ASK MR. SCIENCE!

SECRETS OF THE UNIVERSE REVEALED AT LAST!

Now, from the pages of BCSFAZINE, the monthly publication of the B.C. Science Fiction Association, comes this special Westercon 44/V-CON 19 edition of the collected answers by Mr. Science to questions concerning life and the true nature of the universe.

For information on joining this fine organization, write to the B.C. Science Fiction Association, P.O. Box 35577, Stn. E, Vancouver, B.C., V6M 4G9.

Ms. SC, of Burnaby, B.C., asks:
What are cosmic rays?

Cosmic Rays are distant relatives of the Manta Ray, and swim in the great sea between the stars. Although immense by terrestrial standards, they are curious and gentle creatures, and have brought harm to no one. They are very tenuously constructed, however, and when they accidentally fall into the earth's atmosphere they shrink tremendously in size, until they can only be detected by cloud chambers or other sophisticated apparatus. They are killed, of course, when they strike the ground at high speed, and it is feared this species will someday become extinct.

Mr. AB, of Surrey, B.C., asks:
What are conservation laws in science?

It was felt that it would be best if quantities of certain kinds of things in the universe remained constant. Hence parliament passed, in 1873, what are known as the "Scientific Conservation Laws." A little-known conservation law is Conservation of Adipose Matter. This law states that if you go on a diet and lose weight, someone else must gain it, in order that the total amount of fat in the universe remains constant. So the next time you selfishly want to look and feel better by dieting, remember the harm you are inflicting upon some unsuspecting innocent person, who is probably a friend of yours.

Ms. LB, of Burnaby, B.C., asks:
Why is the sky blue?

The present colour of the sky is caused by an accumulation of the traces of blue aniline dyes produced by the burning of tobacco in cigarettes. As the foul habit of cigarette smoking is stamped out, and photo-destruction of these insidious dyes takes place in the upper atmosphere, the sky will slowly return to its normal, beautiful salmon pink colour.

Mr. DG, of Burnaby, B.C., asks:
Why does sound not travel through a vacuum?

This is actually just another old wives' tale. Sound does indeed travel through a vacuum, but cannot pass through the boundary between the vacuum and the air. The very large difference in Index of Acoustical Refraction of vacuum and air causes the sound to be totally reflected at the interface, and hence it appears, falsely, that sound will not traverse a vacuum. Indeed, to those creatures which live in vacuum, it appears, for the same reason, that sound cannot travel through air.

Ms. FS, of Burnaby, B.C., asks:
What is electricity?

Beginning students of electricity are taught an analogy between the flow of electricity through a wire and the flow of water through a pipe. This is closer to the truth than most scientists believe. There is a great deal of empty space between the atoms of a metal, and it is through this empty space that the electric fluid flows. A non-conductor does not conduct the electric fluid because there is far less empty space available between its atoms or molecules. The function of the rubber or plastic insulation on a wire, incidentally, is simply to keep the electric fluid from leaking out of the sides of the wire, thereby making slippery puddles on the floor.

Ms. DM, of North Vancouver, B.C., asks:
Why are rocks so hard?

Although they may appear to be inanimate objects, rocks are in reality very slow moving, rather unintelligent animals with very thick skins. Because they move so slowly they have developed some interesting defense mechanisms. First, rocks do not taste good and most creatures that try eating one do not repeat the experiment. Second, rocks do not like to be sat upon. If you sit on one it will become tense, its skin getting harder and harder until you finally have to move. By the way, when rocks are in a hurry they simply crawl into streams where the water acts as a lubricant, allowing them to slide along the ground more quickly.

Ms. NB, of Richmond, B.C., asks:
What does my bank teller mean when she says "the computer is down?"

What most people think this means is that the computer is located in the basement. This is not correct. When people first started inventing computers they did not realize that they were creating silicon based life-forms. Like other living things, those made of silicon are very temperamental and inherently unreliable. Computers, for instance, "crash" all the time (this is why programmers "boot" them). A computer with a hard disk is said to be "up." A computer with a soft (floppy) disk is said to be "down." Your teller doesn't know any of this, of course. What she means when she says the computer is down is "go away, it's my coffee break time."

