The Sutton Academy

# Knowledge Rich Curriculum Plan

Year 11 Foundation – Probability

| Lesson/Learning Sequence | Intended Knowledge:<br>*Students will know that…* | Tiered Vocabulary | Prior Knowledge:<br>*In order to know this, students need to already know that…* | Steps to Success |
|---|---|---|---|---|
| **To learn how to draw and use a tree diagram for independent events**<br><br>Basic probability in starters! | • Students will know how to show given information on a probability tree diagram.<br>• Students will know how to complete probabilities using both decimals and fractions to represent probabilities<br>• Students will know construct a probability tree for multiple events<br>• Students will know how to use a probability tree diagram to represent outcomes of combined independent events (with replacement)<br>• 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) | **Independent** – not subject to control by anything else<br>**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<br>• Students will need to know how to multiply decimals<br>• Students will need to know how to multiply fractions | Probability trees steps |
| **To learn how to complete and use a tree diagram for dependent events** | • Students will understand how and why the outcome of one event can impact the outcome of a subsequent event<br>• Students will know how to complete and construct probability trees for dependent events<br>• Students will know how to use probability trees to calculate the probabilities of combined events for dependent events | **Dependent** – determined by<br>**Conditional/ Dependent Events** – events whose outcomes rely on that of another event | • Students will need to know how to use a tree diagram for independent events<br>• Students will need to know how to multiply decimals<br>• Students will need to know how to multiply fractions | |
| **To learn how to create and use a Venn diagram to determine probabilities** | • Students will know how to put information into a Venn diagram and use it to determine probabilities<br>• Students will know how to construct appropriate Venn diagrams to sort information<br>• Students will know how to interpret a Venn diagram to find probabilities<br><br>Extension – Students will know how to use Set Notation | **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.<br>**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<br>• Students should know how to find the probability of an event | |