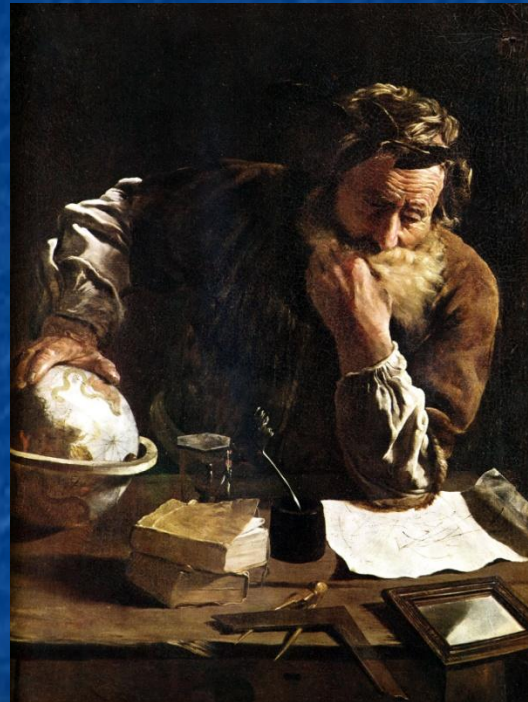


# Archimedes

*287 B.C. – 212 B.C.*



# Famous Quotes....

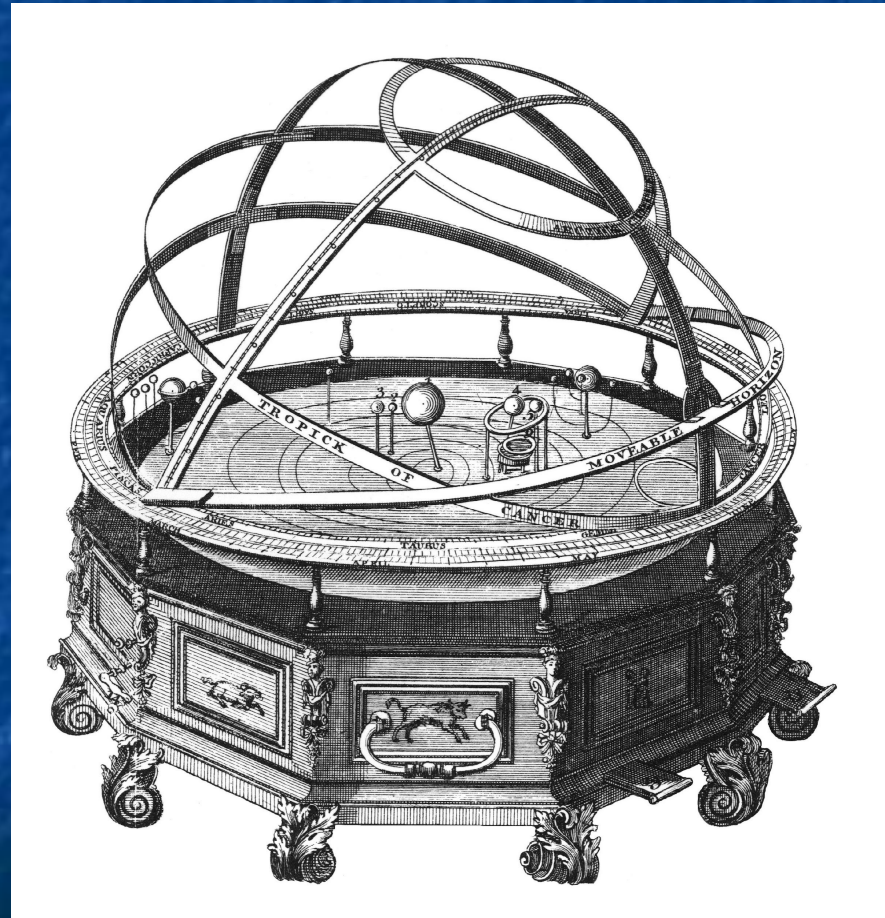
“Give me a spot where I can stand  
and I shall move the earth.”

