

Chapter 1 : What Would You Pack For a Trip To Outer Space? | Wonderopolis

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The first time I made something An Alibaba story Anybody who knows me knows that. It seems like such a simple, easy project at first glance, but to a year-old girl who had no idea what she was doing, it proved to be more challenging than I could have ever imagined. This time I wanted to jump into something a bit bigger and more challenging. I sent him a few e-mails asking for some advice and it gave me enough confidence to believe that I could make my own item as well. I had a few product ideas at this point, but none of them were good. I experimented with liquid rubber silicone and flame-resistant liquid plastics to try to create some plastic cigarettes that I could paint and test out. I tried to create my own custom silly bandz by using silicone caulking and liquid rubber silicones. I failed horribly as well. So I scrapped those ideas. It was literally a block of wood, painted black, and numbered. Definitely more of an art piece really, but once I saw that they were selling - and for a high price - it kind of interested me, and right away I Googled to see if someone else had made an item named something. So I decided I wanted to make something. I chatted with some friends about which route to take for the concept. I decided I wanted a chocolate-bar sized white plastic block with the word something engraved inside of it, presented in a nice little white box. I found a box template generator to create a quick box layout editable in Illustrator. I decided to try Rhino. I easily made a rectangular prism, and I found out how to bring in my text path, but it actually took me hours of Googling to figure out how to cut the text out of the block. Either way, after a small mental breakdown, I did it, and maybe it was the smallest accomplishment in the world but I was proud of myself. Most of them simply required an .STP file, all of which Rhino could create I believe. I had just months earlier learned that you could potentially get custom items made through it, and I started communicating with some manufacturers with questions. I had no idea what I was doing. And I was cool with that. I had decided I wanted to create somethings, but order 10 extra to leave room for flaws. While getting quotes, I learned about 2 methods that manufacturers were recommending to create my plastic blocks. The first was injection molding, which I was vaguely familiar with - the price per item becomes really low but the creation of the initial mold is very high. One of the higher quotes I received. The quotes were still pretty high! After many quotes, I settled for the cheapest one see price chart below which includes shipping etc. A couple weeks later I received it. It was a really nice off-white colour with just the right amount of opacity. Boxes Once I got my sample, I fitted my box template to perfectly fit that size. Once I had the. I wanted boxes just to be safe. A box quote that I received. They were super nice and sat down with me at their computers, fixed up my template to make the flaps lock, and printed off a quick sample to show me. After that, I ordered. I wanted to print a secret message inside the boxes. Captain Printworks gave me a free roll of special tape to start me off. Folding boxes takes a lot of time - and the tape is quite permanent. Once the unassembled boxes were ready, I went to pick them up along with the die used to create them which I get to keep and can reuse in the future for cheaper boxes if I wanted to. The die and some unassembled boxes it created. I got my Vistaprint stamp and started stamping the message on the inside. It took me a while to figure out a good system for this - I had to figure out which flaps should be closed first. I knew Paypal has purchase protection meaning they could refund your money if something went wrong. They gave me an estimated completion date of 1 month. A lot of miscommunication happened which is the case with almost every Alibaba communication I have ever made since then as well. I eventually smuggled them into my house. Sweet, my items are here! The plastic bars were 2mm thicker than the sample, which was what I used to create the boxes, half of which I had already assembled. There was a slight curve on each and every single one. Not only was the plastic more white, it was also more transparent and more soft and prone to scratches. They were not finished. They were not sanded or buffed or polished or anything. They literally just came out of the machine and had scratches and tiny little pieces of plastic feathering out from every corner and edge inside the letters. Although I ordered 10 extra blocks in case there were flaws, over 10 of them ended up having flaws, often big holes or extremely deep scratches. Comparing the sample to the bars I received. Alright, so I had to

problem solve now to try to salvage this project as much as I could. Firstly, I complained to the manufacturer about the problems. That was better than nothing. Moving on, instead of remaking the boxes, I opted to find a way to cut the 2mm off of each block. This would ensure they fit in the boxes, and it would also make the back perfectly straight so that they can at least sit flat on a surface. It was such a hassle, the plastic chips were everywhere, and I think it took 2 sessions - but we succeeded. Thanks for helping, Alex! Next up was hand-finishing. This was the most annoying part. I later tried using a Dremel to clean up the insides, but it would also make things worse. The best option was literally just buying a few different types of sand papers and sanding each block one by one with my hands. Detail shot of how the product arrived. After hand-finishing, I was happy enough with the way the somethings looked. I bought the domain asomething. I found a template close to what I wanted and customized it. I left one side blank for writing a personal note. I decided to go with Canada Post for shipping. I was using Paypal buttons. I also sold them on Amazon for a while, which had many more fees and required me to put even higher shipping prices on there. Breakdown of costs Here are the approximate costs of the entire project.

