Year 11 Maths Learning Journey

Spring Term 5

Revision and communication: Listing and describing.

Core knowledge	Reference
Work with organised lists "Explain what the word systematic means"	WORKSHEET
Use the product rule for counting (H) "How can we list all possible outcomes so that none are missed out?"	WORKSHEET
Sample spaces and probability (R) "What happens to the total number of options if I can't re-use an item? What happens if I can re-use an item?"	WORKSHEET
Complete and use Venn diagrams (R) "Do the circles in a Venn diagram always overlap? Why or why not?"	WORKSHEET
Construct and interpret plans and elevations (R) "What's the difference between the net of a 3-D shape and the plan view?"	WORKSHEET
Use data to compare distributions (R) "Are there any outliers in the data? How will an outlier affect the mean, median, mode, range, interquartile range?"	WORKSHEET
Interpreting scatter graphs (R) "Why do I need a line of best fit when estimating values?"	WORKSHEET

Learning Checkpoints

LC Title	Completed	Dirt
Listing and describing		

Key Vocabulary:

Average: calculated "central" value of a set of numbers

Causation: indicates that one event is the result of the occurrence of the other event; i.e. there is a causal relationship between the two events.

Complement: In Venn Diagrams, the subset of some set which excludes a given subset .

Correlation: A measure of the strength of the association between two variables.

Edge: A line segment, joining two vertices of a figure.

Estimate: To arrive at a rough or approximate answer by calculating with suitable approximations for terms

Event: A possible outcome of a statistical trial, for example 'heads' when a coin is tossed.

Exhaustive: a set of events in a sample space such that one of them compulsorily occurs while performing the experiment.

Extrapolate: estimating an unknown value based on extending a known sequence of values or facts

Face: One of the flat surfaces of a solid shape.

Intersect: used to describe the overlap or two or more events. This is communicated using the character ∩. The phrase P (A ∩ B) is read as "the probability of A and B."

Isometric: Where distances between points stay the same after a transformation.

Median: The middle of a sorted list of numbers.

Outcome: a possible result of an experiment or trial

Outlier: In statistical samples, an outlier is an exceptional trial result that lies beyond where most of the results are clustered.

Range: The difference between the greatest value and the least value in a set of numerical data.

Sample space: The sample space is the set of all possible outcomes of a trial. The sum of all the probabilities for all the events in a sample space is 1.

Front/Plan/Side elevation: Plans and elevations are a way of representing a 3-dimensional object. We have three views of the 3D shape, the side of the shape is called the side elevation.

Stem and leaf: a special table where each data value is split into a "stem" (the first digit or digits) and a "leaf" (usually the last digit).

Systematic: Having a pattern or order to the way you work

Tree diagram: a way of showing combinations of two or more events. Each branch is labelled at the end with its outcome and the probability is written alongside the line.

Two-way table: a way to display frequencies or relative frequencies for two categorical variables

Union: The union of two sets A and B is written as A U B.

Venn diagram: a diagram representing mathematical or logical sets pictorially as circles or closed curves within an enclosing rectangle (the universal set), common elements of the sets being represented by intersections of the circles.