**Mass vs. Weight Activity**

\_\_\_\_\_\_\_\_\_\_\_\_ is the amount of matter in an object. It is measured in grams (g) and remains the same no matter where the object is.

\_\_\_\_\_\_\_\_\_\_\_\_ is a measure of the FORCE acting on an object. It is measured in NEWTONS (N)

|  |  |  |
| --- | --- | --- |
| Object Name | Mass (balance scale) | Weight (spring scale) |
|  |  |  |
|  |  |  |
|  |  |  |

\_\_\_\_\_\_\_\_\_ is the biggest force affecting weight. This means that weight can change depending on gravity.

[](http://catalog.pitsco.com/ImagePopup.aspx?reftype=1&refid=4280&defimg=2458&pop=1)

On Earth, how do we **calculate** the **weight** of an object?

**Loads & Forces**

**Loads**

* are **external forces acting** on a structure.
* There are **two types** of loads:

1. (aka LIVE loads) -

Examples:

1. (aka DEAD loads) -

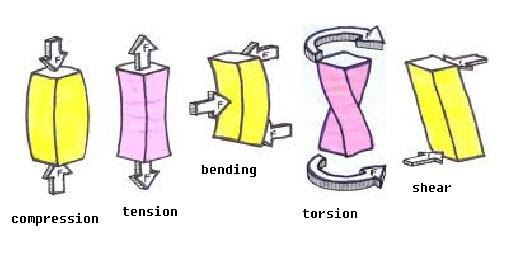
Examples:

**Forces**

* Any push or pull on a structure.
* There are 2 types

1. **External-**
2. **Internal-**

Can be further divided into 4 categories:

1. Compression
2. Tension
3. Torsion
4. Shear

\*\* Make flow chart or graphic organizer on the back of this page to help you remember these key ideas and the connections between them!\*\*