

Probability & Luck

10 hours (approx.)

Overview: 2.8

Can the odds ever be stacked in your favour? Investigate the idea that gamblers can win by having a system which helps them to win against the odds. Prove your mathematical theory is correct and produce a diagram or other wall-chart to show your findings. This lesson plan relates to challenge 2.8.

Learning Objectives: To look at mathematical theory on probability & luck

- To understand the 'odds' in a particular form of gambling.
- To learn the rules of mathematical theory in a particular form of gambling.
- To investigate the possibility of winning against the odds.
- To publish a final mathematical theory on the findings.

Learning Outcomes

1. I can understand the odds in a particular form of gambling.
2. I can explain the mathematical theory in a particular form of gambling.
3. I can prove or disprove the possibility of winning against the odds.
4. I can explain my findings through a mathematical theory.

Resources

1. Power-point presentation on 'Probability & Luck'.
2. Infographics on 'Probability & Luck'.
3. Downloadable information sheets with facts and figures.
4. 'Probability & Luck' guidance notes and downloadable support materials.

Probability & Luck

Starter

(30 minutes)

What do we mean when we say 'against the odds' both in everyday life and in gambling and betting? Do any students have examples of something happening against the odds? Hold a brief class discussion and record your responses accordingly.

Main Activity

(Up to 9 hours)

Against The Odds

This is a chance for students to explore some more complex mathematical theories and so may be best used as part of the core syllabus. This may be students working on their own or in larger groups. Initial research should focus on 'beating the system' in an area of gambling or betting before looking at the mathematical theories involved. Over the course of several sessions, it should be possible to draw some clear conclusions about the probability and numbers involved in a range of different areas. Findings from the exploration should be shared in an original or creative way with the possibility of a practical demonstration.

Findings from the discussion should be recorded in an appropriate format and shared. Students can use the skills sheet for 'Creative Thinking & Exploration', as appropriate. Students should use the appropriate skills sheet and complete the preparation and review sections to support this activity fully.

Plenary

(30 minutes)

What have we learned?

This is a chance for the teacher or trainer to sum up findings from the group in tandem with some other available data in order to make useful comparisons and draw meaningful conclusions.

Extension Task

Find out what happens to people who have a system or win large amounts of money? Make a short film around your thoughts and reactions.