Worksheet 1: Serendipity
Mega Numbers

Google was launched in 1998 on capital of $1,000,000…
A year later with $25,000,000 of extra funds, it began its rise to the top.
By 2001, it was handling 100,000,000 queries a day…
The company now has an annual revenue of $30,000,000,000!

Undoubtedly you can read the words in the excerpt from *Serendipity* above - but can you read the numbers that have been included? The numbers with <u>six</u> zeros after them are all in millions, the last one, with <u>nine</u> zeros is in billions i.e. thirty billion.

Serendipity also tells us that the name of the 'Google' website was based on the word 'googol'. The term *googol* was actually invented in 1938 by a young boy named Milton Sirotta (who was reportably only eight or nine years old at the time). He was asked by his uncle (a mathematician named Edward Kasner) to think up a name for a very large number – one with a hundred zeroes after it. His reply: "Googol". When asked for the name of an even larger number, Milton replied, "Googolplex" which is equal to one with a googol zeros after it.

Task 1: Try to order the number names in the table below from smallest to largest without using any reference material.

million	duodecillion	octillion
centillion	quintillion	googol
quadrillion	googolplex	sextillion
nonillion	billion	decillion
octodecillion	trillion	septillion

When you have finished check your answers with help from an appropriate reference materials (such as the internet or a very large dictionary!)

Task 2: To what does the term milliard refer? Where did it originate?

Extension Activities:

What about other unusual mathematical units of measurement? Identify what terms these are referring to:

- light year
- dog year
- horse year
- galactic year
- horse power & donkey power

Research the history of one of the above units of measurement. When and why did it get its name? Where is it used?