessons **Unit 14** Time 2, Lesson 2
Investigates and discusses calendar patterns and characteristics of months and seasons. (R)	**Unit 5** Time 1, Lesson 3
Estimates and compares lengths of elapsed time. (R)	**Unit 5** Time 1, Lesson 2 **Unit 14** Time 2, Lesson 2
Matches and orders equivalent expressions of time (For example – as represented on analogue and/ or digital clocks, converts times where useful.) (R)	**Unit 5** Time 1, Lesson 1 and Many lessons **Unit 14** Time 2, Many lessons
Sequences time given on different time devices. (A&PS)	**Unit 5** Time 1, Lesson 1 **Unit 14** Time 2, Many lessons
Analyses and creates timetables and calendars. (A&PS)	**Unit 5** Time 1, Lesson 3 **Unit 14** Time 2, Lesson 3

Measures > Money

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Recognises, exchanges and uses coins up to the value of €2. (U&C)	**Unit 15** Money, Lesson 1, 4 and Many lessons
Records calculations of money as number sentences. (C)	**Unit 15** Money, Lesson 6, 7
Represents and records amounts of money in decimal form of euro. (C)	**Unit 15** Money, Lesson 3
Makes and justifies conjectures about combinations of coins/ amounts. (R)	**Unit 15** Money, Lesson 4
Selects appropriate mental strategies for calculation and estimation depending on context. (R)	**Unit 15** Money, Lesson 2
Renames amounts of euro and cent. (R)	**Unit 15** Money, Lesson 3

Selects and uses a range of mental strategies to calculate amounts; identify coins required; determine change from a transaction. (A&PS)	**Unit 15** Money, Lesson 4, 5, 6, 7
Calculates simple bills and the number of items that can be bought with a given sum. (A&PS)	**Unit 15** Money, Lesson 6

Number > Numeration and Counting

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Counts combinations of wholes and parts (For example: 3 wholes and 4 halves make 5). (U&C)	**Unit 3** Fractions, Lesson 6
Counts with fractional parts forwards and backwards (For example: in halves between 0 to 10). (U&C)	**Unit 3** Fractions, Lesson 6
Demonstrates ability to count forward and backwards in 100s. (U&C)	**3rd Class Unit 1** Numbers to 1,000, Lesson 1
Represents numbers up to at least 100 using different models, illustrations and number expressions. (C)	**Unit 1** Numbers to 100, Lesson 3 **Unit 7** Numbers to 200, Lesson 3 **Unit 4** Data 1, Many lessons **Unit 16** Data 2, Many lessons
Describes mental strategies used to count or compute. (C)	**Unit 1** Numbers to 100, Lesson 1 **Unit 2** Addition and Subtraction 1, Many lessons **Unit 7** Numbers to 200, Lesson 1 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Uses mental strategies to estimate and count quantities within at least 100. (R)	**Unit 1** Numbers to 100, Lesson 1 **Unit 7** Numbers to 200, Lesson 1
Explores a variety of counting and estimation strategies to support computation. (A&PS)	**Unit 1** Numbers to 100, Lessons 1 & 6 **Unit 7** Numbers to 200, Lesson 1 & 6 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons
Uses number lines, benchmarks numbers [5, 10, 100], and patterns to count forward and backwards. (A&PS)	**Unit 1** Numbers to 100, Lesson 2 **Unit 7** Numbers to 200, Lesson 2 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Solves problems using known number and property facts and knowledge of mental strategies. (A&PS)	**Unit 2** Addition and Subtraction 1, Lesson 8 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons

