

TABLE OF CONTENTS

HOW THIS MANUAL CAN BE USED	1
HOW TO PRESENT ELEMENTARY NOMENCLATURE MATERIAL	3
Activity 1: Matching Picture and Label Cards	4
Activity 2: Matching Picture, Label and Definition Cards	5
INTRODUCTION	7
FRACTIONS	9
Introduction	9
Understanding What Fractions Are	13
Background Information	13
Activity 1: Reviewing the Concept of Fractions	14
Activity 2: Putting Fractions in Order from a Whole to Tenths	16
Activity 3: Matching Fractions from a Whole to One Tenth	18
Activity 4: Matching Fractions from a Whole to One Tenth by Memory ..	20
Activity 5: Learning the Names of Fractions from a Whole to One Tenth	22
Activity 6: Making Fractions in Which the Numerator Is Greater than One	24
Writing Fractions and Finding Equivalences	26
Background Information	26
Activity 1: Understanding Written Fractions	27
Activity 2: Constructing Fractions to Match Fraction Tickets	29
Activity 3: Labeling Prepared Fractions	30
Activity 4: Learning to Write Fraction Symbols from 1/1 to 1/10	32
Activity 5: Learning and Writing Fraction Symbols up to 10/10	34
Activity 6: Finding Equivalences of Fractions	36
Adding and Subtracting Fractions	38
Background Information	38
Activity 1: Adding Fractions with the Same Denominator That Add Up to One or Less	41
Activity 2: Adding Fractions with the Same Denominator That Add Up to More than One	43
Activity 3: Introduction to Adding Fractions with Different Denominators	45
Activity 4: Subtracting Fractions with the Same Denominator	47

Activity 5: Introduction to Subtracting Fractions with Different Denominators	49
Multiplying and Dividing Fractions	51
Background Information	51
Activity 1: Multiplying Fractions by Whole Numbers	53
Activity 2: Dividing Fractions by Whole Numbers	55
Activity 3: Dividing Fractions by Whole Numbers when Equivalent Fractions Must Be Made First	57
 GEOMETRY	 60
Introduction	60
Points, Lines, Planes, and Solids	68
Background Information	68
Activity 1: Learning the Concepts of Point, Line, Plane, and Solid	71
Activity 2: Reviewing the Concepts of Point, Line, Plane, and Solid	73
Activity 3: Learning About Straight and Curved Lines	74
Activity 4: Studying the Parts of the Line	76
Activity 5: Learning About Horizontal, Vertical, and Oblique Lines	78
Activity 6: Understanding Relationships Between Lines: Parallel, Divergent, and Convergent Lines	81
Activity 7: Understanding Relationships Between Lines: Intersecting, Perpendicular, and Oblique Lines	85
Angles	88
Background Information	88
Activity 1: Learning About an Angle and Its Parts	90
Activity 2: Learning Five Types of Angle	92
Activity 3: Learning to Measure Angles	94
Introduction to Closed Figures	96
Background Information	96
Activity 1: Making Open and Closed Figures	98
Activity 2: Learning the Difference Between Closed Curved Figures and Polygons	100
Activity 3: Studying Irregular Polygons	103
Activity 4: Studying Regular Polygons	105
Circles and Other Closed Curved Figures	107
Background Information	107
Activity 1: Learning Some Closed Curved Figures	109
Activity 2: Learning the Parts of a Circle	111

Triangles	114
Background Information	114
Activity 1: Learning the Parts of a Triangle	118
Activity 2: Classifying Triangles by Their Sides	120
Activity 3: Classifying Triangles by Their Angles	122
Activity 4: Building Equilateral, Isosceles, and Scalene Triangles	125
Activity 5: Building Right, Obtuse, and Acute Triangles	128
Activity 6: Classifying Triangles by Sides and Angles:	
The Seven Types of Triangle in the World	130
Activity 7: Studying the Parts of a Right Triangle	134
Activity 8: Combining Triangles to Make Stars	136
Activity 9: Combining Triangles to Make Diaphragms	139
Quadrilaterals	141
Background Information	141
Activity 1: Learning the Types of Quadrilateral	143
Activity 2: Making Quadrilaterals with Geometry Sticks	146
Activity 3: Learning That Triangles Combine to Make Quadrilaterals	149
Activity 4: Seeing How Many Quadrilaterals the	
Various Triangles Can Form	151
Activity 5: Making Figures Using the Reverse Sides of Triangles	154
Polygons with Five or More Sides	157
Background Information	157
Activity 1: Learning About Regular Many-Sided Polygons	159
Activity 2: Forming Regular Many-Sided Polygons	162
Geometric Solid Shapes	164
Background Information	164
Activity 1: Reviewing the Geometric Solids	166
 RESOURCES FOR TEACHERS AND STUDENTS	169
Print	169
Web	172
Audio/Video	175
 TEMPLATES FOR TEACHERS	177

