Subject	Year	Month
Mathematics	8	November

Topic:

PROBABILITY: LANGUAGE AND NOTATION

4 LESSONS

Content (Intent)

Prior Learning

Y7 Nov:
- Equivalence between decimals, fractions and percentages

Y7 Jan:
- Converting between fractions and percentages
- Simplify a fraction by cancelling common factors

VERY FIRST TIME PROBABILITY. (Not discussed in primary, not in Y7)

Future Learning

Y8 May
- Probability experiments, diagrams and trees

Y9 March
- Probability of combined events; Tree diagrams

Objectives

- Know and use the **vocabulary** of probability
- Understand the use of the 0-1 scale to measure probability
- List all the outcomes for an experiment, including the use of tables
- Work out theoretical probabilities for events with equally likely outcomes
- Use the correct notation
- Know & apply the fact that the sum of probabilities for all outcomes is 1

Second part of probability comes later this year.
In this second part we will discuss experimental vs theoretical probability and the use of Venn diagrams, frequency trees.

For teaching purposes

Possible Questions

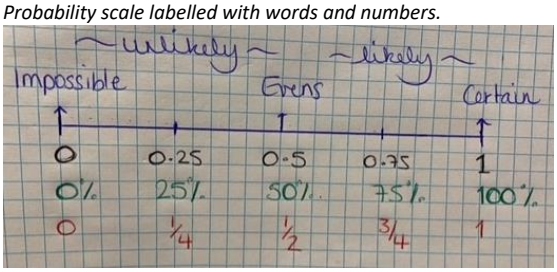
- Show me an example of an event and outcome with a probability of 0. And another…
- Always / Sometimes / Never: if I pick a card from a pack of playing cards then the probability of picking a club is ¼
- Label this (eight-sided) spinner so that the probability of scoring a 2 is ¼. How many different ways can you label it?

Misconceptions

- may think that the probability of it raining tomorrow is ½ as it either will or it won't.
- may write a probability as ratio (e.g. 1:6 or '1 to 6').
- may think that if they flip a fair coin three times and obtain three heads, then it must be more than likely they will obtain a head next.

Pedagogical notes (implementation)

Probability scale labelled with words and numbers.



Notation
Probabilities are expressed as words, fractions, decimals or percentage.
(**not** as a ratio)
The probability of … = P (…)

How will understanding be assessed & recorded (Impact)

8BAM6 Probability
End of term Assessment in December
End of Year Assessment in June

How can parents help at home?

MathsWatch clips (Qualification KS3)

P1, P2a, P2b, P3, P5, P7

Further reading/discussion

Reading / Enrichment

NRICH: Introducing probability
NRICH: Why Do People Find Probability Unintuitive and Difficult?

KM: Probability scale and slideshow version

KM: Probability loop cards

NRICH: Dice and spinners interactive

Literacy

Probability,
Theoretical probability
Event, Outcome
Impossible, Unlikely,
Even chance, Likely, Certain
Equally likely
Mutually exclusive, Exhaustive
Possibility space
Experiment

Numeracy Links

Careers Links

Meteorologist
Insurance underwriter
https://www.bbc.co.uk/bitesize/articles/zs8496f