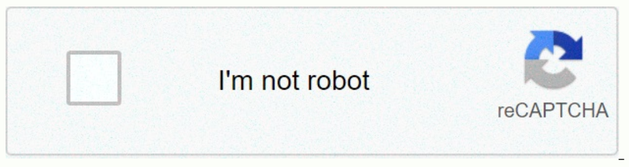

Continue

Cross section earth layers

Four layers of Earth consist of four different layers. Many geologists believe that as the Earth cooled heavier, denser materials sank in the middle and lighter materials rose up. Therefore, the crust is made of lighter materials (stone basals and granites) and the core consists of heavy metals (nickel and iron). The crust is the layer that you live in, and it is most widely studied and understandable. The coat is much hotter and has the ability to flow. The outer and inner cores are hotter yet the pressure is so high that you would be squeezed into a ball smaller than marble if you were able to go to the center of the Earth!!!!!! The earth's ass is like apple skin. It's very thin compared to the other three layers. The crust is only about 3-5 miles (8 kilometers) thick under the oceans (ocean crust) and about 25 miles (32 kilometers) thick beneath the continents (continental crust). Crust temperatures vary from the air temperature on top of about 1600 degrees Fahrenheit (870 degrees Celcius) to the deepest parts of the crust. You can bake a loaf of bread in your oven at 350 degrees Fahrenheit at 1600 degrees F. the stones begin to melt. The earth's crust is divided into many pieces called tiles. The plates float a soft, plastic coat, located below the crust. These tiles usually move smoothly, but sometimes they stick and build pressure. The pressure rises and the rock bends until it breaks. When this happens an earthquake is the result! Note how thin the earth's drought is compared to other layers. Seven continents and ocean plates hover mainly over the mantle, which consists of much hotter and denser material. The crust consists of two basic rock types of granite and basalt. The continental crust consists mainly of granite. The ocean crust consists of a volcanic lava rock called basalt. The basal rocks of ocean tiles are much denser and heavier than the granite rocks of continental tiles. That's why continents fly denser oceanic plates. The crust and the top layer coat together form a zone of stiff, fragile stone called the Lithosphere. The layer beneath the rigid lithosphere is an asphalt-like consistency called the Asthenosphere. The Asthenosphere is part of a mantle that flows and moves the plates of the Earth. The coat coat is a layer located directly under the sima. It's the largest layer on Earth, 1,800 miles thick. The coat consists of a very hot, dense stone. This layer of rock even flows like asphalt under heavy weight. This current is due to large temperature differences from the bottom to the surface. Moving the mantle is the reason that tiles on the Earth move! Temperature coat varies from 1600 to 1600 Fahrenheit at the top of about 4,000 degrees Fahrenheit near the north! Convection Hooved Coat is made of much denser, thicker material because it tiles float on top like oil floats in water. Many geologists believe that the mantle flows because of convection currents. Convection currents are caused by a very hot material in the deepest part of the coat rising, then cooling, drowning again and then heating, rising and repeating the cycle over and over again. Next time you heat something in a soup or pudding pan you can watch convection currents move into liquid. When convection flow the coat they also move the crust. The crust can be free to ride these currents. The conveyor belt factory moves the dew as the convection currents mantle moves the plates to Earth. The outer core of the Earth's core is like a very hot metal ball. (4000 degrees F. to 9000 degrees F.) The outer core is so hot that the metals are all in a liquid state. The outer core is located about 1,800 miles below the crust and is about 1,400 miles thick. The outer core consists of nickel and iron of molten metals. The Inner Core's inner core of the Earth has temperatures and pressures so high that metals are squeezed together and unable to move like liquid, but are forced to vibrate in place solids. The inner core starts about 4,000 miles under the crust and is about 800 miles thick. The temperature can reach 9,000 dgrees F. and the pressure is 4.5 million pounds per square inch. That's 3,000,000 times the air pressure you're going to have at sea level!!! Answer the following questions for your partner on the sheet of paper: If you need to look back to find answers to use page titles are located directly under the questions to help you. When you have finished the questions click on the Earth icon to return to the beginning of the program. 1. Name the four layers of the earth to get from outside the center of the Earth. 2. What causes the coat to flow? 3. What are the two main metals that make up the outer and inner cores? 