

Testing chance with dice and spinners

WHAT THIS LESSON TEACHES

One roll of a die or one spin of a spinner has a result that cannot be known in advance. On a fair die or spinner, each outcome comes up about the same after many trials.

- Rolling the die once and getting a 4.
- After 4 fair spins red and blue show about the same count.

MODEL THIS ON THE BOARD

TESTING ONE ROLL IN A GAME

- 1 Take the fair die for the board game.
- 2 Roll it just one time on the table.
- 3 Note the face that lands up, such as 4.
- 4 Nobody could know that 4 would show before the roll.

ANSWER KEY

Scaffold: visual check on the page

Q1: No

Q2: No

Q3: Yes

Q4: No

a) Never — A single trial result cannot be known in advance.

b) Always — Fair means equal chance so the counts end up roughly equal.

c) Never — The outcome of one spin cannot be known in advance.

d) Never — Four trials are too few; more rolls are needed to be sure.

EXTENSION SHEET · STRETCH ANSWERS

Investigation: Dice or spinner — which is fairer? — open-ended; scan pupils' working for valid solution paths rather than a single answer.