# SUPPLEMENT
# MAKING SENSE OF THE NUMBERS & UNITS

The WWRB data table contains some unfamiliar terms. Fill out the table below to understand the units & numbers. You can also find resources on the Internet to help you understand what those units & numbers mean. For starters, you can check out the following:

- ☐ http://en.wikipedia.org/wiki/Cubic_metre
- ☐ http://www.kokogiak.com/megapenny/
- ☐ http://mathforum.org/library/drmath/sets/select/dm_million.html
- ☐ http://smile.oregonstate.edu/Photos/HSC/HSC_3.jpg
- ☐ http://www.phys.unt.edu/~klittler/demo_room/mech_demos/cubicmeter.jpg

## Part I.  Numbers

| 1 MILLION (M) | 1 BILLION (B) |
|---|---|
| 1 M seconds = _____ days | 1 B seconds = _____ days |
| | 1 B seconds = about___ years |
| **1 penny is 1.65 mm in thickness and 20.32 mm in diameter** | |
| 1 M pennies stacked in 1 pile = _____ metres high | 1 B pennies stacked in 1 pile = _____ metres high |
| 1 M pennies side by side = _____ metres long | 1 B pennies side by side = _____ metres long |
| MAKE YOUR OWN: | MAKE YOUR OWN: |

| 1 SQUARE KILOMETRE (km$^2$) | 1 CUBIC METRE (m$^3$) |
|---|---|
| Area of a typical football pitch <br> = 110 metres × 70 metres <br> = 7700 square metres (m$^2$) | 1 m$^3$ = 1000 Litres <br><br> 1 L = 0.26 gallon = 4.23 cups |
| **1 km = 1000 m** <br><br> 1 km$^2$ = _____ football pitch | 1 m$^3$ = _____ Litres <br><br> 1 m$^3$ = _____ gallons <br><br> 1 m$^3$ = _____ cups |
| **Area of Buckingham Palace =** <br> **= 108 m long × 120 m deep** <br> **= 12960 square metres (m$^2$)** | **Volume of 1 penny** <br> **= 1.65 mm × 20.3 mm × 20.3 mm** <br> **= 680 cubic mm (mm$^3$)if they are blocks instead of cylinders** |
| Buckingham Palace = _____ km$^2$ | It will take _____ pennies to fill 1 m$^{3.}$ |
| MAKE YOUR OWN: | MAKE YOUR OWN: |