4. Describe in your own words how the layers of Earth were formed. Four layers will help you. The inner structure of planet Earth, consisting of several concentric spherical layers of The Earth's structure, the Earth's internal structure is divided into concentric shells: the outer silicate crust, the highly viscous asthenosphere and solid mantle, the liquid outer core, the flow of which produces the Earth's magnetic field, and the solid inner core. Scientific understanding of the earth's internal structure is based on observations of topography and bathymetry, outcrop stone observations, samples brought to the ground from the higher depths of volcanoes or volcanic activity, analysis of seismic waves passing through the earth, gravitational and magnetic measurements. and experiments with crystalline solids at the pressures and temperatures characteristic of the Earth's deep interior. Mass Earth's gravity force can be used to calculate its mass. Astronomers can also calculate the mass of the Earth by observing the movement of satellites in orbit. The average density of the Earth can be determined by gravimetric experiments that have historically involved commuters. The mass of Earth is about 6×1024 kg. [1] Distribution of earth radial density according to the original earth model (PREM). [2] Earth gravity according to the original reference earth model (PREM). [2] Comparison with approximate values using the constant and linear density of the Earth's interior. Mapping the interior of Earth's earthquake waves. Schematic view of the Earth's interior. 1. Continental choir – 2. ocean crust – upper coat 3 – bottom coat 4 – outer core 5 – 6th inner core – A: Mohorovičić uninterrupted – B: Gutenberg continuity – C: Lehmann-Bullen uninterrupted. The structure of the earth can be defined in two ways: with mechanical properties, such as reology, or chemically. Mechanically, it can be divided into the lithosphere, asthenosphere, mesospheric mantle, outer core, and inner core. Chemically, the Earth can be divided into a crust, upper mantle, lower casing, outer core, and inner core. The geological component layers of the Earth are below the surface at the following depths:[3] Depth (km) Chemical layer depth (km) Mechanical layer depth (km) PREM[4] 0-80* Lithosphere 0-80* Lithosphere 0-35† Crust 0-10 ... Upper crust 10-20 ... Lower crust 20-80 ... COVER 35-670 Upper coat 80–220 Asthenosphere Asthenosphere 220-2890 Mesospheric mantle 220-410 400-600 ... Transition zone 600-670 ... Transition zone 670-2890 Lower coat Lower coat 670-770 ... Upper 770-2740 ... Average sub 2740-2890 ... Dkiht 2,890–5,150 External core 2890–5,150 External core 2890–5,150 External core 5150–6370 Internal core 5,150–6370 Inner core * Depth varies between 5 and 200 km †. Earth stratification is indirectly derived using the breakage caused by earthquakes and the time of travel of reflected seismic waves. The core does not allow shear waves to pass through it, while the travel speed (seismic speed) varies for other layers. Changes in seismic velocity between different layers cause snell due to the law of fracture, such as a slight bending when it passes through the prism. Also, reflections are caused by a large increase in seismic speed and are similar to light reflecting the mirror. Crust Main article: Earth drought Earth drought Is 5-70 kilometers (3.1–43.8 km) and it is the outer layer. [6] Thin parts are ocean crusts ocean pools (5-10 km) and consist of dense (mafia) iron magnesiumsilicate stones such as basalt. The thicker crust is a continental crust that is less dense and consists of (felsic) sodium-based aluminium aluminium stones, such as granite. The crust stones fall into two major categories – simasse and simasse (Suess, 1831–1914). It is estimated that the sima begins about 11 km below Conrad's uninterrupted (second-order interruption). The top coat with the crust form the lithosphere. The crust-coat boundary takes place in two physically different events. First, there is the uninterrupted seismic speed, which is most commonly known as Mohorovičić uninterrupted or Moho. The reason Moho is believed to be a change in rock composition stones contain plagioclafeldspar (above) that rocks that do not contain feldspars (below). Secondly, there is a chemical continuity in the ocean crust between ultramafitic cumulates and tectonized harzburgites, which have been observed in deep parts of the ocean crust, which have been removed from the continental crust and preserved as ophiolite sequences. Many rocks now form the Earth's crust formed less than 100 million (1×108) years ago; however, the oldest known mineral grains are about 4.4 billion (4.4×109) years old, indicating that the Earth has had a solid crust for at least 4.4 billion years. [7] Mantle Main article: Earth's mantle of the world map shows the position of Moho. The Earth's mantle reaches a depth of 2,890 km, making it the thickest layer on the planet. [8] The coat is divided into upper and lower coats[9] separated by the transition zone. [10] The lowest part of the coat next to the core-casing boundary is called the D (D-double-prime) layer. [11] Pressure at the bottom of the ≈140 GPa (1.4 Matm). [12] The coat consists of richer silica gel swings than the main crust of iron and magnesium. [13] Although the coat is a very hot silicate material can flow over a very long period of time. [14] Mantelli moves the movement of the clover's tectonic plates. The source of heat that drives this movement is the primordial heat left over from the planet's formation due to the radioactive decomposition of uranium, thorium and potassium in the Earth's crust and mantle. [15] Due to increasing pressure deeper in the coat, the lower part flows less easily, although chemical changes within