

Probability & Luck

60 - 120 minutes (approx.)

Overview: 2.1

As a group, design a brief project designed around the key ideas of probability and luck. Treat the project as a short investigation or experiment to test a hypothesis. Record your answers, analyse the data and publish your findings in a report which can be shared. This lesson plan relates to challenge 2.1.

Learning Objectives: To introduce probability & luck

- To understand what we mean by 'luck'.
- To learn the rules of probability.
- To investigate different odds for coins, dice & cards.
- To record probability data in an appropriate form.

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 objects.
4. I can present data clearly.

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

(10 minutes)

Discuss what we mean by luck as a group. Do we have lucky numbers? Always call heads or tails? Do we believe that luck exists? How does this relate to probability?

Main Activity

(40 minutes-)

Testing Simple Probabilities

In groups test the odds for coins, dice and cards. Establish what each of them should be e.g. $\frac{1}{2}$, $\frac{1}{6}$, $\frac{1}{52}$, or other appropriate probabilities. Now record your own findings for each to establish whether your hypothesis or theory works. What have you discovered as a group? Think of an appropriate way to display your findings e.g. demonstration, wall chart, short film.

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

Plenary

(10 minutes)

What have we learned?

How do we now feel about luck and probability? What might this teach us about games involving elements of luck?

Extension Task

At home investigate other games which use dice or cards to see how probability is important in each. Share your findings with others.