The Sutton Academy

Knowledge Rich Curriculum Plan

Year 10 Higher+ Probability

Lesson/Learning Sequence	Intended Knowledge: *Students will know that…*	Tiered Vocabulary	Steps to Success	Prior Knowledge: *In order to know this…*	Feedback
To learn how to draw and use tree diagrams for independent events	• Students will know how to show given information on a probability tree diagram. • Students will know how to complete probabilities using both decimals and fractions to represent probabilities • Students will know construct a probability tree for multiple events • Students will know how to use a probability tree diagram to represent outcomes of combined independent events (with replacement) • Students will know how to use tree diagrams to calculate the probability of two combined independent events by multiplying across the branches (this can either be fractions or decimals)	**Probability** - the extent to which an event is likely to occur, often expressed as a fraction or decimal. **Independent** – not subject to control by anything else **Independent Events** – Two events are independent if the occurrence of one event does not affect the chances of the occurrence of the other event	•	• Students will need to know that the probability of all possible outcomes for an event add to 1 • Students will need to know how to multiply decimals • Students will need to know how to multiply fractions	
To learn how to solve conditional probability problems using tree diagrams	• Students will understand how and why the outcome of one event can impact the outcome of a subsequent event • Students will know how to complete and construct probability trees for dependent events • Students will know how to use probability trees to calculate the probabilities of combined events for dependent events	**Dependent** – determined by **Conditional/ Dependent Events** – events whose outcomes rely on that of another event	•	• Students will need to know how to multiply decimals • Students will need to know how to multiply fractions	
To learn how to solve algebraic tree diagram problems	• To learn how to form and solve quadratic equations to solve probability problems		•	• Students will need to know how to solve quadratic equations	
To learn how to draw and use Venn diagrams to calculate probabilities	• Students will know how to put information into a Venn diagram and use it to determine probabilities • Students will know how to construct appropriate Venn diagrams to sort information • Students will know how to interpret a Venn diagram to find probabilities	**Venn Diagram** - a diagram representing mathematical or logical sets as circles within an enclosing rectangle (the universal set), common elements of the sets being represented by intersections of the circles. **Universal Set** - a set which contains all objects, including itself **Intersection** – A point, area or line that is common to two or more things. For a Venn diagram the intersection is the overlap between the two circles	•	• Students should know how to sort information into a simple Venn diagram	

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To learn how to interpret and use set notation	• Students will know how to use very simple set notation to describe parts of the Venn diagram e.g. (A), (B), (A'), (B') • Students will know how to use union (A U B) and intersection (A ∩ B) notation • Students will know how to find probabilities using union and intersection notation	**Union** - The set made by combining the elements of two sets. So the union of sets A and B is the set of elements in A, or B, or both.		Students should know how to sort information into a Venn diagram	