Chapter 2 : What are the odds there is life in outer space? | HowStuffWorks

10 Places on Earth that Feel Like Outer Space. Maybe it was a natural metaphor for the core, the source of things, like a lesson in the idea of the essence.

More Articles April 10, Less than human beings have made the ultimate journey of a lifetime into outer space. Leaving oceans and trees and delicious lattes is a sacrifice these astronauts have welcomed most of their lives, but a true sacrifice it is. Astronaut life is not for the faint-hearted, as the physical, mental, and emotional demands can be grueling. In fact, for many space-dwelling scientists and doctors, the time spent amongst the cosmos is life-changing in many ways. NASA via Getty Images Living life in outer space could certainly conjure up a host of different emotions, and for Jerry Linenger , that was absolutely the case. On the other side of the spectrum 2. Others feel very significant, just less god-like Mae Jemison felt some powerful emotions in space. I had as much right to be here. The morning cup of joe morphs into something quite different. NASA via Getty Images There something about the idea of recycling urine to brew up a cup of zero-gravity joe that is difficult to wrap a brain around. Yet, American astronauts do it. For clarification, Russian astronauts at the International Space Station refuse. How purposeful is human existence? Even if there is more, could Earth be as good as it gets? Earth may be as good as it gets We got pretty lucky with this planet. Astronaut Mike Massimino took his celestial trip on the Atlantis space shuttle in , and he slants towards life on other planets as being quite possible. A birds-eye perspective on the environment 6. Dramatic changes have taken shape on Earth Things have changed dramatically. NASA Climate change, deforestation, and the abuse of disposable plastics are all major environmental threats to Earth. But getting a true birds-eye view of it from outer space really sheds light on the severity of the problems. For Jeff Hoffman, who has visited space five different times, the progression of clearcutting the Amazon rainforest caught his attention in a big way. Maybe we are all the same. On one hand, a parent would have to be elated for the child, but on the other hand, terrified. As astronaut Nicole Stott found herself hanging out of a space station with only one hand, it dawned on her why her mother was a little nervous about her trip.

Chapter 3 : What is a good job if you like outer-space? | Yahoo Answers

Mint and Gold Hallway - would also look great in any feminine space like a dressing room! I like how you can see that the hallway is a different color than the room in front of it. Love the gold triangles and matching mirror.

