

Chapter 1 : Ask an Expert: Answers to Your Science Questions

Science is all about asking questions, and some of the most interesting and thought-provoking questions come from the imaginations of children.

What is an example of a dataset with a non-Gaussian distribution? What is the Binomial Probability Formula? Examples of similar data science interview questions found from Glassdoor: Programming To test your programming skills, employers will ask two things during their data science interview questions: They have an in-browser module for typing code, and they can walk you through tricky problems – all absolutely free. What are some pros and cons about your favorite statistical software? Describe a data science project in which you worked with a substantial programming component. What did you learn from that experience? Do you contribute to any open source projects? How would you clean a dataset in insert language here? Tell me about the coding you did during your last project? Explain how MapReduce works as simply as possible. Answer How would you sort a large list of numbers? Here is a big dataset. What is your plan for dealing with outliers? How about missing values? What do you like or dislike about them? What are the supported data types in Python? What is the difference between a tuple and a list in Python? For additional Python questions that focus on looking at specific snippets of code, check out this useful resource created by Toptal. There are insertion, bubble, and selection sorting algorithms. What are the different data objects in R? What packages are you most familiar with? How do you access the element in the 2nd column and 4th row of a matrix named M? What is the command used to store R objects in a file? What is the best way to use Hadoop and R together for analysis? Write a function in R language to replace the missing value in a vector with the mean of that vector. For example, you could be given a table and be asked to extract relevant data, filter and order the data as you see fit, and report your findings. If you do not feel ready to do this in an interview setting, Mode Analytics has a delightful introduction to using SQL that will teach you these commands through an interactive SQL environment. What is the purpose of the group functions in SQL? Give some examples of group functions. Group functions are necessary to get summary statistics of a dataset. If a table contains duplicate rows, does a query result display the duplicate values by default? How can you eliminate duplicate rows from a query result? For additional SQL questions that focus on looking at specific snippets of code, check out this useful resource created by Toptal. Modeling Data modeling is where a data scientist provides value for a company. Turning data into predictive and actionable information is difficult, talking about it to a potential employer even more so. Practice describing your past experiences building models – what were the techniques used, challenges overcome, and successes achieved in the process? The group of questions below are designed to uncover that information, as well as your formal education of different modeling techniques. Take a look at the questions below to practice. Tell me about how you designed the model you created for a past employer or client. What are your favorite data visualization techniques? How would you effectively represent data with 5 dimensions? How is kNN different from k-means clustering? K-means is a clustering algorithm, where the k is an integer describing the number of clusters to be created from the given data. Both accomplish different tasks. How would you create a logistic regression model? Have you used a time series model? Do you understand cross-correlations with time lags? Explain what precision and recall are. How do they relate to the ROC curve? Recall describes what percentage of true positives are described as positive by the model. Precision describes what percent of positive predictions were correct. The ROC curve shows the relationship between model recall and specificity – specificity being a measure of the percent of true negatives being described as negative by the model. Recall, precision, and the ROC are measures used to identify how useful a given classification model is. Explain the difference between L1 and L2 regularization methods. What is root cause analysis? What are hash table collisions? What is an exact test? In your opinion, which is more important when designing a machine learning model: How would you validate a model you created to generate a predictive model of a quantitative outcome variable using multiple regression? I have two models of comparable accuracy and computational performance. Which one should I choose for production and why? How do you deal with sparsity? What are some situations where a general linear model

fails? Do you think 50 small decision trees are better than a large one? When modifying an algorithm, how do you know that your changes are an improvement over not doing anything? Is it better to have too many false positives, or too many false negatives? Past Behavior Employers love behavioral questions. They reveal information about the work experience of the interviewee as well as information about the demeanor of any potential team member. From these questions, an interviewer wants to see how a candidate has reacted to situations in the past, how well they can articulate what their role was, and what they learned from their experience.

Chapter 2 : 50 Interesting Trick Questions and Answers That'll Make You Think Hard

An enduring tricky biology question, the actual hiccup is a strong contraction of the diaphragm - the organ responsible for our breathing. Just after the contraction we start to inhale which causes the glottis (a partitioning wall between the windpipe and oesophagus) closes the windpipe, causing the 'hic' sound.