“Eureka! Eureka! I have found it!”

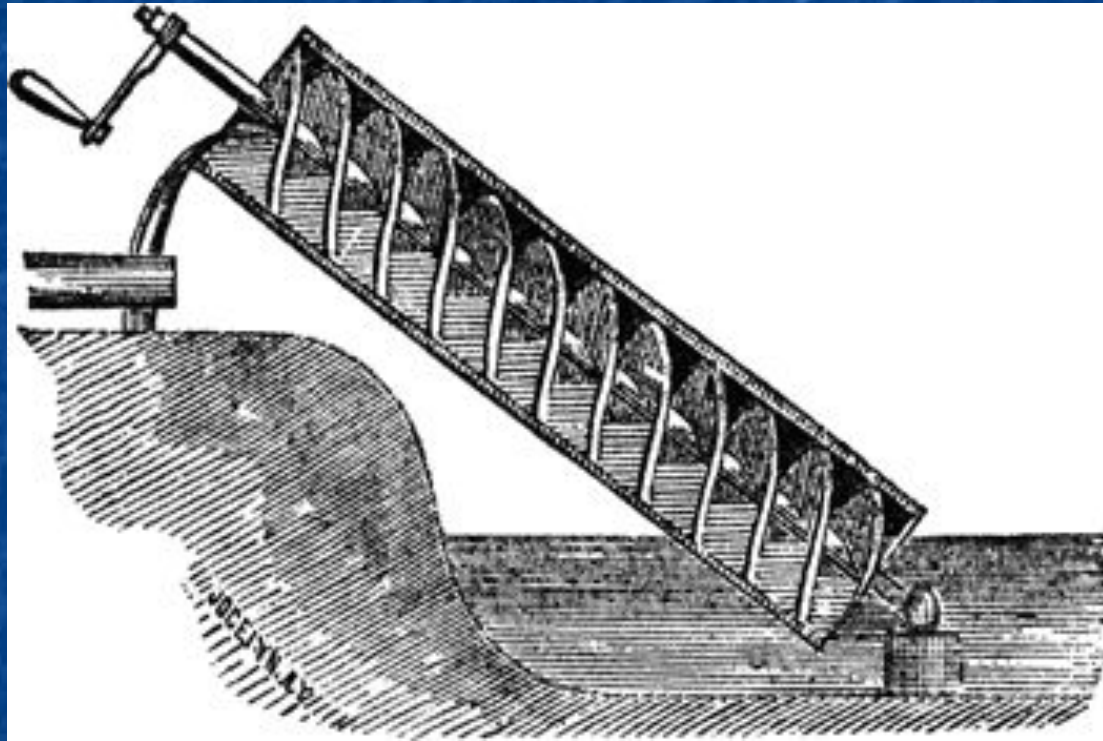
# Mini Planitarium

Archimedes created a mini planetarium that was mechanical and showed the motions of the sun, moon, and planets as viewed from the earth.

# Mini Planitarium



# Archimedes' Screw



# Archimedes' Screw

The purpose is to move water uphill to help with irrigation.



# Contributions:

- Crop irrigation and drainage/farming practices
- Remove water from ships so they would not sink (mechanical water pump)
- Move sludge
- Sewage plants (many substations send to main treatment plant)

# The Law of Hydrostatic or the Archimedes' Principle

What Archimedes stated:

