Linking Junior Cycle Mathematics with Level 2 Learning Programmes

PLU	Elements of the Priority Learning Unit	Level 2 Learning Outcomes	Possible links to Junior Cycle Mathematics Specification
Communication and Literacy	Speaking appropriately for a variety of purposes and demonstrating attentiveness as a listener	A2 Ask questions to obtain information, e.g.to check dates/prices (face to face and by telephone), booking a meal over the telephone	SP.3(a) generate a statistical question, see also U.6
		A4 Express personal opinions, facts and feelings appropriately, e.g. expressing an opinion on a television programme, relate news from their weekend	SP.3(d) select, draw and interpret appropriate graphical displays of univariate data, including pie charts, bar charts, line plots, histograms (equal intervals), ordered stem and leaf plots, **and ordered back-to-back stem and leaf plots**, see also U.13
	Reading to obtain basic information	C3 Interpret different forms of writing and text, including social signs and symbols, e.g. common formats of bills, menus, forms, timetables, road and other signs, simple food preparation instructions (boil an egg, make a sandwich, make a cup of tea), short piece of personally relevant writing	N.2(c) solve money-related problems including those involving bills, VAT, profit or loss, % profit or loss (on the cost price), cost price, selling price, compound interest for not more than 3 years, income tax (standard rate only), net pay (including other deductions of specified amounts), value for money calculations and judgements, **mark up (profit as a % of cost price), margin (profit as a % of selling price), compound interest, income tax and net pay (including other deductions)**
		C4 Find key information from different forms of writing, e.g. locate factual information in forms/bills, times and dates of appointments, menus, timetables, newspapers	
	Using expressive arts to communicate	E2 Create a range of images using a variety of materials	SP.3(d) select, draw and interpret appropriate graphical displays of univariate data, including pie charts, bar charts, line plots, histograms (equal intervals), ordered stem and leaf plots, **and ordered back-to-back stem and leaf plots**
		E3 Produce a piece of work for display	SP.3(d) select, draw and interpret appropriate graphical displays of univariate data, including pie charts, bar charts, line plots, histograms (equal intervals), ordered stem and leaf plots, **and ordered back-to-back stem and leaf plots**, see also U.13
	Using suitable technologies for a range of purposes	F3 Use technology to communicate in an activity with others	SP.3(b) plan and implement a method to generate and/or source unbiased, representative data, and present this data in a frequency table, see also U.13
		F8 Use a software package, involving opening a package, entering and manipulating text/image/data, save to file, print and exit safely, e.g. clipart, word document, electronic presentation	SP.3(b) plan and implement a method to generate and/or source unbiased, representative data, and present this data in a frequency table
		F9 Access a range of websites on the internet e.g. Scoilnet, websites of personal interest to the student	
		F10 Find information for a project on the web	
Numeracy	Managing money	A4 Understand a common household bill in relation to the service provided, how much being charged and how it can be paid for	N.2(c) solve money-related problems including those involving bills, VAT, profit or loss, % profit or loss (on the cost price), cost price, selling price, compound interest for not more than 3 years, income tax (standard rate only), net pay (including other deductions of specified amounts), value for money calculations and judgements, **mark up (profit as a % of cost price), margin (profit as a % of selling price), compound interest, income tax and net pay (including other deductions)**
	Developing an awareness of number	B1 Recognise numbers up to 100 in N, e.g. knowing how many zeros for tens, hundreds	N.1(a) represent the operations of addition, subtraction, multiplication, and division in $\mathbb{N}$, $\mathbb{Z}$, and $\mathbb{Q}$ using models including the number line, decomposition, and accumulating groups of equal size
		B2 Recognise place value in relation to units, tens and hundreds e.g. knowing how many zeros for tens, hundreds	N.1(e) present numerical answers to the degree of accuracy specified, for example, correct to the nearest hundred, to two decimal places, or to three significant figures
		B3 Add two-digit whole numbers that total less than 100 in the context of an everyday situation	N.1(a) represent the operations of addition, subtraction, multiplication, and division in $\mathbb{N}$, $\mathbb{Z}$, and $\mathbb{Q}$ using models including the number line, decomposition, and accumulating groups of equal size, see also U.6
		B4 Subtract two-digit whole numbers in the context of an everyday situation	
		B5 Estimate quantities to the nearest value in broad terms, e.g. to the nearest quantity in 10s or 100s as appropriate	N.1(e) present numerical answers to the degree of accuracy specified, for example, correct to the nearest hundred, to two decimal places, or to three significant figures