Alamy 1 What is the universe made of? Astronomers face an embarrassing conundrum: Over the past 80 years it has become clear that the substantial remainder is comprised of two shadowy entities – dark matter and dark energy. The former, first discovered in 1933, acts as an invisible glue, binding galaxies and galaxy clusters together. Astronomers are closing in on the true identities of these unseen interlopers. Four billion years ago, something started stirring in the primordial soup. A few simple chemicals got together and made biology – the first molecules capable of replicating themselves appeared. We humans are linked by evolution to those early biological molecules. But how did the basic chemicals present on early Earth spontaneously arrange themselves into something resembling life? How did we get DNA? What did the first cells look like? Some say life began in hot pools near volcanoes, others that it was kick-started by meteorites hitting the sea. Astronomers have been scouring the universe for places where water worlds might have given rise to life, from Europa and Mars in our solar system to planets many light years away. Radio telescopes have been eavesdropping on the heavens and in 1974 a signal bearing the potential hallmarks of an alien message was heard. Astronomers are now able to scan the atmospheres of alien worlds for oxygen and water. The next few decades will be an exciting time to be an alien hunter with up to 60bn potentially habitable planets in our Milky Way alone. We do, however, have bigger brains than most animals – not the biggest, but packed with three times as many neurons as a gorilla 86bn to be exact. A lot of the things we once thought distinguishing about us – language, tool-use, recognising yourself in the mirror – are seen in other animals. Scientists think that cooking and our mastery of fire may have helped us gain big brains. The harder, more philosophical, question is why anything should be conscious in the first place. We spend around a third of our lives sleeping. But scientists are still searching for a complete explanation of why we sleep and dream. Animal studies and advances in brain imaging have led us to a more complex understanding that suggests dreaming could play a role in memory, learning and emotions. Rats, for example, have been shown to replay their waking experiences in dreams, apparently helping them to solve complex tasks such as navigating mazes. When they meet, both disappear in a flash of energy. Our best theories suggest that the big bang created equal amounts of the two, meaning all matter should have since encountered its antimatter counterpart, scuppering them both and leaving the universe awash with only energy. Researchers are sifting data from experiments like the Large Hadron Collider trying to understand why, with supersymmetry and neutrinos the two leading contenders. Our universe is a very unlikely place. Alter some of its settings even slightly and life as we know it becomes impossible. It may sound crazy, but evidence from cosmology and quantum physics is pointing in that direction. Now we have to put all that carbon back, or risk the consequences of a warming climate. But how do we do it? One idea is to bury it in old oil and gas fields. Another is to hide it away at the bottom of the sea. Our nearest star offers more than one possible solution. Another idea is to use the energy in sunlight to split water into its component parts: The hope is that these solutions can meet our energy needs. The fact you can shop safely on the internet is thanks to prime numbers – those digits that can only be divided by themselves and one. Public key encryption – the heartbeat of internet commerce – uses prime numbers to fashion keys capable of locking away your sensitive information from prying eyes. And yet, despite their fundamental importance to our everyday lives, the primes remain an enigma. An apparent pattern within them – the Riemann hypothesis – has tantalised some of the brightest minds in mathematics for centuries. However, as yet, no one has been able to tame their weirdness. Doing so might just break the internet. Antibiotics are one of the miracles of modern medicine. Yet this legacy is in danger – in Europe around 25,000 people die each year of multidrug-resistant bacteria. Thankfully, the advent of DNA sequencing is helping us discover antibiotics we never knew bacteria could produce. Our tablets and smartphones are mini-computers that contain more computing power than astronauts took to the moon in 1968. But if we want to keep on increasing the