Mr. PS, of Campbell River, B.C., asks:
Why does the smoke from a campfire always follow me, no matter which side of the fire I go to?

All smoke, whether from campfires or cigarettes, is attracted by the homeopathic diamagnetism emitted, in one degree or another, by almost all people. If you and a friend stand on opposite sides of a campfire, or cigarette smoker, the smoke will seek out the one of you with the stronger personality. Genghis Khan and Adolph Hitler were well-known smoke attractors.

Mr. MC, of Sydney, B.C., asks:
What are the Nobel Prizes?

The Nobel Prizes are to science what the Academy Awards are to the movies. They are awarded in various categories, such as "Best Male Scientist," "Best Female Scientist," "Best Scientist in a Supporting Role," "Maddest Scientist," "Best Foreign Scientist," "Most Expensive Government Project," "Most Destructive Military Scientific Development," etc. The 1983 Nobel Peace and Quiet Prize was awarded to the Sony Corporation of Japan for the invention of the Walkman.

Ms. DM, of Coquitlam, B.C., asks:
Why does my cat have extra toes?

Cats have four toes and a dew-claw on each foot. The creature you describe is, in actuality, the larval form of the Sasquatch, or Bigfoot. In the spring of its fourteenth year your "pet" will seek out a very secure hiding place, where it will spin a dense cocoon around itself. It will emerge six weeks later, a fully formed Yehti, only 40 cm. tall.

Mr. SM, of Vancouver, B.C., asks:
What is gravity?

The popular belief that Sir Isaac Newton invented gravity in 1687 as a means of more easily getting apples out of his tree has held back a true understanding of the nature of gravity for three centuries. The modern idea that gravity is an attractive force from within the mass of the Earth has no more validity than the former view. Gravity is, in fact, a repulsive force directed at us from outer space by aliens who are attempting to prevent us from leaving our planet to explore the universe. If it were not for their semi-successful efforts, we would be able to travel in space, as they do, in vehicles no more complicated than hot-air balloons.

Mr. JM, of Vancouver, B.C., asks:
How can one prevent contact lenses from fogging, now that the cold, wet weather is here?

If, before inserting the lenses, one will first rub the entire front surface of both eyeballs with the cut end of a potato, fogging will be prevented. A further benefit of this method is that less grease will be required to fry the potato afterwards.

Mr. GB, of Vancouver, B.C., asks:
Was the 1939 Worldcon the first SF convention?

According to the final con report prepared by Aristophanes and published in ALPHAPA, the first science fiction convention was held in Socrates' garden early in 399 B.C. The Pro Guest of Honour was Plato, Fan Guest of Honour was Thucydides, and Praxiteles was Artist GoH. The Bacchanal featured imported Persian belly dancers. First prize in the costume judging was won by Dionysius The Elder, who, dressed as Icarus, suffered minor burns when he accidentally backed into an illuminating torch. The banquet caterers unfortunately served hemlock blintzes, with tragic results as we all know.

Mr. CH, of North Vancouver, B.C., asks:
Why do Alka-Seltzer bubbles sound so loud on the Saturday morning following F.R.E.D.?

In order to prevent the bubbles formed by dissolving Alka-Seltzer in water from accumulating at the bottom of the glass, each tablet is coated with thousands of extremely tiny stainless steel springs, which serve to launch each newly formed bubble towards the surface with high velocity. These fast rising bubbles are shot into the air above the water's surface where they explode with a cannon-like sound. This, combined with the heightened awareness of one who has experienced the intellectual stimulation and camaraderie of a F.R.E.D. (Forget Reality, Enjoy Drinking) gathering, results in the fact behind your question.

Mr. VF, of Vancouver, B.C., asks:
Why, when a lighted match is held above a smoking candle, does the flame flash down the trail of smoke and relight the candle?

