CENTRES FOR EXCELLENCE IN MATHS

FE centre resource

Pearson

Lesson plan

Probability

Level 2

1. Lesson objectives

- Understand the likelihood of events using a probability scale
- Calculate simple probability as a fraction, decimal or percentage, including from a table
- Work out the probability of combined events including the use of diagrams and tables, including two-way tables
- Identify and correct common misconceptions

2. Functional Skills Level 2 curriculum

Handling information and data
26 work out the probability of combined events including the use of diagrams and tables, including two-way tables
27 express probabilities as fractions, decimals and percentages

3. Lesson plan

This is an overview of the lesson. More notes can be found in the notes in the lesson slides.

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Introduction	Introduce the key language and concept of probability	10	This whole class activity involves ordering events according to their probability of occurring. It can be done in either of two ways: • A ‘washing line’ hung across the classroom, or along one wall • By asking learners to stand in a line across the classroom, or along one wall. Ask learners to pick events cards and place themselves (or their card) in a line and justify their position.	Slide 2 Handout: Event cards
Discuss 1	Review previous learning of the language and concept of probability	10	Introduce the decimal probability number line and ask questions to identify where impossible, certain, likely and unlikely would fit on this. Discuss some of the events from the previous activity, and what numbers would apply to them, then match the percentages to the probability scale. Use Slides 4 and 5 to confirm key vocabulary and ways of expressing probabilities in numbers.	Slides 3–5
Review	Review misconceptions and probe understanding	5	Draw out misconceptions and probe understanding of probability.	Slide 6

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Explore 2	Locate the probability of simple events and mutually exclusive events on a probability scale	20	Return to the probability scale and provide an A3 copy for pairs/small groups to work with. Ask learners to work in pairs or small groups and give each group card set A. Ask them to calculate the probability of the event on each card and stick on the probability scale handout. When learners have completed card set A, provide them with set B and repeat. These are more challenging probabilities, involving mutually exclusive events (and an example of a simple combined probability). Use Slides 8 and 9 to extend this task and address a misconception about probabilities adding to 1.	Slides 7–9 Handout: Probability scale Handout: Probability card sets A and B
Explore	Calculate probability from data in a table	5	Introduce the data in a tabular format and recap what is known of the probability values. Remind the learners that the key idea is to work out the number of ways an event can happen divided by the total number of possible outcomes. Ask learners how to calculate probabilities from data in a table.	Slide 10

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Explore and discuss	Understand two-way tables	25	Context of a catering company. Learners are given some data about food choices. They are asked to arrange this data in an appropriate way and have a class discussion about different methods. Concept of two-way tables is introduced and used to show how it helps the catering company arrange the data. Learners then have a go at creating, completing and answering probability questions from another two-way table. Learners are challenged to come up with questions and challenge their partners to answer – based on the data in the table – how might these be phrased? How complicated can the questions get? Class review and discussion.	Slides 11–16
Practice questions	Practice questions	10	Ask learners to answer the selection of practice questions and after a few minutes discuss their thinking.	Slides 17–20 Handout: Probability exam questions
Lesson closure	Review learning	5	Tutor to review key learning with learners whilst re-visiting lesson objectives.	Slide 21