amount of computing power we carry around in our pockets, how are we going to do it? There are only so many components you can cram on to a computer chip. Has the limit been reached, or is there another way to make a computer? Scientists are considering new materials, such as atomically thin carbon “ graphene “ as well as new systems, such as quantum computing. The short answer is no. Not a single disease, but a loose group of many hundreds of diseases, cancer has been around since the dinosaurs and, being caused by haywire genes, the risk is hardwired into all of us. The longer we live, the more likely something might go wrong, in any number of ways. For cancer is a living thing “ ever-evolving to survive. Robots can already serve drinks and carry suitcases. Ninety-five per cent of the ocean is unexplored. In , Don Walsh and Jacques Piccard travelled seven miles down, to the deepest part of the ocean, in search of answers. Their voyage pushed the boundaries of human endeavour but gave them only a glimpse of life on the seafloor. But on such scales quantum physics probably has something to say too. Except that general relativity and quantum physics have never been the happiest of bedfellows “ for decades they have withstood all attempts to unify them. We live in an amazing time: Our knowledge of what causes us to age “ and what allows some animals to live longer than others “ is expanding rapidly. And since many diseases, such as diabetes and cancer, are diseases of ageing, treating ageing itself could be the key. The number of people on our planet has doubled to more than 7 billion since the s and it is expected that by there will be at least 9 billion of us. Where are we all going to live and how are we going to make enough food and fuel for our ever-growing population? Maybe we can ship everyone off to Mars or start building apartment blocks underground. We could even start feeding ourselves with lab-grown meat. These may sound like sci-fi solutions, but we might have to start taking them more seriously. Time travellers already walk among us. At that speed the effect is minuscule, but ramp up the velocity and the effect means that one day humans might travel thousands of years into the future. Nature seems to be less fond of people going the other way and returning to the past, however some physicists have concocted an elaborate blueprint for a way to do it using wormholes and spaceships. The Big Questions in Science:

Chapter 3 : Top 12 Tricky Science Questions Answered | Owlcation

The third volume of Paul Kuttner's popular "tricky questions" series makes science fun for those who shy away from it and challenges those who consider themselves science know-it-alls: Why is the saline content of the Dead sea higher than that of.

Perfect for pre-teens and teens. They will sure find solving these challenging questions, puns, riddles, a sure fire fun activity. Go ahead, enjoy some great fun along with these mind teasers. These funny questions and riddles and answers are guaranteed to make you think, and will surely make you laugh as well. Adults will also find the below mentioned collection, interesting albeit funny. So, be ready for a spin. What is white and black, but red all over? Obviously, the newspaper [read all over! How can a door be not a door? When it is ajar [a jar! What made the lady run around her bed? So as to catch up on her sleep. Why did the house go to the doctor? Which road do ghosts linger? Why do fluorescent lights hum? Because they forgot the words. What did one campfire say to the other? Shall we go out tonight? Because she is still alive. What did the quilt say to the bed? I have got you covered. What happened when the tiny fortuneteller that escaped from jail? He was a small medium at large. Why are movie stars always cool? Because they have so many fans. What is the biggest problem with snow boots? What is round and extremely violent? What gets wetter the more it dries? What did the ocean say to the beach? Nothing, it just waved. Where can you find an ocean with no water? Why do you get if you cross a chili pepper, a spade, and a poodle? A hot-diggity-dog [a spicy hot dog! What kind of hair do oceans have? Why did the clown visit the doc? Because he was feeling kinda funny. What is brown and sticky? What is the name for a boomerang that does not return when thrown? What happens when you throw a white hat into the Black Sea? What only starts to work after it is fired? What common letter word is always spelled incorrectly? What do you find in the middle of nowhere? What did one commode say to the other commode? Well, you really look flushed. What gives you the power and strength to walk through walls? What is green and sings? Why did Superman cross the road? To get to the supermarket. What did the first volcano say to the second volcano? Do you lava me? Why is it cold on Christmas? Because it is in Decembrrrr. What kind of nails do carpenters or masons hate to strike? What happened when the magician got angry? He pulled his hare out. What always comes at the beginning of a parade? What do snowmen like to eat for breakfast? What do lawyers always wear to court? Did you hear about the human cannonball? What did the inventor of the door-knocker win? What happened to the woman who fell into the upholstery machine? She is fully recovered. What room has no walls? Two waves had a race. How did the scarecrow win the Nobel Prize? Mainly because he was out, standing [outstanding! Why did the cowboy ride his mule to town? Because, it was too heavy to carry. What goes up and down but never moves? What happened to the lion when he ate the clown? He felt funny, of course. Did you heard about the origami store? Why did the banker quit her job? Why was everyone so tired on the First of April? Because they had just completed a March of 31 days. Which is the fastest country in the world? What do you get when you throw a million books into the ocean? What is the coldest country in the world? What do you call a man in a hole? What do you call a woman standing on a tennis court? The waiter replies, "For you? A photon checked into a hotel and is asked if she needs any help with her luggage. No, I am travelling light. Want to hear a joke about potassium? Are there any good jokes about sodium? What are you supposed to do with a dead chemist? Why is the mushroom always invited to parties? Because he is a fungi. Enjoy and have a nice day. Was this article useful? What should we do to improve your experience?

