

# [Earth science cole #1](https://assignbuster.com/earth-science-cole-1/)

5 north circumpolar constellationsUrsa Major, Ursa Minor, Cassiopeia, Cephus, DracoUrsa Major representsThe great Bear, Big dipperUrsa Minor representsthe little bear, the little dipperCassiopeia representsthe queenCephus representsthe KingDraco representsthe DragonDescribe the geocentric theory of the universe held by many early Greeks. Earth is motionless at the center of the universe. The stars are attached to a CELESTIAL sphere that rotates daily around the Earth. There are 7 objects that move in front of the Celestial sphere. Name the 7 ojects that can be seen with the eye to move against the background stars. Planets= wanderer in Greek
Sun, moon, mars, mercury, jupiter, venus and saturnSunday SunOE. Sunnandaeg G. SonntagMonday MoonOE. Monandaeg G. MontagMars TuesdayOE. Tiwesdaeg G. DientagMercury WednesdayOE. Wodnesdaeg G. WennerstagJupiter ThursdayOE. Thunresdaeg G. DonnerstagVenus FridayOE. Frigedaeg G. FritagSaturn SaturdayOE. Saeterndaeg G. SamstagList the astronomical philosophers of the ancient GreekAristotle, Eratostheenes, Hipparchus, and PtolemyAristotleGeocentric Earth,
Motion requires a continued push or Pull,
Considered infallibleEratosthenesDetermined the diameter of the Earth using a well in Syene and a tower in Alexandria. 7degree angles. 24, 400 miles... now its 24, 900 miles VERY CLOSEHipparchusCatalogued the location of about 850 stars
divied the brightness of the stars into 6 groups (BASIS OF MAGNITUDE SYSTEM)
Measured the length of the year to within minuets of today's value
Developed a method to predict lunar eclipses.
Retrograde Motion- some planets appear to move backwards for a short whilePtolemyWrote the Almagest, a summary of astronomy
Developed a geocentric model that explained retrograde motion 1700 hundred years was true. What is the ecliptic? REFER TO SOMEONE ELSE? Describe the Ptolemaic model of the universe? Ptolemaic system is earth centered system of the universeWhat is retrograde motion to Ptolemythe apparent westward motion of the plants with respect to the stars. Star appears to be going backwards for a short whileNicolaus Copernicus1473-1543 Polish astronomer and mathematician
De RevolutionibusObjections to the heliocentric ideasTheologians still believe earth is center
counter to " common sense" cant find the wind of the earth moving
No parallax effect oberserved - stars should move in small closed loopsTycho Brahe 1546-1601made careful observations that were good to within 1-2 minutes of arc
Could not detect PARALLAX (it's to small to be seen with the unaided eye)Parallaxapparent shift of an object when viewed from two different locationsJohannes Kepler 1571-1630German astronomer who first stated laws of planetary motion (1571-1630) Very religious. Believed the creator had made an orderly universe, he spent much of his life looking for that order. Kelper's laws of planetary motion1. The planets orbit the Sun in ELLIPSES, with the sun at the one Focus.
Eccentricity, e= distance between FOCI/ Length of the major axis.
if e= 1 then shape is a line. if e= 0, then its a circle

2. A line joining the Sun and a planet sweeps out equal areas in equal times.

3. the square of the period of Revolution (P) is proportional to the cube of the average distance (R) of the planet from the sun
Pe= 1yr Re= 1 astronomical unit 1 A. U.

1A. U. the average distance from the sun to earthP and RPe= 1yr Re= 1 astronomical unit 1 A. U. What are the longest seasons? Summer and Spring are the longest seasons because the sun has farther to travelAphelionthe point in the orbit of a planet or comet that is at the greatest distance from the sun JULY 4perihelionthe point in the orbit of a planet or comet where it is nearest to the sun JANUARY 3Galileo Galilei 1564-1642the Father of modern science, process of science.
overthroew the authority of aristotle through observation and experiementation

1616- forbidded to teach the motion of Earth
1630- published Dialogue of the Two Great World Systems
1632- condemned by the Roman inquistion and sentenced to house arrest for the last 10 years of his life.

List and describe the three main objections to the heliocentric model of the universe at the time of Copernicus (De Revolutionibus)1. Stars are stationary [ Earth must rotate]
2. The sun is the center of the Solar system. [ Heliocentric model] EARTH REVOLVES AROUND SUN!!!!!
3. Planets move in perfect circles at constant speeds is now WRONG!!!! Retrograde motion proves this falseModern science is often dated to galileo, why? The process of Sciende, discovered inertia and made telescope 30 powerlist some of Galileo's significant discoveriesdiscovered Inertia

adovcated the copernican model because of its simplicity and logic

Made the first astronomical telescope
1. Discovered moon's around Jupiter 4 moons
2. planents are disks, not points of light like the stars
3. moon has mountains, craters, darker areas (Maria) (SEAS) thought the moon had bodies of water, but they were just the shadows
4. the milky Way is made up of many stars
5. the sun has dark spots= blemishes that move around the Sun, Sun moves too
6. Venus shows a full range of Phases and appears to vary in size, (expected in copernican (heliocentric model)

inertia(physics) the tendency of a body to maintain is state of rest or uniform motion unless acted upon by an external force.

Object in motions stays in motion

Isaac Newton... Kepler's law of motion... Describe Newton's three Laws of Motion... Differnce between rotation and revolution... what is a solar dayaverage time from noon to noon 24 hoursSidereal DayRotation of the earth with respect to a star 23hours 56 mins and 4 secsDescribe the characteristics lf the earth's orbit around the Sun... What does precession mean and what effect it producesThe wobble of the earth axis. Once every 25, 800 years. Vega won't always be in Lyra. Name and describe some characteristics of the moon and it's orbit around the EarthMore elliptical than the earth; s orbit around the sun e= 0. 055 vs. . 017)
Perigee- moon and earth the closest
Apogree- moon and earth are farthest away from eachother
238, 000 miles average distance between earth and moonLunar Sidereal monthrevolution of the moon using a star 27 1/3 daysSynodic Monthrevolution of the moon using the Sun 29 1/2 days WE USE THIS TO MEASURE A MONTH!!!! A lunar day is equal toa lunar night= 2 weeksUmbraa region of complete shadow resulting from total obstruction of lightPenumbraa fringe region of partial shadow around an umbracratersProduced by the impact of the meteroids. like bomb crater
Flooded with lava,
Ejecta- light colored material blasted out by moon. rayed CratersLOOK UP! How do Lunar highlands compare in age to the Maria basins? Lunar highlands densely cratered, brighter areas 4. 5 billion years old
Maria Basin Darker areas, relatively flat, large impact basins flooded with lava circular shape 3. 2-3. 8 billion years old. ONEARTH SCIENCE COLE #1 SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder Now