When the universe was told, seventeen billion years ago, "Let There Be Light," no one ever said "OK, That's Enough." As a result the universe has gone on, to this day, trying to produce light at every opportunity.

Mr. SE, of Burnaby, B.C., asks:
Why do hair stylists call them "perms," when they only last a few months?

In keeping with his glasnost compatible policy of knowing all and telling all, Mr. Science will answer this question even though it is more an economic than a scientific one. The only thing permanent about a "perm" is the money that many people are willing to to keep throwing inside the hair stylist's door. There is but one truly permanent method of hair style preservation: complete epoxy encapsulation of the patron's head, but this has a major, undesirable side-effect.

Ms. FH, of Vancouver, B.C., asks:
Why do cats make that strange coughing sound when observing birds?

Cats, unfortunately, are the victims of a major genetic defect. While stalking, they attempt to decoy their prey by imitating the birds' chirping vocalization. But because of a severe error in all cats' sense of hearing caused by this genetic mutation, their imitation of chirps comes out as a growling cough. They do not respond to being called by their names for the same reason.

Mr. DW, of Ladner, B.C., asks:
Do I capture a person's soul when I take his or her picture with my camera?

It is no longer possible to capture a human soul by photographic methods. In the very earliest days of Daguerrean photography, 1837 to 1840, stealing souls photographically was quite common, since exposure times of 20 to 30 minutes in bright daylight were easily long enough to weaken struggling souls to the point where they could be drawn in through the lens. Early improvements in the art of photography, which resulted in shorter exposure times, ensured that even slightly recalcitrant souls could escape capture. Modern methods, with their extremely short exposures, have made it impossible for souls to be taken, since even those eager to leave their hosts cannot move quickly enough to reach the camera before the shutter has closed.

The first person in history to have his soul stolen photographically. Paris, 1837.

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Mr. GS, of Vancouver, B.C., asks:
Will there be chicken in outer space?
(This is a condensation of GS's original question, which occupied fourteen pages of typewritten text.)

All life on Earth is descended from microbes in the excrement of a race of chicken-like aliens which visited here 3.26 billion years ago. What we will find in outer space is the result of a large number of evolutionary changes in these creatures. They are not likely to take kindly to being considered as candidates for the frying pan.

Mr. LM, of North Vancouver, B.C., asks:
Why does looking at the sun make one sneeze?

The Solar Sneeze is a distorted racial memory of Sun Worship. An acquaintance of Mr. Science always, when looking at the sun, sneezes three times, not more, not less. This is the result of the ancient priests so often exhorting their followers to "give three cheers for the Sun." Ra! Ra! Ra!

Mr. RGC, of Vancouver, B.C., asks:
Why, despite the world's rivers emptying millions of tons of water into the oceans every day, does the average sea level always remain the same?

The basic idea of the Earth having a molten core is correct, but the presumed liquid is not. The Earth's hollow core has been filling, not with molten iron, but with water. The remaining empty space is small, and calculations indicate it will be filled about the begining of May, 1988. Sea level will then begin to rise. U.B.C. is high enough that V-CON 16 will not be affected, but V-CON 17 will probably have to be held at the top of Grouse Mountain.

Mr. SF, of Coquitlam, B.C., asks:
Are perpetual motion machines possible?

Perpetual motion machines of the 37th kind (the first 36 kinds were all fraudulent) have recently been constructed which weigh 50 kg., develop 150 horsepower, and work by extracting energy from vortices in the luminiferous aether through which the universe is moving. Knowledge of the existence of these machines has been suppressed by the International Oil Cartel, and they will be "invented" only when the oil supply has dwindled to almost nothing.

Mr. RWS, of Coquitlam, B.C., asks:
Why do the bubbles in my beer always start at the same height in the glass, and what does this have to do with Quark Quantum Chromodynamics?

This unique property of beer, called the Plimsoll Effect, is caused by the presence, in all beers, of strongly radioactive heavy isotopes, which quickly settle to the bottom of the glass. The alpha particles emitted by these isotopes are, of course, the nuclei of helium atoms. These helium nuclei capture electrons when they slow down, and form minute bubbles of helium gas, which rise through the beer, coalescing into ever larger bubbles until they finally become visible at the Plimsoll Line. The connection with Quark Quantum Chromodynamics is perfectly obvious, and will not be discussed here.