Chapter 4 : PSLE Science: Electricity Trick Question

This is a tricky science trivia question. The answer isn't your head even though that's what most people think. You lose heat evenly throughout your body. In the winter, most of your body heat.

Tricky Questions A murderer is condemned to death. He has to choose between three rooms. Which room is safest for him? A woman shoots her husband. Then she holds him under water for over 5 minutes. Finally, she hangs him. But 5 minutes later they both go out and enjoy a wonderful dinner together. How can this be? What is black when you buy it, red when you use it, and grey when you throw it away? Can you name three consecutive days without using the words Wednesday, Friday, or Sunday? This is an unusual paragraph. It looks so ordinary and plain that you would think nothing was wrong with it. In fact, nothing is wrong with it! But it is highly unusual, though. Study it and think about it, but you still may not find anything odd. But if you work at it a bit, you might find out. Try to do so without any coaching! Answers to Tricky Questions The answers to all these five riddles tricky questions are mentioned below. That one was easy, right? The woman was a photographer. She shot a picture of her husband, developed it, and hung it up to dry. Charcoal, as it is used in barbecuing. Sure you can name three consecutive days: Would you like to be notified when new articles are added? Join over users who get fresh content from knowledge publisher. Subscribe to our feed and get instant notifications about new posts.

Chapter 5 : trick science questions~? | Yahoo Answers

This is one of the trickiest question types on the ACT Science section. And here is one of the hardest tough questions I've seen. Not only is the graph crazy, the question requires you to analyze four data points within the graph.

Try yourself with these trick questions or brain teaser questions. These will give a pretty hard time to your common sense because, most of the times, the questions are really silly and there is no correct answer to them. At other times, there is no logic behind these and the answer will make you laugh really hard. Some of the trick questions are funny while others are based on logic that you will turn a blind eye to. Trick questions are a fun way to kill time and have some good fun. Most of the kids have grown up playing these with each other and even making trick questions of their own. They are quite an entertaining source to test your common sense at times. Some people intentionally give funny answers to such tricky questions just to spark funny conversations among a group. Trick questions are best to have some workout for your brain and as they say, the more you use your brain, the more it gets sharp. So, here are some great trick questions for brain teasers to try your commonsense with. Momo, Meme, and Mumu are three of them. I have three apples. If you take away two from me, how many do you have? What breaks and never falls and what falls and never breaks? Day breaks and night falls. You have a match and you enter a wagon with a candle, a lamp and a fireplace. Which one do you light first? A family lived in a round hut. The father came back from work and found the mother dead. The first said he was watching television, the second said he was drawing, the third one said he was reading in a corner. A farmer had sheep and took one shot that got them all. How did he do it? He took a panoramic view! Which letter of the English alphabet flies, sings, and stings? It took 20, workers to build the Taj Mahal in 20 years. How many workers would be required to build it in 10 years? Sorry, the Taj Mahal cannot be built again. Which one is correct? My neighbor Bob is a blacksmith. He is 45 years old, 7 ft. Guess what does he weigh? You have 20 apples in a basket. You want to give all the apples to each one of them, but still keep one inside the basket? How will you do it? Give all the 19 apples to each one of them and give the basket to the last child with the apple still inside it. How many sides does a circle have? An inside and an outside. If there are 12 fish and half of them drown, how many are there? A man went outside in the pouring rain with no protection, but not a hair on his head got wet. How can a man go eight days without sleep? No problem, He sleeps at night. Before Mount Everest was discovered, what was the highest mountain in the world? Mount Everest was still the highest even though it had not been discovered. Exactly the same as today. An electric train is moving north at mph and a wind is blowing to the west at 10mph. Which way does the smoke blow? There is no smoke with an electric train. Why is it against the law for a man living in North Carolina to be buried in South Carolina? What looks like half an apple? A girl kicks a soccer ball. It goes 10 feet and comes back to her. How is this possible? She kicked it up. A man and his son were in an automobile accident. The man died on the way to the hospital, but the boy was rushed into surgery. The surgeon was his mother. A rooster laid an egg on top of the barn roof. Which way did it roll? A truck driver is going down a one-way street the wrong way, and passes at least ten cops. Why is he not caught? What happened when wheel was invented? It caused a revolution. The garbage truck Question: What two words, when combined hold the most letters? A is the father of B. But B is not the son of A. What can you never eat for breakfast? There was an airplane crash, every single person on board died, but yet two people survived. The two were married. If you had only one match, and entered a dark room containing an oil lamp, some newspaper, and some kindling wood, which would you light first? If there are 6 apples and you take away 4, how many do you have? The 4 you took. It was a Sunday morning. Father was getting the mail, mother was in the kitchen cooking breakfast, little brother was playing Nintendo, big brother was playing the guitar, little sister was playing with dolls, and big sister was listening to music. Then everyone went into big sisters room and she was murdered! The father because it was a Sunday and no one gets mail on Sunday! What do you call a woman who knows where her husband is every night? How many legs does an elephant have if you count his trunk as a leg? If a plane crashes on the border between the US and Mexico, where do they bury the survivors? Survivors generally are never buried. If it took eight men ten hours to build a wall, how long would it take four men to build it? No

