Probability & Luck?

60 - 120 minutes (approx.)

Overview

This lesson is part of the YGAM 'In The Know' programme section 2, 'Probability & Luck', offering students an initial look at the idea of mathematics, odds and luck associated with different forms of gambling. This lesson plan relates to challenge 2.4

Learning Objectives: To introduce Probability & Luck:

- To understand what we mean by 'luck'
- To learn the rules of probability
- To investigate different odds for different areas of gambling
- To investigate if there are systems for beating the odds

Learning Outcomes

1. I can offer a personal definition of 'luck'.

2. I can understand the main rules of probability.

3. I can weigh up the odds associated with different forms of gambling.

4. I can research information and presentation appropriately.

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
(20 minutes total)

What is your understanding of probability and luck?

Discuss in pairs and feed back answers to the following questions:

- Is there such a thing as luck?
-
- What do we mean by 'odds'?
-
- Are the rules of probability easy to understand?
-
- What do we mean by 'responsible gambling'?

Write answers on board or sugar paper and save as appropriate

Looking at the Infographics. What is of interest? - (5 minutes)

Main Activity
(30 minutes)

Why Can't You Beat The System?

This activity invites students to investigate different aspects of the gambling industry, such as fruit machines, casinos, roulettes, lotteries or cards, amongst others.

Students can research from primary sources or carry out simple investigations using cards, coins and dice, as available.

Research can be presented in appropriate form such as a class presentation or short leaflet with a focus on mathematics and probability. The activity is based around the skill of Research & Presentation. Students should use the appropriate YGAM skills sheet to help their preparation and reviewing of the activity.

Plenary
(10 minutes)

What have we learned?

Following the lesson, ask the students to feed back on what they have learned about the risks associated with probability and luck in gambling. Use the learning outcomes as above to measure and assess the impact of the lesson on the students. You can use the YGAM self/peer assessment documents or grade them yourself using our progression grading system.

Extended Learning
Students could be asked to share information and to produce a more in-depth research paper, with a focus on the comparative risks in different forms of gambling or gaming.

Teacher's Note
This is an excellent opportunity to liaise with the Mathematics department to support work on probability at either KS3 or KS4. Students do not need to be prolific at Mathematics, merely interested in how the ideas of chance and luck are linked to numbers and gambling and/or gaming. This is not a Mathematics test and this should be stressed to students who may be concerned.

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