

Notes for biased pair of dice

Teaching notes

This activity supports objectives described in the Secondary Mathematics Framework: Statistics Years 7, 8 and 9.

It involves using a spreadsheet package which models the rolling of two dice: one, both or neither of which are biased.

Start by opening Biased pair of dice and enabling macros. Press Reset.

Select tabs at bottom to choose pairs of dice A, B or C.

Each press of F9 will roll the dice.

Holding down F9 will roll the dice continuously.

Demonstrate how the software works.

Possible questions to stimulate initial discussion before using the software.

In your groups discuss:

- How would you know from the bar chart and frequency table if any of the dice were biased?
- How will the number of rolls affect your hypothesis?
- How many times would you need to roll it to be sure your results are reliable?
- What might make the dice biased?
- Who might use biased dice?
- What other ways are there to record the outcomes?
- If fundraising; which of the pairs of dice would you use?
- Could you devise a game/situation where biased dice would be appropriate?

Teaching points

Make sure you are familiar with the software.

Consider the use of different-shaped dice, i.e. tetrahedral dice

Keep task open-ended as possible and allow pupils to develop own lines of enquiry.