time at all it is already built. How much dirt is there in a hole 3 feet deep, 6 ft long and 4 ft wide? How can you lift an elephant with one hand? How many birthdays does the average person have? Just one, all the rest are anniversaries. Hope we gave a good exercise to your brain for some time while trying to solve these trick or tricky questions aka common sense questions. You can create your own too and challenge your fellows at school or office in order to get a break from your tiresome schedule. These trick questions will surely keep you energetic and your brain muscles to be engaged and more fit. You will get stuck at times and want to beat yourself up but the feeling is enthralling for sure and you will be more relaxed eventually. So, tag your friends here or share these trick questions or brain teasers with them and have a great time making them feel puzzled. Since there is not a single answer to these questions so you can always change the trick to make them feel crazy. You can entertain yourself by making them uncomfortable while enjoying a good laugh with these tricky questions in the meantime.

Chapter 6 : www.nxgvision.com - Trick Questions

Science's Trickiest Questions has 4 ratings and 0 reviews. What a hoot! Try a few. What is unique about a grunion? How many limbs do centipedes have? Of.

Space holds a fascination for young and old alike - this hub looks at four tricky space questions. Answered , I decided to do a follow up. As with my first list, each question has a straightforward answer, followed by a slightly fuller explanation and, where necessary, a link or video for more information.

Why Does Ice Float? When water freezes, it expands see why here. Due to this expansion, ice is less dense than water, and so floats on top! Imagine what would happen to life if ponds froze from the bottom up The principle of ice expanding can be demonstrated in a simple experiment. Get two transparent plastic cups and half fill them with water. Put cling-film over the top of both to prevent evaporation. Place one cup in the freezer and wait a few hours. The cup you placed in the freezer will be at a higher level than the water. As you know you started with the same amount of water, the water must have expanded. Something that is less dense than water cannot push the water atoms out of the way and so floats on top. Rocks are much more dense than water and can easily push water molecules out of the way - this allows them to sink

2. How does a Jet Engine Work? For every action there is an equal and opposite reaction A Jet engine works on the principle of suck, squeeze, spray, spark, blow

Explanation: In brief a jet engine: Uses a turbine to suck air in suck Uses a compressor to compress this air squeeze Injects Fuel into the compressed air spray Ignites this fuel spark Blows the expanding gases out of the back of the engine blow

