



The Sutton Academy

Knowledge Rich Curriculum Plan

Year 12/13 – Stats – Probability

Lesson/Learning Sequence	Intended Knowledge: <i>Students will know that...</i>	Tiered Vocabulary	Prior Knowledge: <i>In order to know this students, need to already know that...</i>	Assessment
<p>Lo : To learn how to find probabilities from a Venn diagram and To learn about mutually exclusive and independent events.</p>	<ul style="list-style-type: none"> • <i>Students will know that a Venn diagram can contain frequency's or probabilities.</i> • <i>Students will be able to find probabilities from a Venn diagram.</i> • <i>Students will be able to draw Venn diagrams of multiple variables.</i> • <i>Students will be able to solve problems involving venn diagrams.</i> • <i>Students will know that for mutually exclusive events $P(A \text{ and } B) = P(A) + P(B)$</i> • <i>Students will know that for independent events $P(A \text{ and } B) = P(A) \times P(B)$</i> • <i>Students will know how to use the multiplication rule to determine if events are independent.</i> • <i>Students will be able to interpret Venn diagrams of mutually exclusive events.</i> • <i>Students will be able to use the formulas to solve problems.</i> 	<p>Mutually exclusive – Events that have no outcome in common.</p> <p>Independent events – When one event has no effect on the other.</p>	<p>Students will need to know how to draw and interpret two variable Venn diagrams.</p> <p>Students will need to know how to draw and interpret two variable Venn diagrams.</p>	
<p>To learn how to use conditional probability</p>	<ul style="list-style-type: none"> • <i>Students will know that $P(B A)$ is the probability that B occurs given that A has already occurred.</i> • <i>Students will know that for independent events $P(A B) = P(A B') = P(A)$ and $P(B A) = P(B A') = P(B)$ and this can be used to determine independence.</i> • <i>Students will be able to solve conditional probability from a sample space.</i> • <i>Students will know how to calculate conditional probability from a Venn diagram</i> • <i>Students will be able to draw a Venn diagram, given information about probability.</i> 		<p>Students will need to have knowledge of set notation.</p> <p>Students will need to be able to find probability</p> <p>Students will draw sample spaces and bipartite tables.</p> <p>Students will need to have knowledge of set notation.</p> <p>Students will need to be able to find probability</p> <p>Students will need to know how to construct probability from a venn diagram.</p>	<p>To learn how to use conditional probability</p>
<p>To learn how to use the probability formulae to find conditional probability.</p>	<ul style="list-style-type: none"> • <i>Students will need to that the addition formula for conditional probability is $P(A \cup B) = P(A) + P(B) - P(A \cap B)$</i> • <i>Students will know that the multiplication formula is $P(B A) = \frac{P(B \cap A)}{P(A)}$ so</i> $P(B \cap A) = P(B A) \times P(A)$ • <i>Students will need to use the formula to find missing values</i> 		<p>Students will need to have knowledge of set notation.</p> <p>Students will need to be able to find probability</p> <p>Students will need to know how to construct probability from a venn diagram.</p>	

Lesson/Learning Sequence	Intended Knowledge: <i>Students will know that...</i>	Tiered Vocabulary	Prior Knowledge: <i>In order to know this students, need to already know that...</i>	Assessment
LO: To learn how to use tree diagrams	<ul style="list-style-type: none"> • <i>Students will know that a tree diagram can be used to show the outcome of two or more happening in succession.</i> • <i>Students will know how to interpret tree diagrams.</i> • <i>Students will know how to draw tree diagrams that show two or more events.</i> • <i>Students will know how to use formula to solve tree diagram problems.</i> • <i>Students will know how to find probability from a tree diagram.</i> 		<p><i>Students will need to know that for mutually exclusive events $P(A \text{ and } B) = P(A) + P(B)$</i></p> <p><i>Students will need to know that for independent events $P(A \text{ and } B) = P(A) \times P(B)$</i></p>	