Big Bang

* All energy and matter was compressed into something smaller than an atom
* Gravity occurred during the Big Bang to make planets start forming together
* BB created all matter
* Evidence
  + CMB, Redshift, Abundance of Light
  + Universe is still expanding

Milky Way (our position)

* Barred spiral galaxy
* Two major arms are Perseus and Scutum Centaurus
* Located on Orion Spur
  + Orion Spur is off Perseus Arm

Heliocentric (Sun Centered)

* Helio – Sun
* Centric – Center
* Copernicus Polish astronomer who proposed theory – he used some ideas from Ptolemy, but moved sun to center of ‘universe’ (he didn’t know there were other solar systems)
* Galileo proved Copernicus’ theory by observing Jupiter’s moons, and seeing the phases of Venus
  + Invented the telescope
* Kepler further proved Copernicus’ theory by using math to determine that the planets move on elliptical orbits

Geocentric (Earth Centered)

* Geo – Earth
* Centric – Center
* Evidence – could not feel the earth moving, sun revolved around the earth, moon revolved around the earth
* Aristotle, Greek philosopher, was first to develop model
  + Thought there was a ‘prime mover’ that made the planets orbit
* Ptolemy – evolved Aristotle’s model
  + Created epicycles to explain planetary movement

Size and order of the universe

* Biggest to smallest
  + Universe, super cluster, galaxy cluster, galaxy, solar system, planet