the coat may also be important. The mantelviscosity ranges from 1021 to 1024 Pa·s, which grows in depth. [16] By comparison, the viscosity of water is approximately 10–3 Pa·s and the pitch's is 107 Pa·s. The main products: the earth's inner core and the earth's outer core The average density of the Earth is 5,515 g/cm3. [17] Since the average density of surface material is only about 3,0 g/cm3, we materials are present in the earth's nucleus. This result has been known since the Schiehallion experiment, which was conducted 17 {9}{5}70. Hutton estimated that this metallic part occupies about 65% of the earth's diameter. [18] Hutton's estimate of the average earth density was still about 20% too low, 4.5 g/cm3. Henry Cavendish's toration balance experiment in 1798 found a value of 5.45 g/cm3, within 1% of the modern value. [19] Seismic measurements show that the core is divided into two parts, a solid internal core with a radius of ≈1,220 km[20] and a liquid outer core extending beyond it ≈3400 km radius. The density in the outer core is between 9900 and 12 200 kg/m3 and in the inner core 12 600 to 13 000 kg/m3. [21] Inge Lehmann discovered in 1936 that he had been a member of the European Parliament. Since this layer is capable of transmitting shear waves (transverse waves), it must be certain. Experimental evidence is at times critical to the crystal models of the core. [22] Other experimental studies show a discrepancy between high pressure: rombiaed (static) studies at core pressure give a melting point that is approximately 2000 K lower than the impact laser (dynamic) studies. [23] [24] Laser studies create plasma[25] and the results suggest that limiting the conditions of the inner core depends on whether the inner core is solid or solid density plasma. This is the area of active research. In the early stages of Earth formation some 4.6 billion years ago, melting would have caused the center of denser substances to sink into a process known as planetary differentiation (see also iron catastrophe), while less dense materials would have migrated to the crust. Thus, the core is thought to be largely made up of iron (80%) with nickel and one or more light elements, while other dense elements, such as lead and uranium, are either too rare to be significant or tend to bind to lighter elements and thus remain in the crust (see nail materials). Some have argued that the inner core may be in the form of a single iron crystal. [26] [27] Under laboratory conditions, the iron-nickel alloy sample was pressed under cordial pressure, grabbing this shot between two diamond ends (diamond anvil cell) and then heating it to about 4000 K. The sample was x-rayed and strongly supported by the theory that the earth's inner core was made of giant crystals that ran from north to south. [28] [29] The liquid outer core surrounds the inner core and is thought to consist of iron and lighter traces mixed with nickel. Some have speculated that the inner part of the core is enriched with gold, platinum and other siderophilic elements. [30] The Earth's composition is very similar to certain ad generation of meteorites and even some elements of the outer part of the sun. [31] From 1940 onwards, the Commission has been a member of the European Union. This ignores the less abundant enstatite of the warts, which formed with very limited available oxygen, leading to certain usually oxyphile elements present in either partially or completely the melting part that corresponds to the core of earth. Dynamo's theory shows that convection in the outer core with the Coriolis effect creates the Earth's magnetic field. The solid inner core is too hot to hold a permanent magnetic field (see Curie temperature), but it is likely to stabilize the magnetic field generated by the liquid outer core. The average magnetic field of the earth's outer core is estimated to measure 25 Gauss (2.5 mT), which is 50 times stronger than a magnetic field on the surface. [33] [34] Recent evidence has shown that the earth's inner core may rotate slightly faster than the rest of the planet. In 2005, a team of geophysicists estimated that the Earth's inner core rotates about 0.3-0.5 degrees per year faster.; [35] [36] [37] 2011. Other possible movements to the core to be oscillator or chaotic. [quote needed] The current scientific explanation for the Earth's temperature gradient is the combination of heat left over from the planet's initial formation, the decomposition of radioactive elements and the freezing of the inner core. See also Geological History of Earth Lehmann Uninterrupted Rain-out Model Travel to the Earth Center Links ^ ME = 5.9722×1024 kg ± 6×1020 kg. 2016 Selected astronomical constants in astronomical Almanac on the Internet, USNO–UKHO ^ a . M Dziewonski, D.L. Anderson (1981). Initial comparison country model (PDF). Earth and Planetary Interior Physics. 25 (4): 297–356. Bibcode:1981PEPI... 25..297D. doi:10.1016/0031-9201(81)90046-7. Issn 0031-9201. In Gupta, Rough (ed.). Earth's geophysics encyclopedia. Springer Science & Business Media. 134–154. Isbn 9780048187010. In 2006, Thailand became the 1986. ZME science. 28, 2019 25 April 2017 Earth structure from crust to inner nucleus. 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