**An Experiment with a Die**

**You will need a single die.**

**Make your own using the *Die Net***

**Online Dice:** <https://www.online-stopwatch.com/chance-games/roll-a-dice/>

Before we start, let's think about what might happen.

**Question: If you roll a die:**

* 1. What is the **lowest** possible score?
* 2. What is the **highest** possible score?
* 3. What do you think is the **most likely** score?

The first two questions are quite easy to answer:

* 1. The **least** possible score must be **1**
* 2. The **greatest** possible score must be **6**
* 3. The **most likely** score is ... ???

Are they all just as likely? Or will some happen more often?

Let us see which is most likely ...

**The Experiment**

**Throw** a die 60 times,
**Record** the scores in a tally table.

You can record the results in this table using tally marks:

|  |  |  |
| --- | --- | --- |
| Score | Tally | Frequency |
| 1 |   |   |
| 2 |   |   |
| 3 |   |   |
| 4 |   |   |
| 5 |   |   |
| 6 |   |   |
|   | Total Frequency = | 60 |

OK, Go!

**Finished ...?**

Now draw a bar graph to illustrate your results.

You can make your own.

You may get something like this

: 

* Are the bars all the same height?
* If not ... why not?

**Questions**

* Which face came up most often? \_\_\_\_
* Which face came up least often? \_\_\_\_
* Do you think you would get the same results if you did this again? Yes / No

An experiment gives results.

When done again it may give **different** results!

So it is important to know when results are **good quality**, or just **random**.