	Developing an awareness of weight and capacity	D1 Use appropriate vocabulary to describe the units of weight and capacity, e.g. litres, 500ml, kilograms, grams (pictorial or concrete)	GT.1 calculate, interpret, and apply units of measure and time
		D3 List some examples of weight and capacity from daily life, e.g. knowing own weight, a litre of milk	
		D4 Use a graduated vessel to work out the capacity of liquids, e.g. using a jug to measure litre of milk	
	Developing an awareness of length and distance	E1 Use appropriate vocabulary to describe the units in length and distance, e.g. kilometres, metres, centimetres	
		E2 Identify the units of length and distance on a ruler, metre stick and measuring tape	
		E3 Use a ruler to draw and measure different lengths of lines	
		E4 Estimate the length of common objects, e.g. the length of a book	
		E5 Measure the length of common places, e.g. bathroom, kitchen, classroom using measuring tape	
	Using a Calculator	F1 Find digits 0-9 and the decimal point and necessary operations buttons (+, -, ÷, =) on a calculator	U.1 recall and demonstrate understanding of the fundamental concepts and procedures that underpin each strand
		F2 Use a calculator to solve simple problems, e.g. add two items	U.2 apply the procedures associated with each strand accurately, effectively, and appropriately
		F3 Use a calculator to correct work which has been completed without the use of a calculator	
	Developing Spatial Awareness	G1 Use appropriate vocabulary to describe direction, e.g. clockwise, anti-clockwise, horizontal, vertical	GT.6(a) recognise and draw the image of points and objects under translation, central symmetry, axial symmetry, and rotation, see also GT.1 and U.13
		G6 Move a range of objects in given directions	GT6(a) recognise and draw the image of points and objects under translation, central symmetry, axial symmetry, and rotation
	Using data for a range of different purposes	H1 Identify uses of data in everyday life, e.g. class survey on the most popular movie for teenagers	SP.3(c) classify data (categorical, numerical), see also U.6
		H2 Identify basic approaches to data collection, e.g. record sheets, tally system	SP.3(b) plan and implement a method to generate and/or source unbiased, representative data, and present this data in a frequency table, see also SP.2(c)
		H3 Collect a range of data using one of the following: a survey, record sheet, tally system or audio-visual records	SP.3(b) plan and implement a method to generate and/or source unbiased, representative data, and present this data in a frequency table
		H4 Interpret basic data of two criteria, e.g. more/less of one class than another, bigger/smaller	SP.3(d) select, draw and interpret appropriate graphical displays of univariate data, including pie charts, bar charts, line plots, histograms (equal intervals), ordered stem and leaf plots, **and ordered back-to-back stem and leaf plots**, see also U.13
		H5 Construct basic representations to communicate data with two criteria, e.g. drawing a pictogram /bar chart	
		H6 Talk about /discuss information from basic data e.g. a pictogram, bar chart, or trend graph	SP.3(e) select, calculate and interpret appropriate summary statistics to describe aspects of univariate data. Central tendency: mean **(including of a grouped frequency distribution),** median, mode. Variability: range, see also U.13
	Using Shapes	I1 Name common 2D and 3D shapes in everyday life, e.g. circles, rectangles, cubes, cylinders and spheres	GT.2(b) draw and interpret nets of rectangular solids, **prisms (polygonal bases), cylinders**
		I2 Divide a line into two equal segments without measuring, e.g. by folding	GT.6(b) draw the axes of symmetry in shapes
		I3 Find axes of symmetry of familiar 2D shapes and figures by folding, and mark them	
		I4 List the properties of common 2D shapes and 3D forms, e.g. number of faces, edges	GT.2(b) draw and interpret nets of rectangular solids, **prisms (polygonal bases), cylinders**
		I5 Sort 2D and 3D shapes and forms in relation to size	GT.2(a) draw and interpret scaled diagrams
	Developing an awareness of time	J1 Tell the time from an analogue clock for the hour, half hour and quarter hour	GT.1 calculate, interpret, and apply units of measure and time
		J2 Tell the time from a digital clock for the hour, half hour and quarter hour	
		J4 Solve problems to work out the passage of time, e.g. use the start and finish time to calculate duration of journey or programme, calculate the duration of a specific programme	N.3(b) solve problems involving proportionality including those involving currency conversion and those involving average speed, distance, and time, see also U.7, U.8 and U.9

Links are described as 'possible' as teachers and/or subject departments are best placed to identify the relevant direct links to the L2LP learning outcomes which they deem appropriate to their students. Whilst possible links to two PLU's have been identified above, teachers may also consider the learning outcomes in the following PLU's; Personal Care, Living in a Community and Preparing for Work, to identify other possible links between these PLU's and Junior Cycle Mathematics learning outcomes. **Higher level material is shown in bold text.**