



Chapter 4: Probability

Number of lessons (between 6&8)	Content of the unit	Assumed prior learning (tested at the beginning of the unit)
9	<ul style="list-style-type: none">• The Probability Scale• Tally Charts and Bar Charts• Pictograms• Listing Outcomes• Calculating Probability• Mutually Exclusive Events• Venn Diagrams	
Assessment points and tasks	Written feedback points	Learning Outcomes (tested at the end and related to subject competences)
Pre test Post test (half term exams/ mock exams)	Diagnostic marking (TF)-(green sticker)-(PF)/(SF) yellow and orange stickers Traffic lighting of exam papers	Can you understand and use the probability scale? Can you draw tally charts and bar charts? Can you draw and interpret information from a pictogram? Can you list all the outcomes of an event? Can you calculate simple probabilities? Can you calculate probabilities of mutually exclusive events? Can you use Venn diagrams to work out probabilities?



Lesson	Clear learning intentions	Clear success criteria	Hook	Presentation of content	Guided practice	Independent practice (homework)	Closure
1 The Probability Scale	Can you understand and use the probability scale?	<ul style="list-style-type: none"> Know that probability is a way of measuring likeliness Know and use the vocabulary of probability Understand the use of the 0-1 scale to measure probability Assess likeliness and place events on a probability scale 	Probability Line	Mathswatch Clip 40 (old GCSE) Mathswatch Clip 14 (NEW GCSE) Boardwork Maths-KS3-D4-Probability -Slides 3-14	Probability Scale worksheet (old GCSE) Probability Scale worksheet (new GCSE) Collins Foundation Book, Page 399, EX 18A		Place fractions, decimals, percentages and probability keyword (likely, certain etc.) on a probability line.
2 Tally Charts and Bar Charts	Can you draw tally charts and bar charts?	Complete a frequency table. Draw a bar chart.	Reading information from bar graphs	Mathswatch Clip 15 (NEW GCSE) Boardwork Maths-KS3-D3-Slides 3-9 Boardwork Maths-KS3-D1-slides 24-25	Tally Charts and Bar Charts worksheet (new GCSE) New GCSE Foundation textbook – Page 60-61, Q1-Q10 <i>(Strengthen): Page 82, Q1</i>	Bar Chart HW	Why do statisticians need to display data? Explain what reliability means, in terms of taking a data reading on a separate occasion and finding similar results. Ask students how frequency tables



					Collins Fdn Bk, Page 122-123, Ex 6A		might be useful in their own interest areas, such as in sport or music competitions.
3 Pictograms	Can you draw and interpret information from a pictogram?	Complete a pictogram. Read information from a pictogram.	Pictogram Bingo	Mathswatch Clip 42 (old GCSE) Mathswatch Clip 16 (NEW GCSE)	Pictogram worksheet (old) Pictogram worksheet (new)		Construct a pictogram for the shoe sizes of the people in the class.
4 Listing Outcomes	Can you list all the outcomes of an event?	<ul style="list-style-type: none"> List all the outcomes for an experiment Identify equally likely outcomes 	Pick from the Pot	Mathswatch Clip P2a/P2b(new KS3) Mathswatch Clip 58 (NEW GCSE) Boardwork Maths-KS3-D4- Probability -Slides 37-46	Outcomes P2a Outcomes P2b Listing outcomes (new)		Page 384, Q6
5 Calculating Probabilities	Can you calculate simple probabilities?	<ul style="list-style-type: none"> Work out theoretical probabilities for events with equally likely outcomes Know how to 	Coloured sheep	Mathswatch Clip 90a/90b (old GCSE) Mathswatch Clip	Calculating Probabilities 90a (old) Calculating	Probability HW 1 Probability HW 2	Ellie was asked to toss a coin four times and said she got HHHH. Heath was asked to



		<p>represent a probability</p> <ul style="list-style-type: none"> Recognise when it is not possible to work out a theoretical probability for an event 		<p>59 (NEW GCSE)</p> <p>Boardwork Maths-KS3-D4- Probability -Slides 16-28</p>	<p>Probabilities 90b (old)</p> <p>Calculating Probabilities (new)</p> <p>New GCSE Foundation textbook – Page 380-381, Q2-Q8 (Strengthen): Page 401, Q1- Q4.</p> <p>Collins Fdn Bk, Page 401-403, Ex 18B</p>		<p>throw a dice four times and said he threw 5555. Should the teacher be suspicious that either student did not do the experiment for themselves? Can the teacher be certain in either case?</p>
6 Mutually exclusive events	Can you calculate probabilities of mutually exclusive events?	<p>Understand that mutually exclusive events add up to 1.</p> <p>Identify equally likely outcomes.</p> <p>Apply the fact that the sum of probabilities for all outcomes is 1</p>	<p>In a pack of cards how many:</p> <ol style="list-style-type: none"> Cards are there (no jokers) Kings? 4s? Suits? Red cards Number cards? 	<p>Mathswatch Clip91 (old GCSE)</p> <p>Mathswatch Clip 60 (NEW GCSE)</p> <p>Boardwork Maths-KS3-D4- Probability -Slides 29-36</p>	<p>Mutually exclusive events (old)</p> <p>Mutually exclusive events (new)</p> <p>New GCSE Foundation textbook – Page 381-382, Q9-Q13</p>		<p>Ask students to construct as many pairs of mutually exclusive events that they can think of for a set of cards numbered 1–8. Which of these pairs are also exhaustive? Then ask students to construct exhaustive pairs of events which</p>



					(Strengthen): Page 401, Q5		are not mutually exclusive.
7 Venn Diagrams	Can you use Venn diagrams to work out probabilities?	Sort data into groups on a Venn diagram. Calculate probabilities using Venn diagrams.	Place numbers into even, square and prime Venn diagram	Mathswatch Clip P6 (NEW ks3) Mathswatch Clip 127a/127b (NEW GCSE)	Venn diagrams KS3 Venn Diagrams 127a (new) Venn Diagrams 127b (new) New GCSE Foundation textbook – Page 403, Q3, Q4, Q5 Page 289, Q2-Q9		Construct a Venn diagram for the information BELOW In a recent survey, 13 people said they liked rugby, 18 people said they liked hockey and 4 people said they liked both. 3 people said they liked neither. How many people were asked? (answer: 30)
8 Homework Lesson							
9 Check up lesson	Revision of objectives learnt throughout the topic.	Formative assessment on the core objectives, grouped by topic.					