Number > Place Value and Base Ten

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Composes and decomposes the structure of 3-digit whole numbers up to at least 199. (U&C)	**Unit 1** Numbers to 100, Lesson 4 **Unit 2** Addition and Subtraction 1, Many lessons **Unit 7** Numbers to 200, Lesson 4
Identifies place value in 3-digit whole numbers up to at least 199, including zero as a placeholder. (U&C)	**Unit 1** Numbers to 100, Many lessons **Unit 7** Numbers to 200, Many lessons
Compares two 3-digit numbers up to at least 199, and represents the relationship between these numbers using symbols and language (For example: <, >, and =). (U&C)	**Unit 1** Numbers to 100, Lesson 5 **Unit 7** Numbers to 200, Lesson 5
Demonstrates an ability to estimate various arrangements or models of numbers to 199. (U&C)	**Unit 1** Numbers to 100, Lesson 4 **Unit 7** Numbers to 200, Lesson 4
Models and represents 3-digit numbers up to at least 199 in terms of hundreds, tens and ones. (C)	**Unit 1** Numbers to 100, Many lessons **Unit 2** Addition and Subtraction 1, Many lessons **Unit 7** Numbers to 200, Many lessons
Describes 3-digit numbers up to at least 199 in terms of hundreds, tens and ones. (C)	**Unit 1** Numbers to 100, Many lessons **Unit 2** Addition and Subtraction 1, Many lessons **Unit 7** Numbers to 200, Many lessons
Investigates the efficiency of different estimation strategies, including rounding numbers to the nearest ten or hundred. (R)	**Unit 1** Numbers to 100, Lesson 6 **Unit 7** Numbers to 200, Lesson 6
Orders 3-digit numbers up to at least 199. (R)	**Unit 1** Numbers to 100, Lesson 5 **Unit 7** Numbers to 200, Lesson 5
Explores place value in the context of numbers from 0–1. (R)	**3rd Class Unit 11** Decimals, Many lessons
Makes predictions and conjectures about the size of groups of objects to solve problems or play games. (A&PS)	**Unit 1** Numbers to 100, Many lessons **Unit 7** Numbers to 200, Many lessons

Number > Sets and Operations

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Explores addition and subtraction up to at least 199. (U&C)	**Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Practices repeated addition and group or skip counting. (U&C)	**Unit 1** Numbers to 100, Lesson 2 **Unit 4** Data, 1 Many lessons **Unit 7** Numbers to 200, Lesson 2 **Unit 16** Data 2, Many lessons
Uses inverse operations to check addition and subtraction calculations. (U&C)	**Unit 2** Addition and Subtraction 1, Lesson 6 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons

Subtracts numbers up to at least 199, with and without renaming. (U&C)	**Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Compares equivalent and non-equivalent sets. (U&C)	**Unit 1** Numbers to 100, Lesson 5 **Unit 4** Data 1, many Lessons **Unit 7** Numbers to 200, Lesson 5 **Unit 12** Addition and Subtraction 3, Many lessons **Unit 16** Data 2, Many lessons
Fluently recalls addition and subtraction facts [bonds] to at least 20. (C)	**Unit 2** Addition and Subtraction 1, Many lessons **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Lesson 3 **Unit 19** Addition and Subtraction 4, Many lessons
Uses symbols +, -, =, < and > to convey addition and subtraction facts. (C)	**Unit 2** Addition and Subtraction 1, Many lessons **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 18** Number Sentences, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Describes and records mental strategies for addition within 99. (C)	**Unit 2** Addition and Subtraction 1, Many lessons **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons
Records equivalent and non-equivalent sets up to 99 using <,> and =. (C)	**Unit 1** Numbers to 100, Lesson 5 **Unit 7** Numbers to 200, Lesson 5 **Unit 13** Measuring 2, Many lessons **Unit 15** Money, Lesson 5 **Unit 18** Number Sentences, Lesson 2
Uses a range of estimation strategies (For example – clustering, front-end estimation) routinely to check the reasonableness of a solution. (R)	**Unit 2** Addition and Subtraction 1, Lesson 6 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Applies and justifies the associative and zero properties to support calculations. (R)	**Unit 2** Addition and Subtraction 1, Lesson 4, 7 **Unit 8** Addition and Subtraction 2, Lesson 7
Develops strategies for efficient computation of addition and subtraction number facts. (R)	**Unit 2** Addition and Subtraction 1, Many lessons **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 19** Addition and Subtraction 4, Many lessons
Constructs number sentences and number stories to solve problems involving addition and subtraction within 199. (A&PS)	**Unit 2** Addition and Subtraction 1, Lesson 1 **Unit 8** Addition and Subtraction 2, Many lessons **Unit 12** Addition and Subtraction 3, Many lessons **Unit 18** Number Sentences, Lesson 4 **Unit 19** Addition and Subtraction 4, Many lessons
Solves multi-step problems involving addition and subtraction [using real-life contexts where appropriate]. (A&PS)	**Unit 13** Measuring 2, Lesson 6 **Unit 19** Addition and Subtraction 4, Many lessons

