Linking ON Gr 6 ~ 9 Math Expectations to Binogi: Examples

Grade	Strand	Specific Expectation	Binogi Video
6	B. Number	<u>Number Sense:</u> B1.2 read and represent integers, using a variety of tools and strategies, including horizontal and vertical number lines	• Rational Numbers • Introduction to Negative Numbers • The Coordinates of a Point
	C. Algebra	<u>Patterns and Relationships:</u> C1.2 create and translate repeating, growing, and shrinking patterns using various representations, including tables of values, graphs, and for linear growing patterns, algebraic expressions and equations	• The Coordinate of a Point • Linear Equations • Algebraic Expressions
	D. Data	<u>Data Literacy:</u> D1.5 determine the range as a measure of spread and the measures of central tendency for various data sets, and use this information to compare two or more data sets	• Statistics: Mode and Median • Mean • Range (Statistics)
	E. Spatial Sense	<u>Measurement:</u> E2.1 measure length, area, mass, and capacity using the appropriate metric units, and solve problems that require converting smaller units to larger ones and vice versa	• Measurements • Prefixes • Measurement Units and Conversions
	F. Financial Literacy	<u>Money and Finances:</u> F1.4 explain the concept of interest rates, and identify types of interest rates and fees associated with different accounts and loans offered by various banks and other financial institutions	• Simple Interest • Compound Interest
7	B. Number	<u>Operations:</u> B2.8 multiply and divide fractions by fractions, using tools in various contexts	• Multiplication with Fractions • Division with Fractions
	C. Algebra	<u>Equations and Inequalities:</u> C2.3 solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions	• Introduction to Equations • Solving Equations using the Index Finger Method • Solving Equations using the Balancing Method
	D. Data	<u>Probability:</u> D2.1 describe the difference between independent and dependent events, and explain how their probabilities differ, providing examples	• Randomness and Probability • Conditional Probability

	E. Spatial Sense	<u>Measurement:</u> E2.3 use the relationships between the radius, diameter, and circumference of a circle to explain the formula for finding the circumference and to solve related problems	• The Circumference of a Circle
	F. Financial Literacy	<u>Money and Finances:</u> F1.6 compare interest rates and fees for different accounts and loans offered by various financial institutions, and determine the best option for different scenarios	• Simple Interest • Compound Interest • Pay Now or Later
8	B. Number	<u>Operations:</u> B2.2 understand and recall commonly used square numbers and their square roots	• Square Roots
	C. Algebra	<u>Coding:</u> C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves the analysis of data in order to inform and communicate decisions	• Variables: Introduction • Variables: More examples • Variables: Introduction (Python programming) • Variables: More examples (Python programming) • Variables: Introduction (JavaScript programming) • Variables: More examples (JavaScript programming) If (programming) • If else (programming) • Nested if else (programming) • While loop (programming) • For loop (programming)
	D. Data	<u>Data Literacy:</u> D1.3 select from among a variety of graphs, including scatter plots, the type of graph best suited to represent various sets of data; display the data in the graphs with proper sources, titles, and labels, and appropriate scales; and justify their choice of graphs	• Bar and column graphs • Histogram • Line graphs • Circle graphs • Draw circle graphs • Stem and leaf plots
	E. Spatial Sense	<u>Measurement:</u> E2.4 describe the Pythagorean relationship using various geometric models, and apply the theorem to solve problems involving in unknown side length for a given right triangle	• The Pythagorean Theorem
9	B. Number	<u>Powers:</u> B2.1 analyse through the use of patterning, the relationship between the sign and size of an exponent and the value of a power, and use this relationship to express numbers in scientific notation and evaluate powers	• Scientific Notation • Powers and Exponents
	C. Algebra	<u>Characteristics of Relations:</u> C4.4 determine the equations of lines from graphs, tables of values, and concrete representations of linear relations by making connections between rates of change and slopes, and between initial values and y-intercepts, and use these equations to solve problems	• Linear equations • The slope of a line • Other forms of linear equations
	D. Data	<u>Data Literacy:</u> D1.2 represent and statistically analyse data from a real-life situation involving a single variable in various ways, including the use of quartile values and box plots	• Quartiles • Box and whisker plots
	E. Spatial Sense	<u>Measurement:</u> E1.6 solve problems using the relationships between the volume of prisms and pyramids and between the volume of cylinders and cones, involving various units of measure	• Prisms • Pyramids • Cylinders • The volume of a cone