Discovery[edit] In BCE, Greek philosopher Aristotle suggested that nature abhors a vacuum, a principle that became known as the horror vacui. This concept built upon a 5th-century BCE ontological argument by the Greek philosopher Parmenides , who denied the possible existence of a void in space. Likewise, the "sun, moon, and the company of stars float in the empty space, moving or standing still". In , he demonstrated that an established force resisted the formation of a vacuum. However, it would remain for his pupil Evangelista Torricelli to create an apparatus that would produce a partial vacuum in This experiment resulted in the first mercury barometer and created a scientific sensation in Europe. The French mathematician Blaise Pascal reasoned that if the column of mercury was supported by air, then the column ought to be shorter at higher altitude where the air pressure is lower. This decrease in pressure was further demonstrated by carrying a half-full balloon up a mountain and watching it gradually expand, then contract upon descent. He correctly noted that the atmosphere of the Earth surrounds the planet like a shell, with the density gradually declining with altitude. He concluded that there must be a vacuum between the Earth and the Moon. He believed that the Universe, while not infinite, could not be held as finite as it lacked any bounds within which it could be contained. He extended the Copernican heliocentric cosmology to the concept of an infinite Universe filled with a substance he called aether , which did not resist the motion of heavenly bodies. This form of aether was viewed as the medium through which light could propagate. However, the null result indicated something was wrong with the concept. The idea of the luminiferous aether was then abandoned. He showed that the star 61 Cygni had a parallax of just 0. This corresponds to a distance of over 10 light years. British physicist Arthur Eddington made a similar calculation to derive a temperature of 3. German physicist Erich Regener used the total measured energy of cosmic rays to estimate an intergalactic temperature of 2. At left is depicted the rapid inflation from the initial state, followed thereafter by steady expansion to the present day, shown at right. Big Bang According to the Big Bang theory, the very early Universe was an extremely hot and dense state about . About , years later the Universe had cooled sufficiently to allow protons and electrons to combine and form hydrogen—the so-called recombination epoch. When this happened, matter and energy became decoupled, allowing photons to travel freely through the continually expanding space. The present day shape of the universe has been determined from measurements of the cosmic microwave background using satellites like the Wilkinson Microwave Anisotropy Probe. These observations indicate that the spatial geometry of the observable universe is " flat ", meaning that photons on parallel paths at one point remain parallel as they travel through space to the limit of the observable universe, except for local gravity. The atoms account for only 4. Given the finite speed of light , this view covers the past 13 billion years of the history of outer space. Outer space is the closest known approximation to a perfect vacuum. It has effectively no friction , allowing stars, planets , and moons to move freely along their ideal orbits , following the initial formation stage. However, even the deep vacuum of intergalactic space is not devoid of matter , as it contains a few hydrogen atoms per cubic meter. Atmospheres have no clearly delineated upper boundary: Above this altitude, isotropic gas pressure rapidly becomes insignificant when compared to radiation pressure from the Sun and the dynamic pressure of the solar wind. The thermosphere in this range has large gradients of pressure, temperature and composition, and varies greatly due to space weather. However, the radiation of outer space has a different temperature than the kinetic temperature of the gas, meaning that the gas and radiation are not in thermodynamic equilibrium. There is quite likely a correspondingly large number of neutrinos called the cosmic neutrino background. For example, the corona of the Sun reaches temperatures over 1. This has been used to show ordered magnetic fields exist in several nearby galaxies. Magneto-hydrodynamic processes in active elliptical galaxies produce their characteristic jets and radio lobes. Non-thermal radio sources have been detected even among the most distant, high-z sources, indicating the presence of magnetic fields. A conjecture is that just such a scenario occurred early in the history of the Solar System, with potentially microorganism

-bearing rocks being exchanged between Venus, Earth, and Mars. Space exposure and Weightlessness
Because of the hazards of a vacuum, astronauts must wear a pressurized space suit while off-Earth and outside their spacecraft. The altitude where atmospheric pressure matches the vapor pressure of water at the temperature of the human body is called the Armstrong line, named after American physician Harry G. It is located at an altitude of around 10 km. At or above the Armstrong line, fluids in the throat and lungs boil away. More specifically, exposed bodily liquids such as saliva, tears, and liquids in the lungs boil away. Hence, at this altitude, human survival requires a pressure suit, or a pressurized capsule. Once the deoxygenated blood arrives at the brain, humans lose consciousness after a few seconds and die of hypoxia within minutes. Ebullism is slowed by the pressure containment of blood vessels, so some blood remains liquid. This pressure is high enough to prevent ebullism, but evaporation of nitrogen dissolved in the blood could still cause decompression sickness and gas embolisms if not managed. This can cause nausea and vomiting, vertigo, headaches, lethargy, and overall malaise. The duration of space sickness varies, but it typically lasts for 1-3 days, after which the body adjusts to the new environment. Longer-term exposure to weightlessness results in muscle atrophy and deterioration of the skeleton, or spaceflight osteopenia. These effects can be minimized through a regimen of exercise. Lesser symptoms include loss of body mass, nasal congestion, sleep disturbance, and puffiness of the face. Exposure to high-energy, ionizing cosmic rays can result in fatigue, nausea, vomiting, as well as damage to the immune system and changes to the white blood cell count. Over longer durations, symptoms include an increased risk of cancer, plus damage to the eyes, nervous system, lungs and the gastrointestinal tract. However, the impact of the cosmic rays upon the shielding produces additional radiation that can affect the crew. Further research is needed to assess the radiation hazards and determine suitable countermeasures. There are several standard boundary designations, namely:

Chapter 4 : Top 10 Strangest Things In Space - Listverse

I would like to learn how to cultivate food on other planets, and learn how to apply various medical treatments in space for emergency purposes. You might think that I'm super weird, and unprofessional sounding. but in this once in a lifetime opportunity I would absolutely love to be in Zero G overlooking a planet other than earth after.

