



Using Words and Numbers to Describe Probability Teaching Ideas

Learning Objective: To be able to describe probabilities using both words and numbers.

Success Criteria:

- To be able to order events by likelihood.
- To describe probabilities using words.
- To measure probabilities using numbers, based on equally likely outcomes.

Context: This is an introduction to probability. Prior to this lesson, students should be familiar with fraction, decimal and percentage equivalences.

Starter

Ordering Events

Students work individually to order the events by likelihood. Ask the students how they decided on the order they chose.

Main Activities

Definitions

Introduce the words “probability” and “random” and their mathematical definitions. Ask the students if they can think of a choice which is made randomly and one that is not made randomly.

Describing Probability Using Words

Introduce the terms impossible, unlikely, even chance, likely, and certain. Ensure that the students understand that ‘even chance’ means that something is exactly as likely to happen as to not happen. Given the examples on slide 7, can the students create their own examples of events that have an even chance of occurring?

‘Likely’ means a higher than even chance but less than certain and ‘unlikely’ means a less than even chance but more than impossible. These three terms have precise definitions and must be used accordingly, whereas students may be inclined to use them in a vaguer manner. Can the students think of events where the probability may be harder to define? For example, “There is an even chance that Sam opens the door with her left hand, but if Sam is left-handed it is actually more likely that she will use her left hand to open the door.”

Ensure that students are able to order these words according to their likelihood and on a probability scale. The students should discuss, in pairs, which of the probability terms accurately describe each of the events on slide 10.

Using Numbers to Measure Probability

Link the words covered in the previous activity to 0, one half and 1 on a probability scale. Explain how equally likely outcomes, like rolling each face on a dice, can be used to evaluate the probability of other events numerically. Students work out numerical probabilities in pairs for the events described on slide 13 which are the same events they chose descriptions for in the last activity.

Activity Sheet

Students work individually through the exercises on the [Using Words and Numbers to Describe Probability Activity Sheet](#), which comes with an [Answer Sheet](#).

Plenary

Ask pupils to find events which are impossible, unlikely, even chance, likely and certain linked to picking letters of their first names at random. When they have done this, ask them to find a numerical probability for each.