Ms. MM, formerly of Bellingham, WA, asks:
Why does my TV set briefly display a white dot in the center of the screen when I turn it off?

Your set was designed by an electronics engineer who, in his spare time, was a fervent student of English grammar. The white spot is the equivalent of the period at the end of a sentence.

Mr. DH, of Vancouver, B.C., asks:
Why is it that essential food groups are called "staples?"

In the 1870's those items said to be "the four essential food groups," (i.e., preservatives and artificial colors, salt, sugar, cholesterol) were shipped in large boxes with lids held in place by U-shaped metal fasteners, so that they could be inspected. Government examiners were sent to "pull the staples," thus giving rise to the expression.

Mr. KJ, and Mr. JH, both of Victoria, B.C., ask:
Why do fools fall in love?

Fools, that is, all persons with an IQ of under 157, lack the observational capacity to recognize pheromonal and chemical attraction for what it is, and instead believe themselves to be "in love." Incidentally, the answer to that other often asked question, "does love make the world go 'round?" is no. But it does make it go up and down a little.

Mr. WCSAAL, of Burnaby, B.C., asks:
Why is it so warm at SF club meetings?

The extreme acceleration of mental activity required to keep up with the constant, high-speed flow of remarkably intelligent ideas and concepts at these gatherings is made possible by a major increase in the brain's consumption of blood-borne organic compounds derived from the alkanes, particularly ethane, by the substitution of one hydroxyl radical for one hydrogen atom. This results in a 5 degree Kelvin temperature increase in the upper part of the body. Incidentally, Mr. Science recommends, as an energy saving measure, the universal use of the Kelvin system of temperature measurement, since even the most cold-blooded person will hesitate to turn up the furnace when told that room temperature is 293 degrees.

Ms. LS, of Port Moody, B.C., asks:
What does the groundhog do for the rest of the year?

As your question so correctly points out, the groundhog's employment prospects are highly seasonal in nature. All the rest of society owes a large debt of gratitude to the groundhog, since it was for the benefit of this creature, which makes such an invaluable contribution to the science of weather prediction, that unemployment insurance was created.

Many have written to ask:
Where did Mr. Science learn all he knows?

If Mr. Science were to divulge this information he, like the groundhog, would be unemployed most of the year. He has stated, however, that the secrets of the universe cannot long withstand the intense probings of one imbued with curiosity and uncommon sense.

Mr. EH, of Vancouver, B.C., asks:
What is spring fever?

An infection by the antibiotic resistant micro-organism "vernal-bacterium equinoxii" is responsible for this disease. The major symptoms are an unusual sensitivity to cloudless skies and a slight irritation of the joints of the limbs, which can only be relieved by walking to and fro while making sweeping motions with the upper torso. Fortunately, this infection is of short duration, and recovery is generally complete.

Ms. BD, of Vancouver, B.C., asks:
Can I become ill by talking with a sick person on the telephone?

You cannot catch bacterial diseases in this manner. Viruses, however, are small enough to pass through the interstices in the telephone wire. They will be driven along by the undulating electric current at about half the speed of sound. This means that you are safe for about ten seconds for every mile between you and the infected person with whom you are speaking.

Mr. DF, of New Westminster, B.C., asks:
Why do I get a shock after walking across a rug on a dry day?

The currently popular TV commercial showing the destruction of a rug by "carpet critters" forms the basis of the explanation of this common phenomenon. One of the large variety of "carpet critters" is a close relative of the electric eel, which, preferring a great deal of moisture, understandably becomes annoyed on dry days. You, disturbing it even further by walking across the rug, become the target of its electric anger.

Ms. RR, of Coquitlam, B.C., asks:
Why is it necessary to measure the speed of light so accurately?

