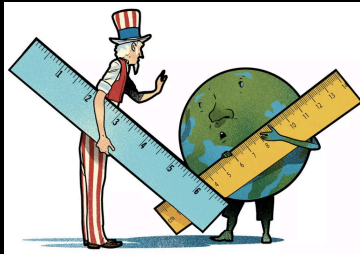


Metric System and Graphing Notes

I. A Common Measurement System

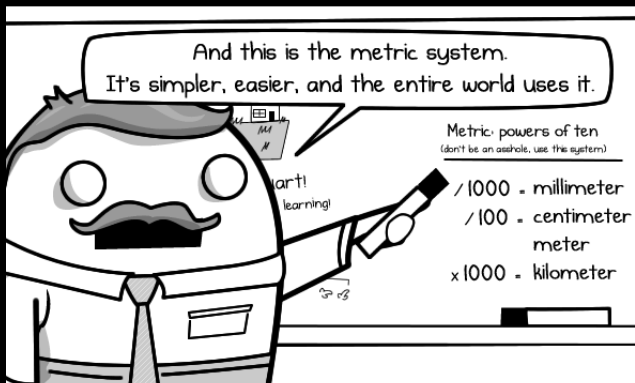
- A. Most scientists use the metric system when collecting data and performing experiments.



- B. **Metric system** – a decimal system based on multiples of 10, also known as International System of Units or SI.

1. Length: meter
2. Mass: kilogram
3. Volume: liter
4. Temperature: degrees Celsius

Why is it easier to use the metric system rather than standard measurements?



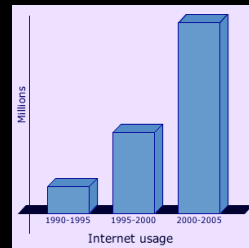
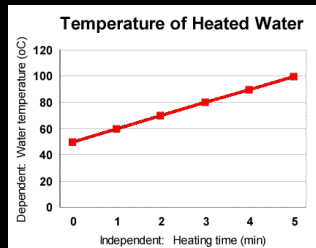
The Metric System Prefixes

| | | |
|-------|-----|-------------------|
| nano | n | 0.000 000 001 |
| micro | μ | 0.000 001 |
| milli | m | 0.001 |
| centi | c | 0.01 |
| deci | d | 0.1 |
| --- | --- | 1 |
| deka | da | 10 |
| hecto | h | 100 |
| kilo | k | 1 000 |
| mega | M | 1 000 000 |
| giga | G | 1 000 000 000 |
| tera | T | 1 000 000 000 000 |

II. Analyzing Biological Data

- A. Making graphs is the easiest way to understand and recognize patterns in data.

What attributes does a properly made graph have?



Try graphing the following data for an experiment on the affect of fertilizer on tomato plant growth:

| Amount of Fertilizer (mL) | Plant Height (cm) |
|---------------------------|-------------------|
| 0 | 10 |
| 1 | 12 |
| 2 | 13 |
| 5 | 15 |
| 10 | 21 |
| 20 | 6 |