

Look Kool – Probability

ABC ME screening details: Monday 11 May, 2020 at 11:15am

This episode can also be viewed on [ABC iView](#) (select Series 2 from the drop-down menu)

Key learning areas: Mathematics

Level: Levels 3-5

About: Hamza can't figure out why Koolkatt always wins when they play Flip-the-coin. Can you use probability to predict the future? Hamza interviews a real-life playing card and find out what's so 'lucky' about the number seven.

Before the episode

1. For each of the statements below, decide whether it is *likely*, *unlikely*, *certain*, or *impossible*.
2. Order the statements from least to most likely, where 1 is impossible and 5 is certain.
 - I will have ice-cream for lunch.
 - I will go to sleep tonight.
 - I will roll a 7 the first time I roll the dice.
 - I will see a chicken cross the road today
 - The sun will rise tomorrow.

After the episode

1. What is the probability that a flipped coin will land on tails?

2. What can happen if you flip two coins? Try the **Two Coin Toss** experiment below.
3. After the experiment, notice the most common outcome. Can you explain this?

Two Coin Toss

Place two coins on the end of a ruler. You are going to flip the coins 20 times. Before each toss, circle your prediction. After each toss, place a tick next to the actual result. A circled combination with a tick next to it means a correct prediction.

Toss number	Two Heads	Two Tails	One Head and One Tail
1	HH	TT	HT/TH
2	HH	TT	HT/TH
3	HH	TT	HT/TH
4	HH	TT	HT/TH
5	HH	TT	HT/TH
6	HH	TT	HT/TH
7	HH	TT	HT/TH
8	HH	TT	HT/TH
9	HH	TT	HT/TH
10	HH	TT	HT/TH
11	HH	TT	HT/TH
12	HH	TT	HT/TH
13	HH	TT	HT/TH
14	HH	TT	HT/TH
15	HH	TT	HT/TH
16	HH	TT	HT/TH
17	HH	TT	HT/TH
18	HH	TT	HT/TH
19	HH	TT	HT/TH
20	HH	TT	HT/TH

Vingerhoets, R (2006), 'Two Coins on a Ruler', Maths on the Go, Book 2.

Follow-up activity: What might happen if you flipped three coins 20 times?

Teacher notes

This resource contains self-directed learning activities that students can complete while learning at home or in the classroom. The activities align with the Victorian Curriculum F-10 and can be modified to meet the needs of your students. Teachers could collect student work for feedback and assessment.

Learning intentions

- To predict possible outcomes of simple chance experiments.

Victorian Curriculum content descriptions

	Level 3	Level 4	Level 5
Chance	Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (VCMSP147)	Describe possible everyday events and order their chances of occurring (VCMSP175)	List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (VCMSP203)
Data representation and interpretation	Interpret and compare data displays (VCELT159)	Select and trial methods for data collection, including survey questions and recording sheets (VCMSP178)	Describe and interpret different data sets in context (VCMSP207)

Victorian Curriculum achievement standards

	Level 3	Level 4	Level 5
Statistics and Probability	Students conduct chance experiments, list possible outcomes and recognise variations in results.	Students list the probabilities of everyday events. They identify dependent and independent events.	Students list outcomes of chance experiments with equally likely outcomes.

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