Number > Fractions

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Establishes and identifies quarters of sets. (U&C)	**Unit 3** Fractions, Lesson 2, 5
Explores the concept of equivalence between halves and quarters. (U&C)	**Unit 3** Fractions, Lesson 3
Discusses and explains relationship between 'related fractions' halves and quarters [fraction families]. (C)	**Unit 3** Fractions, Lesson 3
Explores different models to demonstrate understanding of simple equivalent fractions (For example: using number lines). (C)	**Unit 3** Fractions, Lesson 3
Explains multiple fractions as more than one part of a whole. (C)	**Unit 3** Fractions, Lesson 6
Justifies the ordering of fractions and whole numbers along a number line. (R)	**Unit 3** Fractions, Lesson 4
Investigates relationships between fractions using various models (For example: paper folding, clocks, games). (A&PS)	**Unit 3** Fractions, Many lessons
Uses knowledge of halves and quarters to solve problems involving sharing and combining given quantities. (A&PS)	**Unit 3** Fractions, Many lessons

Shape and Space > Spatial Awareness and Location

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Identifies and describes the location of an object using a grid system [the use of numbers and letters to identify an area] (For example: A6). (U&C)	**Unit 9** Location and Transformation, Lesson 2
Gives and follows directions involving turns and simple distances or landmarks in the context of simple plans/ grids maps/ aerial photos of familiar environments. (C)	**Unit 9** Location and Transformation, Lesson 3, 4
Records directions as a series of simple steps. (C)	**Unit 9** Location and Transformation, Lesson 4
Recognises the relationship between different modes of representing position and location (For example: birds-eye view versus street view). (R)	**Unit 9** Location and Transformation, Lesson 1
Analyses and evaluates representation [maps/plans] and directions for movement and refines for clarity and accuracy. (R)	**Unit 9** Location and Transformation, Lesson 4
Uses spatial relations to reason about other areas of mathematics (For example: identifying appropriate units for area measurement). (R)	**Unit 10** Measuring 1, Many lessons **Unit 13** Measuring 2, Many lessons **Unit 17** Measuring 3, Many lessons
Devises and analyses routes on maps, plans or grids that satisfy certain constraints (For example: the shortest route, no crossing roads, avoiding obstacles). (A&PS)	**Unit 9** Location and Transformation, Lesson 4

Explores grid references in the context of barrier games, or other playful activities. (A&PS)	**Unit 9** Location and Transformation, Lesson 2

Shape and Space > Shape

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Recognises square and non-square corners in the environment, identifying square corners as right angles, or a quarter of a turn. (U&C)	**Unit 9** Location and Transformation, Lesson 5
Dissects and/ or constructs 3-D shapes using modelling materials. (U&C)	**Unit 6** Shapes, Lesson 8
Represents classification of shapes according to common properties [number/type of sides/ faces, right angle corners or symmetry] using tables or diagrams (For example: using a two-way Carroll diagrams). (C)	**Unit 6** Shapes, Lesson 4, 6, 7
Conjectures and justifies about whether an unfamiliar shape belongs to a certain category. (R)	**Unit 6** Shapes, Lesson 1
Solves problems requiring the greatest or least number of 2-D shapes needed to compose a larger 2-D shape in a variety of ways. (A&PS)	**Unit 6** Shapes, Lesson 5
Solves tasks and problems involving technology / virtual manipulatives. (A&PS)	**Unit 6** Shapes, Lesson 5

Shape and Space > Transformation

Learning Experiences in Progression Continua (f)	*Maths and Me* 2nd Class
Discusses, models and visualises reflection, rotation and translation of shapes. (U&C)	**Unit 9** Location and Transformation, Lesson 3, 6, 7
Examines tessellations and identifies if shapes have been reflected, rotated and/or translated. (U&C)	**Unit 9** Location and Transformation, Lesson 8
Explores and creates simple tessellations. (U&C)	**Unit 9** Location and Transformation, Lesson 8
Completes missing reflections, of shapes or images. (C)	**Unit 9** Location and Transformation, Lesson 6
Use appropriate language and simple measures where appropriate to describe shape movement (For example: rotated through a quarter turn). (C)	**Unit 9** Location and Transformation, many lessons
Visualises and predicts how an object will look when rotated through a half or quarter turn. (R)	**Unit 9** Location and Transformation, Lesson 3
Reasons about alternative ways to perform the same transformation (For example: noting that rotating three- quarters of a turn clockwise is equivalent to a quarter turn anti-clockwise). (R)	**Unit 9** Location and Transformation, Lesson 3, 7
Manipulates models or materials (For example – tangrams,	**Unit 9** Location and Transformation, Many lessons

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pattern blocks, polyominoes) to make or create a structure or model. (A&PS)	
Explores tessellations where a single shape is repeated (how many different patterns can be created for a single repeating rectangle?) (A&PS)	**Unit 9** Location and Transformation, Lesson 8