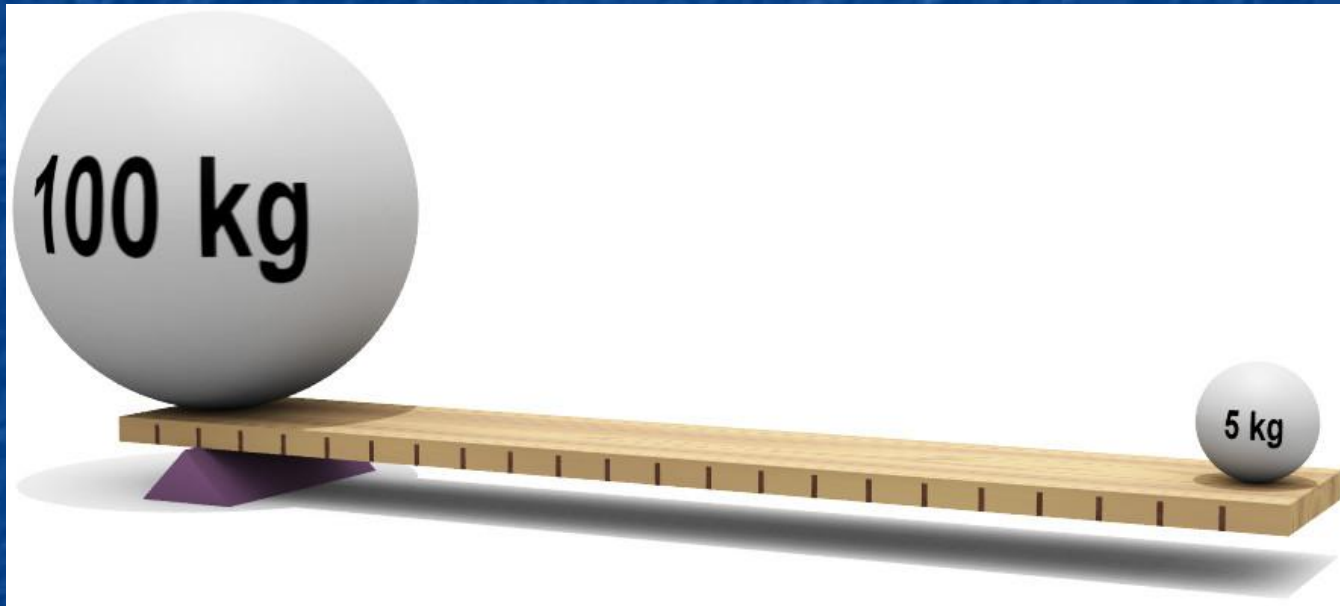
"Any solid lighter than a fluid will, if placed in a fluid, be so far immersed that the weight of the solid will be equal to the weight of the fluid displaced."



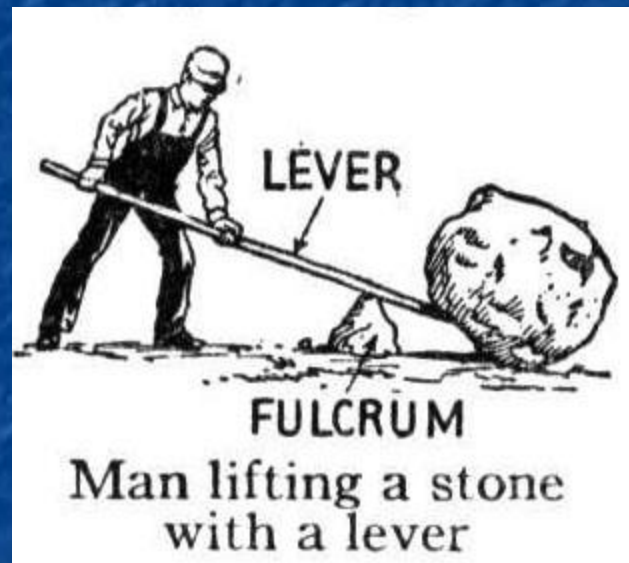
# Simple Machines: Law of the Lever

He was not the first to use the lever but he showed that the movement of the fulcrum influences equilibrium.

# Simple Machines: Law of the Lever



Law of the Lever – the closer the lever is to the fulcrum, the easier it is to move an object



# Contributions:

- Applied mechanics – moving from physical science theory to technology and it is used to explain the effects of items when force is applied  
(example: engineering)

# Contributed to Math

- Pi - Used a 96 sided polygon to determine that the value of pi was between  $3 \frac{10}{71}$  and  $3 \frac{1}{7}$ .

# Contributed to Math

## **Approximating the area of a circle**

He found the area of a circle by finding the area of smaller rectangles and adding them together.

This is termed the "**method of exhaustion**" and led to **integral calculus**, which is the study of the area figures and on the volumes of solids.