In this world of perpetually changing ideas, concepts and values it is very comforting to scientists to be able to measure something which never varies. The best current measurement, incidentally, is as follows:

$$C = 1.80261775 \times 10^{6} \text{ furlongs per microfortnight.}$$

Mr. CB, of Vancouver, B.C., asks:
Should I avoid cooking with aluminum pots?

Mr. Science assumes that you are referring to the purported connection between aluminum and Alzheimer's disease. Since aluminum occurs with greater abundance in the Earth's crust than any other metal it is difficult to... What was the question again?

A MR. SCIENCE INFORMATION ALERT!

A new use has been found for Gor novels. At a very recent local convention Mr. Science was assigned a room in which the bed was tilted in several directions simultaneously. Not wishing to sleep with his feet higher than his head, or in peril of rolling onto the floor, Mr. Science discovered that the judicious placement of three Gor novels, specifically, two copies of "Captive of Gor" and one of "Tribesmen of Gor," successfully levelled the bed. It is believed that other Gor books will work equally well.

Ms. KFM-F, of Edmonton, Alberta, asks:
Why is the sky of Mars so orange? (Originally answered at V-CON 16)

Mars is, of course, a colder world than ours, and no longer has any surface water. What water there is in the atmosphere of Mars exists as very small wind polished crystals of ice at an altitude of 5000 to 8000 meters, where these crystals act as a gigantic diffuse mirror, reflecting the colour of the red iron oxide Martian surface.

Mr. TH, also of Edmonton, Alberta, asks:
What is spontaneous human combustion?

This rare phenomenon is the result of the ignition of carbon monoxide gas exhaled by persons with certain metabolic disorders. Amazingly, it has actually been captured on film. In the 1937 motion picture "Way Out West" the right thumb of co-star S. Laurel can be seen bursting into flames no less than three times! Luckily for Mr. Laurel, as well as those who appreciate the remainder of his film career, he sustained no serious injury.

Mr. KJ, and Mr. JH, both of Victoria, B.C., ask:
What would happen if a volcano accidentally got turned upside down?

Since volcanoes typically have connections with hollow areas far below the Earth's crust, it is clear that this eventuality would engender the most serious consequences. During an eruption the volcano would pump a significant fraction of our atmosphere into the core of the planet, causing it to inflate like a balloon. If the volcanization lasted more than 3.1 days the Earth would burst, also like a balloon. Calculations show that 74% of objects on the surface would be ejected at greater than escape velocity. Since this is a less than desirable method of travelling in space, Mr. Science recommends the mounting of a massive 'volcano watch' program, to provide a warning should this event come to pass.

Ms. FS, of Burnaby, B.C., asks:
Why don't pens write upside down?

Ink molecules are extremely unsymmetrical, with one end very much heavier than the other. When one writes with a pen in the normal position the heavy end of the ink molecule, which is light in colour, is held against the paper by gravity, leaving the light end, which is dark in colour, exposed to our view. When writing upside down, the light (dark) end of the molecule is attached to the paper, so that we see only the heavy (light) end. The solution to this problem, if you must write upside down, is to use black paper. Or a pencil.

Ms. TF, of Burnaby, B.C., asks:
Why do I think the telephone is ringing when I run water in my shower or sink? Am I crazy?

Mr. Science is not able to judge the state of your sanity from your question. You may be relieved to learn, however, that you are not alone in being a victim of this delusion. Research was conducted secretly in 1979 at Psycho-Acoustic Laboratories, Inc. of Bloomington, Indiana, into bell-like component sounds emitted by running water. Those engineers designing telephones with electronic ringers were financially encouraged to include those sounds in their designs. The funds for this project came from groups attempting to encourage water conservation, since their theory was that if you hear those sounds you will turn off the water to see if your phone is ringing.

Mr. GM of Calgary, Alberta, asks:
What does it mean when things are 'out of whack,' and why are they never 'in whack?'