Source 3. The Moon can appear red for several reasons. In desert regions dust can scatter the light reflected from the moon, giving it a reddish quality. Far more spectacular, however, is a Lunar Eclipse. This light gets reflected back off the Moon, giving a red colour. This means more red light is reflected back towards Earth. Many of the different colours the Moon appears to take on are due to the filtering effects of our atmosphere. Read More Here

The Moon can appear larger and smaller due to the effects of perspective technically called the Ponzo Illusion. When the Moon is high in the sky, you have nothing to give you a sense of scale. When the moon is close to the horizon, you can compare it to trees and buildings. Next time you see the Moon out, hold out your hand with your thumb up. The moon should be neatly covered by your thumbnail. Try the same trick when the Moon appears large - your thumbnail will still neatly cover it. As was pointed out, there is much more to the Ponzo illusion than mere scale. Check out this link , courtesy of scottcgruber, which explains it in full.

Are Humans Still Evolving? Most scientists agree that the human race is still evolving. We may bicker about the driving force of evolution, but as long as mutations can enter the human gene pool, the possibility for change evolution persists

Explanation: This is quite a contentious issue. The weak are no longer getting weeded out by natural selection. This does not, however, mean that evolution is not occurring - merely that natural selection is not driving it. When combined with high rates of migration, huge population size and promiscuity, mutations are actually entering the human genome at an unprecedented rate. People are also getting better at choosing mates based on intelligence, athleticism, physical health etc. This may mean that advantageous mutations are selected for. This may even be accelerating the rate of human evolution, as new mutations have plenty of opportunities to become fixed in a population. Most experts agree that all species are continually evolving - just at different rates. As long as there are mutations in the genetic code, there is the possibility for change. Sustained change, whatever the driver of this change, will always result in evolution.

How Big is Space? The Universe is on a scale that can barely be imagined. Fortunately, this is what we have special effects departments for. The video opposite can give you an inkling of the the vastness of the universe, as well as the scale of the microscopic world. The original video is still amazing and well worth a look. Have you been told the seaside smells like it does because of the salt? This chemical is used to make clouds, and flavour food. This chemical is made by plankton tiny organisms living in the sea. We are not sure why these organisms do this though! Read More Here

7. A burp is nothing but a noisy release of gas - just like a fart! Where does this gas come from? Most of this gas is just air that we have swallowed whilst eating. The rest usually comes from fizzy drinks - the bubbles in these drinks are carbon dioxide gas The excess gas escapes the stomach, travels up the food pipe oesophagus and exits via the mouth. The sound is made by the speed at

which this gas travels. A Hiccough or hiccup is completely different. From the science museum website, a hiccup is: The "hic" noise comes when the breath is cut off by the snapping shut of your glottis - which is like a fleshy lid or trapdoor that separates the food and air tubes in your throat. [Read More Here](#) 8. Helium is six-times less dense than air. This allows sound waves to travel through the helium much faster, causing a squeaky voice. Pretty much what is said in the video Sound is caused by the vibration of particles in a solid, liquid or a gas. The pitch of a sound is almost entirely related to how quickly the sound wave makes the particles vibrate. High pitched sounds are caused by fast moving sound waves; low-pitched sounds are caused by slow moving sound waves. Our sound waves for speech are made in the voicebox. If we fill this box with a gas of a different density to air, sound waves can travel through it at different speeds, creating different pitches. Because light from these galaxies takes so long to reach us, we are looking back in time to the very beginnings of the Universe. But space is not as crowded as this image makes it appear [What is Space Made Of?](#) If you take a look at the video above you can see that, zoomed right out to the edge of the visible universe, most of space is empty blackness. But space also contains everything, everywhere! It all depends on your perspective. Are you talking about: That is pretty empty Whilst the Deep Field Image opposite may make space look rather crowded, take a look at how much of the picture is still black. If you define space as everything that is not Earth, the space is made up of Everything, Everywhere in the Universe But then, the Universe is said to be in space If that made your head hurt, chew on this: They are made of billions of particles of ice, dust and rock. These particles can be as small as a grain of sand or as large as a house. The rings are huge, but very thin - the largest ones can be up to , miles wide, but only metres thick. But where did they come from? These pieces kept colliding making smaller and smaller pieces. Which answer interested you the most? Why does ice float? Why does the Moon sometimes look different?

