WORKSHEET 2

Activity - What's the Chance of Rain?

In this activity you will investigate the chances of getting low, normal or high rainfall during a Normal year.

Procedure

Work in pairs. Visit the following location on the internet:

Or cut out the pie chart given below and make a spinning top with it. Push a toothpick through its centre and then follow the instructions below and answer the following questions in the spaces provided below.

Background

The Normal Year wheel

Use the Normal Year wheel. In a Normal year the Bureau predicts a 33.3%* chance of getting high rainfall (Wet); that is like saying out of 100 spins it expects 33 to be 'Wet'. There is a 33.3% chance of normal and 33.3% chance of low rainfall (Dry).

*33.3% is said as ‘33.3 per cent’ - ‘per cent’ comes from the Latin language meaning ‘out of 100’. So it could also be read as ‘33.3 out of 100’.

Questions

Answer the following questions in the spaces provided.

1. Spin the Normal Year wheel and record the condition (Dry, Wet or Normal) that stops above the pointer. For each spin enter the result as a letter (D, W or N) in the table given below. Simply write one letter after the other, for example DDDNNDWD etc. Do this 100 times.

<table>
<thead>
<tr>
<th>Rainfall during a Normal Year</th>
<th>Enter results here.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet</td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>Dry</td>
<td></td>
</tr>
</tbody>
</table>

2. Add up all the D's, W's and N's and give total scores for each in the spaces provided below.
   Total D's out of 100 = …
   Total W's out of 100 = …
   Total N's out of 100 = …

3. The Normal Year pie chart is divided up into three equal parts. This means that each condition has an equal chance of landing on the pointer. Use the information from the web page http://www.bom.gov.au/lam/Students_Teachers/climprob/rainprbprim.shtml
to fill in the gaps and complete the following sentence.

*During a Normal year, there is a ..... chance of high rainfall. A ..... chance of low rainfall and a ..... chance of normal rainfall.*

4. You're about to play basketball or netball and you toss a coin to decide which goal each team will shoot for. Use the word 'chance' in a sentence to say why this is a fair way to decide. Write your sentence in the space below.

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**Extension Questions**

**Colours Pie Chart**

5. You want to find out what other students think the results will be if they were to spin the Colours Pie Chart given above. You want them to tell you what the chances are of each colour landing on the pointer. You also want to find out why they think so. Write down the questions you could ask. Use your own sheet of paper. Ask a few students to answer your questions and record their guesses and reasons in a table. Then write down what you would do to test their guesses.

6. One of the students that you surveyed in Question 5 says that after spinning the Colours Pie Chart above you will get the colours coming up in a sequence something like this: 1, 2, 3, 4, 1, 2, 3, 4 and so on, because they each have the same chance of landing on the pointer. How would you respond to this statement?

7. Do you think it is possible to spin the Colours Pie Chart 100 times without one of the colours landing on the pointer? Why do you think so?