This expression is all that remains of an obscure theory which held that objects and machines were motivated (in the physical sense) by being filled with a substance known as Whackogen. When the machine stopped working this substance was thought to have been consumed, and it was therefore said to be 'out of whack.' This theory was replaced by the more nearly correct Phlogiston Theory, which means, of course, that things can never be 'in whack,' but only 'in phlogiston.'

Ms. DM, of no fixed address, asks:
Why were dinosaurs so BIG?

You have, regrettably, been taken in by the 'bigger-is-better' theory of evolutionary development. The largest of the dinosaurs was only about two meters in it's greatest dimension, which is not especially large. The Earth itself was much smaller 65 million years ago (see earlier question concerning inverted volcanoes), and by expanding so greatly in the intervening millenia, our planet has produced a very great enlargement of the fossilized remains of these creatures, causing gullible persons to believe that dinosaurs were very large animals.

Mr. FS, of New Westminster, B.C., asks:
Why do I itch?

Human skin is a wretchedly vile habitat that breeds parasites of many kinds. Microscopically small, particularly disgusting beetles live in the slimy areas between flakes of dead and dying skin. Their favorite food is the delicate tips of nerve endings exposed as your skin decays. When they bite, you itch.

Ms. DV, of Seattle, WA, asks:
How can one tell the difference between aliens and human beings?

All human beings have a nearly overpowering urge to collect things. Aliens do not. Human beings typically must move to ever larger homes every few years to accomodate the increasing volume of their possessions. Aliens always live in one-room apartments, with only a small likeness of Ailrun Hooburd, the leader of their civilization, on otherwise bare walls.

Mr. SC, of Edmonton, Alberta, asks:
Why are men hairier than women?

Would you ask 'why do elephants have bigger noses than tigers?' Of course not! The question would be mere nonsense, since the two are of different and unrelated species. Recent evidence points strongly to the fact that men and women, likewise, are not of the same species. This accounts remarkably well for the documented differences in weight distribution, temperature preferences, and attitudes toward love, sex and the purpose of life.

Ms. JW, of Vancouver, BC, asks:
Why is salad and dessert tableware smaller than dinner tableware?

Salad and dessert have always been well-behaved, but there was a time when the entre fought back.

Ms. JR, of Vancouver, B.C., asks:
Now that the Shroud of Turin has been found to be of medieval origins can Mr. Science explain how the image was formed?

No, but he can explain the formation of the image on the Shroud of Surrey. As you no-doubt will recall, Mr. Science met with an unfortunate nuclear accident during a demonstration at VCON 16, last year. After his brain had been removed the body was covered with a cloth shroud and placed in a lead coffin to await safe disposal. When the shroud was later removed, it was found that the intense surface radioactivity had caused an "image" of the body to be burned into the cloth. The shroud, itself, is now so radioactive that photographing it is difficult. Therefore, reproduced here is an Artist's Rendering of the appearance of the shroud. It will soon be on display, behind a thick sheet of leaded glass, at the Mr. Science Museum Of Interesting Stuff, in Surrey. Mr. Science's remains were carefully cremated and his highly radioactive ashes were then sealed inside a glass-ceramic brick, which now resides at the bottom of a deep, abandoned mine shaft, almost directly beneath the National Atomic Museum, at Albuquerque, New Mexico.

Dearest Mr. Science,

No matter how many electric lights one turns on after natural light fades, there is not enough light by which to do a jigsaw puzzle, and one wonders if it has something to do with the new "room darkening" drapes. Will they eventually absorb enough candle power to light a small city?

Ever Questingly Yours,
Dora Dovestruck

Your new drapes will continue to absorb light, with slowly decreasing efficiency, for several more years, at which time all of the light previously stored will be released in one brilliant flash. The incident of several years ago in which a satellite was thought to have detected a nuclear explosion in the south Atlantic Ocean was, in fact, a developmental test of this special fabric. A far more satisfactory solution to the problem of temporary, and safe, reduction of light intensity indoors is the use of "darkbulbs." These remarkable products have been fully described in a recent article in The Best of the Journal Of Irreproducible Results. Darkbulbs come in a variety of sizes, shapes and wattages. They work by converting absorbed light into electricity and flushing it out the power line. thus avoiding the "sudden release" problem. In addition, Mr. Science will soon be publishing the results of some original research on the use of ordinary (and much less expensive) light bulbs on A.C. power with a frequency of MINUS 60 Hz.