Most science fiction writers throw in a planet with two stars that looks vaguely like Southern California, and call it a day. But the cosmos is a lot stranger than we give it credit for: These are big, fiery balls of gas rocketing through space at millions of miles per hour. Just try to imagine a huge ball of gas, four times the size of our sun, hurtling out from our galaxy at millions of miles per hour. This planet orbits a red dwarf star, many times smaller than our Sun, with a luminosity of only 1. This means that the planet is far closer to its star than we are to ours. The tidal locking of the planet alone results in some pretty odd features. Stepping out onto the star-side of the planet would immediately melt your face off, whereas standing on the opposite side of the planet, where there is no sun, would freeze you instantly. However, in between these two extremes is a small belt where life could theoretically exist. Living on Gliese c would have its challenges, though. The star it orbits is a Red Dwarf, which means that it is at the lower frequency end of our visible spectrum, bathing the entire sky of Gliese c in a hellish red color. Another side effect of this is the fact that photosynthesizing plants would have to adapt to the constant bombardment of infrared radiation, rendering them a deep black color. As one of the two bright stars from the Gemini constellation in our night sky, it has some serious luminosity. Three binary star systems orbit each other here, with two hot and bright A-Type stars being stuck in the system, as well as four M-type red dwarves. All together, though, these six stars put out roughly the same amount of energy as our sun. The gas cloud in question consists largely of ethyl formate, which is known to give raspberries their taste, and rum its distinctive smell. That hell-hole of a star that we visited earlier? Gliese b is, quite simply, a burning ice cube. The only reason this ice stays solid is because of the huge amount of water present on the planet; the gravity pulls it all in towards the core, keeping the water molecules so densely packed that they cannot evaporate. The huge diamond planet was once a star in a binary system, until its partner began to cannibalize it. However, the star was not able to pull its carbon core away, and carbon is just a ton of heat and pressure away from being a diamond—so at a surface temperature of degrees Celsius, the conditions are almost perfect. One third of the mass of the planet is said to be pure diamond, and whereas Earth is covered in water and abundant in oxygen, this planet is made mainly of graphite, diamond, and a few other silicates. The Himiko Cloud is the most massive object ever found in the early universe, and it dates to only million years after the Big Bang. But the kicker is that this black hole, twenty billion times the size of our sun, is constantly spewing out huge amounts of energy—equivalent to what would be produced by trillion suns. With that kind of power, you could even use that pesky seven-blade electric razor you have lying around! And we thought that our galaxy was big—this single lightning bolt is one and a half times the size of it. Well, what about a structure in space so enormous that it breaks the conventional laws for modern astronomy? Our galaxy, the Milky Way, is only one hundred thousand light years across. Think about that for a moment; if something happens on the far side of the galaxy, it would take a hundred thousand years for the light to reach the opposite end. That means that when we watch an event take place at the other end of our galaxy, it actually occurred when the human species was just beginning to form. Now, take that length of time, and multiply it by forty thousand. The cluster of seventy-four quasars actually breaks the rules of standard astrophysics, since the maximum size of any cosmic structure should be only 1. Scientists have absolutely no idea how this huge structure formed, since they had previously only been aware of other clusters of perhaps several hundred million light years across. The gargantuan structure absolutely spits on a certain physical law, which states that when viewed from a distance, the universe would look relatively uniform.

Chapter 5 : What does space smell like? Astronauts describe the unique scent - AOL News

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Chapter 6 : Space Thing () - IMDb

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Chapter 7 : Outer space - Wikipedia

While we can't smell anything in outer space because, as we mentioned, anyone attempting to do so would almost instantly die, what we can smell are the things that have come back from space.

Chapter 8 : Life in Outer Space: Astronauts Reveal What It's Like to Live in the Cosmos

Originally Answered: What exactly is it like to go to outer space? If you are willing to wait a bit, I have a book coming out this spring (). It discusses various aspects in reference to your question.