



Makes Maths Fun

Level 1

Probability

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

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BLOOMSMATH

Makes Maths Fun

Also Available in the Level 1 Program

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Fractions & Decimals
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Data
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Area
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Mass
Time
3D Shape
2D shape
Position

Probability

Level 1 is designed for students in their first year at school. The Probability strand allows students to recognise the elements of chance in given events.

Knowledge: Students play heads and tails as a whole class led by the teacher to recognise the elements of chance in this game.



Students who demonstrate proficiency in this activity move on to Comprehension.



Students stop here as they require additional teacher support to master this activity.

Comprehension: Students form small groups and play heads and tails again to recognise the continued elements of chance and that the number of players does not affect the outcome of the coin toss.



Students who demonstrate proficiency in this activity move on to Application.



Students stop here if time has run out or they require additional support with this activity.

Application: Students are given their own 2 sided disc and play heads and tails by themselves to test the elements of chance over 30 tosses of the coin.



Students who demonstrate proficiency in this activity move on to Analysis.



Students stop here if time has run out or they require additional support with this activity.

Analysis: Students must select the likelihood of events occurring and thus explore the language of chance using terms such as likely, unlikely, certain and impossible.



Students who demonstrate proficiency in this activity move on to Synthesis.



Students stop here if time has run out or they require additional support with this activity.

Synthesis: Students must select the appropriate level of chance for various events occurring from definitely will to might happen to definitely will not occur.

Evaluation: Suggested questions and activities provide a starting point for discussions related to Probability such as whether it is fair to give slower runners a head start in a race.



Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.



All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

Name: _____

Heads And Tails

By playing the game heads and tails you will learn that there is no real way of knowing what the outcome will be but you can estimate from the 2 options given - heads or tails.



Rules

You must circle either heads or tails in round 1 below. Your teacher will then flip a coin. If correct you get to continue in that round. If incorrect you must wait for the next round to start so you can play again.

Round	Circle Your Selection Heads or Tails					
1	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
2	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
3	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
4	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
5	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
6	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
7	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
8	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
9	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails
10	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails	Heads Tails

Probability - Level 1 - Students will recognise the elements of chance in given events.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation



Let's Try This Again



Progress To Comprehension

Name: _____

Small Group Coin Toss



Probability - Level 1 - Students will recognise the elements of chance in given events.

Knowledge

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Evaluation

In groups of four play four rounds of heads and tails using a red/yellow BloomsMath disc.

Be careful - if you all choose the same colour you will all be eliminated together but by choosing the opposite of other players at least one of you can win.

Player	Colour				
1	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
2	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
3	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
4	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Winning Player: _____					

Player	Colour				
1	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
2	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
3	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
4	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Winning Player: _____					

Player	Colour				
1	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
2	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
3	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
4	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Winning Player: _____					

Player	Colour				
1	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
2	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
3	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
4	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Winning Player: _____					



Let's Try This Again



Progress To Application



Name: _____

Personal Coin Flip

Toss your own red/yellow two sided BloomsMath disc 30 times and record how many times it is yellow or red. Compare your results with other students to see if one colour occurs more often or if they occur an even number of times.

Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow
Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow	Red or Yellow

How many Red? _____

How many Yellow? _____

Which colour occurred most often or where they even? _____

Could the coin flip up blue? _____ Why? _____

Could the coin flip up red every time? _____ Did it? _____



Let's Try This Again



Progress To Analysis

Name: _____

Will It Happen?

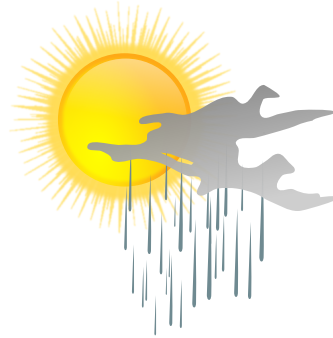
Circle the word which best describes each event's chance of happening.

It is likely or unlikely to rain this week.

It is likely or unlikely to rain this month.

It is certain or impossible that it will rain this year.

It is certain or impossible that it will never rain after today.



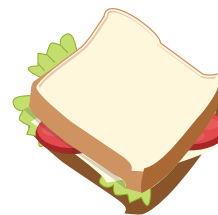
It is likely or unlikely that you will eat lunch today.

It is likely or unlikely that you will eat lunch at least once this week.

It is certain or impossible that you will eat fried worms for lunch.

It is certain or impossible that you will eat lunch at least once this month.

It is certain or impossible that you will never eat lunch again.

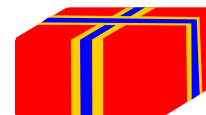


It is certain or impossible that you will receive at least one present for your next birthday.

It is likely or unlikely that you will receive 10 presents for your next birthday.

It is likely or unlikely that you will receive 1000 presents for your next birthday.

It is certain or impossible that you will receive no presents for your next birthday.



Probability - Level 1 - Students will recognise the elements of chance in given events.

Knowledge

Comprehension

Application

Analysis

Synthesis

Evaluation

BLOOMSMATH



Let's Try This Again



Progress To Synthesis

Name: _____

Ordering Probability

Place these events in order from 1- definitely will, 2 - might to 3 - definitely will not happen.

- Everyone in the class will have a birthday this year.
- No one in this class will have a birthday this year.
- Four people will have their birthday in the same month.

- Someone will get hurt today.
- You will get hurt today.
- No one will get hurt today.

- No one in the class will eat lunch today.
- Everyone in the class will eat lunch today.
- Someone in the school will not eat lunch today.

- Everyone in the class will be sick once this year.
- Everyone in the class will be sick on the same day.
- You will be sick sometime this month.

- If you blow up 10 balloons 2 will pop.
- If you blow air into a balloon it will shrink.
- If a full balloon hits a pin it will pop.

- If you dance in the rain you will get wet.
- If you have an umbrella you will stay dry in the rain.
- If you watch the rain from inside you will get wet.

- Everyone in this class will have a drink of water today.
- No one in this class will have a drink of water today.
- You will have four glasses of water today.

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

Probability - Level 1 - Students will recognise the elements of chance in given events.



Let's Try This Again



Progress To Evaluation

Probability Evaluation

The following questions and activities are provide as a starting point for fun discussions related to Probability. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the Probability activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.



What does it mean if an event has an even chance of occurring?



Is there anything you could do to make sure you win when playing Heads and Tails?



Is it fair to give slower runners a head start in a race?



How many rounds did there need to be in the 4 person coin toss to find a winner?



Suggest possible and impossible endings to popular stories. Such as Little Red Riding Hood left her grandma's house on a motorbike, ate the big bad wolf, ate her grandma, ate the woodcutter and ate the cakes she had brought for grandma.