Mr. GB, of Surrey, B.C., asks:
How do the microwaves in my oven know where the food is?

The microwaves in your oven are far too stupid to know, or even care, where the food is. They go rushing madly about in all directions, trying to escape from the cavity. When the unfortunate ones enter, and are captured by, your dinner, their vain struggles to free themselves heat your food by friction. As you open the door those still free to do so escape to join their bretheren in the universe's cosmic microwave background radiation.

Mr. HW, Jr, of Hagerstown, MD, asks:
Where does the water from my one year old automatic defrosting refrigerator go?

If you own a General Electrical, Westinghome or Hotspot unit with the letter "X" in its model number, YOU ARE IN GRAVE DANGER! These are experimental models which dispose of the water produced during automatic defrost by electrolysis. The oxygen produced by this process is simply vented to the air and poses no hazard. But the hydrogen is adsorbed into two large palladium rods inside the system. Under certain conditions heavy hydrogen (deuterium), present to the extent of one part in six thousand of normal hydrogen, may accumulate to the point where "cold" fusion will result in a rather large melt-down of your kitchen.

Ms. KB, of Port McNeil, BC, asks:
Can the ozone layer be saved?

Certainly. If 500 very large nuclear-powered Tesla coils are taken to the upper altitude limit of heavy lifting balloons, enough ozone can be generated to replenish the ozone layer in a matter of several weeks.

Mr. JM, of Vancouver, BC, asks:
Why has Steve Forty continued to print BCSFAZINE for so long?

Before we can understand why, we must understand what he has done. This (#192, May, 1989) is the 100th issue of BCSFAZINE that he has printed, including 35 issues as editor. This remarkable feat has resulted in the dissemination of 61 convention reports, 485 movie reviews, 265 book reviews, 161 letters to the editor, 27 recipies, 25 Space Reports, 50 questions for Mr. Science and one nude centre-fold. This has required the use of 1,156 stencils, 75,525 sheets of paper and more than 100 tubes of ink, and does not include the 5,000 flyers, 750 program books, 700 Mr. Science booklets, 4 club directories and many other items which he has printed. Since his second issue he has had an uncontrollable need to print, and even now intends to continue printing for BCSFAZINE's new editor. The clue to the solution of this tragedy lies in one of the numbers quoted above. Take heart, Steve Forty! Mr. Science has taken up the challenge to find a cure for your addiction to Gestetner ink!

Mr. DL, of Chilliwack, BC, asks;
Why are newts mute?

Newts are not mute. They are, however, very shy and do not speak in the presence of any other living creature, except Mr. Science.

Mr. CH, of North Vancouver, BC, asks:
Is it true that "...music has charms to soothe the savage breast?"

While this statement is not generally true, there are some notable exceptions. Any music in which the base line pulsates in approximate imitation of a beating human heart is likely to possess this remarkable property. As an experiment, Mr. Science suggests that you carry a tape player on your person at all times. On the next occasion in which you are about to be attacked by a savage breast, quickly put on a tape of "Oxygene" by Jean-Michel Jarre, and watch the immediate soothing effect this music has.

Mr. EH, of Vancouver, BC, asks:
What is the Philosophers' Stone?

Cannabis Sativa.

Mr. TB, of East Thetford, VT, asks:
Ever since those clowns discovered 'cold fusion' the price of gasoline has been going up a nickel a week. How come?

You are a victim of memory loss induced by the deliberate addition of aluminum salts to your drinking water by greedy politicians. You have forgotten that the price of gasoline was going up a nickel a week even before those clowns called their press conference. One tenth of one per cent of the increase is caused by a non-coincidental rise in the price of palladium, used in the catalytic cracking of petroleum products. The rest of the increase is caused by higher taxes collected now, before cheap fusion energy, hot or cold, drastically reduces the government's "take."

