**The Scientific Revolution**

**Scientific Revolution**

* Scholars during the 1500s, began to question classical scientific ideas and Christian beliefs. This became known as the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.
  + **Revolution =** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* During this time period, people in Europe began to change the way they thought about the world.
  + Old way of Scientific thinking was based on the **\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - Aristotle thought the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_was the center of the Universe.
    - Nobody questioned him for 2,000 years!!

- New way of Thinking used \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_(not just faith) to explain the world.

**Scientific Method**

* During the scientific revolution, a step by step process that required scientists to collect and accurately measure data evolved called the **Scientific Method**.
* Steps of the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**:
  + State the Problem
  + Gather information about the problem
  + Form a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – an educated guess
  + Experiment to test the hypothesis
  + Collect, record, and analyze data.
  + Draw Conclusions
  + Share your conclusions and answer questions.

**4 Scientists Made Discoveries That Changed the World**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Copernicus**

* *Main Theory:* 
  + Wrote the *Revolutions of the Heavenly Spheres* in 1543.
    - The universe is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and revolves around the **\_\_\_\_\_\_\_**and not the Earth.
    - Most people STILL did not believe him!!
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** = a Danish astronomer provided evidence that supported Copernicus’s theories.

**Johannes Kepler**

* *Main Theory:* 
  + Planets move in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that are elliptical (oval) not round.

**Galileo**

* *Main Theory:*
  + Galileo built the first **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**and studied the planets and moon.
    - **Telescope** = magnifies distant objects and is used to study the skies (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
  + Galileo’s Theories caused an uproar with the church!

**Galileo’s Trial**

* The church condemned Galileo because his ideas \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the Christian teaching that the heavens were fixed in position to the Earth.
* In 1633, Galileo was tried before the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
  + Sentenced to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and silence
  + Threatened with death unless he said his theories were wrong (even though they were not!)

**Isaac Newton**

* *Main Theory*:
  + Discovered the force of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    - Used math to prove that gravity keeps the planets in their orbit moving around the sun.
  + Some say he greatest scientist who ever lived

**Other Important People…**

* **Vesalius** – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **William Harvey** – circulation of blood
* **Leeuwenhoek** – **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to see human cells and microorganisms.
* **Robert Boyle** - chemistry

**Consequences of Scientific Revolution**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of scientists formed
  + Royal Society
  + Papers were read and published
* Scientists subjected to critical audience
* Science accepted as the preferred method of getting "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"