**Lesson 2: Scalars and Vectors (Notes from http://www.science-spark.co.uk/ks5.html)**

**Definitions:**

* **Vectors are quantities with magnitude and direction**
* **Scalars are Quantities with magnitude only**

**Examples**

|  |  |
| --- | --- |
| **Scalars** | **Vectors** |
| **Mass, temperature, speed, distance, energy, power** | **Force, displacement, velocity, momentum, acceleration** |

**Adding:**

Vectors differ because they have direction as well as magnitude. Imagine a person walking a distance Disth from a from a point and then changing direction and walking a distance Distv; the vector diagram would look something like that below:

Disth

Distv

DistR

O

P

Adding Scalars: The total distance (scalar) travelled would be Disth + Distv

Adding vectors: The displacement (vector), which is the Resultant distance moved from O to P, would be DistR.