Chapter 7 : - Sciences Trickiest Questions Questio by Paul Kuttner

question: A 10 foot rope ladder hangs over the side of a boat with the bottom rung on the surface of the water. The rungs are one foot apart, and the tide goes up at the rate of 6 inches per hour.

Show Punch Line Answer: Billie was born on December 28th, yet her birthday always falls in the summer. How is this possible? Billie lives in the Southern Hemisphere. In South Africa you cannot take a picture of a man with a wooden leg. If you were running a race and you passed the person in 2nd place, what place would you be in now? You would be in 2nd place. You passed the person in 2nd place, not 1st. Is it legal for a man living in North Carolina to be buried in South Carolina? No, because he is alive. A farmer has five haystacks in one field and four haystacks in another. How many haystacks would he have if he combined them all in one field? If he combines all his haystacks, they all become one big stack. A guy is condemned to death. He has to choose a room. Which room is the safest? Eskimos are very good hunters, but they never hunt penguins. Which is heavier, pounds of rocks or pounds of feathers? They both weigh the same pounds. Would it be ethical for a man to marry the sister of his widow? Since he has a widow, he must be dead himself. Which is correct to say, "The yolk of the egg is white" or "The yolk of the egg are white? Egg yolks are yellow, not white. What has a head and a tail but no body? An electrician and a plumber were waiting in line for admission to the "New England Home Show". How could this be possible? They were husband and wife. Some months have thirty days while others have thirty-one days? Which month has twenty-eight days? All months have 28 days in them. A woman shoots her husband. She then puts him underwater for 5 minutes. Finally, she hangs him. She is a photographer. When do you stop at green and go at red? If there are 12 fish and half of them drown, how many are there?

Chapter 8 : Science Brain Teasers With Answers | Genius Puzzles

Science's Trickiest Questions by Kuttner, Paul. Barnes & Noble. As New in As New dust jacket. Hardcover. Binding and pages of book clean, square and tight.

Contact Author Source Science is all about asking questions, and some of the most interesting and thought-provoking questions come from the imaginations of children. They can be staring out of a window and then drop such bombshells as: Fortunately, we live in the age of information, with answers just a few clicks away. The important thing is to never dismiss or dodge these questions. This inquisitive nature passes by all too quickly. If you are unsure of an answer, seek it out with your child! Children crave parental attention, and this is a great opportunity for you to spend time together while learning something new. Here are some of the science questions I am asked quite often, particularly by my younger students. Each question and their related questions have simple answers and, where necessary, a link for more information. Why does the moon appear in the daytime? How much does the sky weigh? How much does the Earth weigh? How do airplanes stay in the air? Why is water wet? Where do birds go in the winter? Why is the ocean blue? Why is the sun the only star that can be seen during the daytime? Blue sky over a green hillside. Why Is the Sky Blue? The sky looks blue but really it is made up of all the colours of the rainbow. Each of these colours has a different wavelength. Some of these are smoother while others are choppy. Blue light waves travel in short, choppy waves. Because the colour blue has the shortest wavelength, it collides with nearly everything in its path and is scattered about the sky. This is why the sky appears blue. Blue light travels in short, choppy waves whereas red light travels in long, smooth waves. If not for nitrogen and the short wavelength of the colour blue, the sky might be a different colour. Is the Sky Blue Because of the Ocean? No, the sky is blue because blue light waves have a short wavelength, causing this colour to get caught in the sky as it collides with gases and other particles. What Is the True Colour of the Sky? The sky has no true colour. While most of the time it is blue, sometimes it is not. It can often be pale blue, gray, or even white. The reason for this is pollution. Below is a table listing the different colours the sky the cause of its changed colour. Colour of the Sky Causes Deep blue sky This colour means the sky is very clean. This often occurs when a cold front brings clean air from the north, or when clean air from the ocean moves onto land. Medium blue sky This colour means there is lots of water vapor in the sky. It can also suggest the presence of sulfur from coal-burning operations. Lastly, it may be caused by the chemical emissions of plants and trees, such as those found in The Smokey Mountains of North Carolina and Tennessee. Pale or milky-white sky This colour indicates considerable air pollution from coal-burning power plants or chemical power plants. This condition often occurs in the summer when the air is still. There are also natural causes, such as volcanic activity or ocean plankton. Gray or dark gray Smoke from forest fires or agricultural burns can cause the sky to appear this colour. Brown or brownish orange Emissions from cars and trucks can cause a layer of this colour to form over the horizon. The main component of this kind of pollution is nitrogen dioxide. The colours of the daytime sky and the causes of its varying colour. Is the Sky Purple? Simply by looking up, we can see that the sky is indeed blue and not purple. It is true that violet is being scattered in the sky much like blue, but our eyes are not refined enough to see every colour of the spectrum. The sky is dominated by wavelengths between nanometers violet and nanometers blue. When mixed together, our eyes are only able to see the dominant colour: Why Is the Sunset Red or Orange? According to the science magazine Scientific American, the sunset is reddish because "when the sun is setting, the light that reaches you has had to go through lots more atmosphere than when the sun is overhead, hence the only colour light that is not scattered away is the long wavelength light, the red. Moon sighting during the day. Why Does the Moon Appear in the Daytime? The moon does not produce its own light. We can only see the moon when light coming from the sun is reflected off of its surface. The visibility of the moon during the daytime also depends on its angle and its distance from Earth. The reason we can see the moon and not stars during the day is because the sunlight reflected off of the the moon makes it , times brighter than the brightest star in the sky. A full moon only happens when the sun shines on the face of the moon unobstructed by the Earth. Thus, you cannot see a full moon during the day. Currently, there is no

scientific name for when the moon is out during the day. How Long Is a Day on the Moon? A day on the moon is equal to This means from sunrise to sunset on the moon, How Much Does the Sky Weigh? The Earth has a surface area of million square miles. With atmospheric pressure being an average By that measure, the sky weighs equal ,,, adult Indian elephants. If we were to have grown up on another planet with less air, the weight of the air surrounding Earth might fatigue us. Luckily, that is not the case. How Much Does the Earth Weigh? The Earth weighs 5. However, the Earth technically weighs nothing, because weight depends on the gravitational pull acting on an object and the Earth is floating in space. If the entire human population stepped on a scale, the weight would be million tons or billion pounds , according to a study by the London School of Hygiene and Tropical Medicine. Those who are overweight in the world carry a total of 16 million tons of extra weight, the equivalent of million normal-weight people. How Do Airplanes Stay in the Air? Planes stay in the air because of the shape of their wings. Air moving over the wing gets forced downwards, which pushes the wing up. This push is stronger than gravity, and so makes the plane fly. This is a very technical subject that the video below deals with very nicely. As air moving over the wing gets forced down, there is an equal and opposing force generated. This is a combination of the bottom of the wing getting pushed up, and the top of the wing getting pulled up. Can an Airplane Stand Still in the Air? An airplane cannot stand still in the air. This is a rule outlined by the laws of physics. Everything is always falling, but an aircraft can appear to stand still in the air by stabilizing its altitude. A helicopter, for example, appears to stand still in the air as its propeller pulls the aircraft up at the same rate gravity pulls it down. An airplane, too, can appear to stand still if there is a strong headwind coming towards it that keeps it in place. Can an Airplane Go in Reverse? Airplanes can in fact go in reverse. They a "thrust reverser" which changes the direction of the spinning blades in the thruster so that air is thrust forward instead of back. Airplane pilots usually only use this function for stopping once they land. When an airplane backs out of a gate at an airport, it relies on the use of tow cars to push it onto the runway. If the pilot were to engage the thrust reverser while parked in the gate, the amount of force coming from the thrusters would damage the airport as well as the people and vehicles on the ground. Water is not wet. Why Is Water Wet? What we feel as wetness is actually coldness as the water evaporates.

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Science brain teasers presents puzzles related to scientific facts. These puzzles helps us to gain more knowledge about science in a much more interesting way. So start playing and gaining knowledge.