Ms. FH, of Vancouver, BC, asks:
Why is there no relocation program for slugs?

Two major problems have held back the implementation of this eminently worth-while conservation measure. The first has been the development of a slime resistant radio tracking collar small enough to fit these most interesting creatures. Second has been the resurgence of the NIMBY (Not In My Back Yard) syndrome. The collars, which will be held in place by a chemically modified cyanoacrylate glue, are almost ready and once a suitable and willing receptor community is found SLURP (SLUg Relocation Project) can proceed.

Mr. JH, of Port Coquitlam, BC, asks:
As an inventor I have run out of ideas. Can Mr. Science help?

It would be presumptuous and unfair to others for Mr. Science to suggest to you what to invent. However, a very complex computer program written recently by EB, of Richmond, BC, and requiring 87 hours, 14 minutes, 27 seconds to run on a Cray supercomputer, shows that only 14.8% of all possible inventions have been elucidated so far. The last invention will occur on April 30, 2143. The fact that (Canadian) income taxes are due on that date is purely coincidental.

Confidential to JC, of Seattle, WA:
Next time have your quantum repaired by a different mechanic.

Mr. DG, of Coquitlam, BC, asks:
If androids dream of electric sheep, what do electric sheep dream of?

RAM chips.

Ms. LC, of Vancouver, BC, asks:
I have been navel gazing and have many questions about the fascinating bellybutton: Would a clone have a bellybutton? Would a born-again Christian have two? And if you inhaled helium and untied your bellybutton would you fly around the room making rude noises?

These remarkable questions show the immense value inherent in introspection. For this reason Mr. Science has suspended his rule of answering only one question per correspondent per column. Most people are aware only of the outdated and erroneous theory that the navel had something to do with providing nutrients to the fetus. The true purpose of the umbilical cord is to prevent build-up of bile caused by anger at the anticipated trauma of birth. Since a born-again Christian is not re-birthed, and suffers no such trauma, there is no need for a second navel, though it might help to relieve the anger they so readily feel at the rest of us. Likewise, a clone, not being "born" at all in the conventional sense, would have no need for even one bellybutton, except as a convenient point of attachment for the ligatures that prevent the clone from bumping into the sides of the nutrient solution vessel. As to your third question, you would indeed fly around the room backwards, but since helium is lighter than air it would absorb rude noises. You would, however, leave strange little bile-coloured spots all over the walls.

Helium, incidentally, is a fine substance to investigate. Mr. Science wants you to try the following experiment: Find a friend who owns a very large, hermetically sealed truck. Next, suspend yourself from the ceiling of the truck with a rope. Have your friend accelerate the vehicle forward and notice that you swing toward the rear of the truck, just as Isaac Newton said you would in his book "Experimentum de Inertia de Plaustrum Dieselum Cum XVIII Rotae," published in 1724 and currently available in facsimile soft cover edition from Old Age Publishers, Salem, Mass. Now tether the rope to the vehicle's floor and, after making sure that your navel is tightly sealed, inhale sufficient helium to make yourself float upward until the rope is taut. Have your friend once again accelerate forward. Do you swing to the rear of the truck as before, or do you swing to the front? Please write again when you have completed the experiment and know the answer.

Ms. LG, of Coquitlam, BC, asks:
Why does my hot water flow slow down and stop as it warms up?

Your faucet is over-compensated. Many years ago a small group of conservationist plumbers designed faucets in such a way that the flow would be reduced as the water heated, to make up for the high initial rate you would use to flush the cold water from the pipe. This process, which is called thermal subfluxation, was intended to reduce the consequent wastage of water.

Ms. EBH, of Burnaby, BC, asks;
Why does a friend of mine spend an hour every night tearing bumper stickers from cars?

Your young friend is afflicted with a rare mental disorder. This condition, called "decalcomania," is known to occur only in those whose parents put stickers which proclaim that "war is not healthy for children and other living things" on their cribs.

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Mr. CJ, of Victoria, BC, asks:
Why are they banning leaded glass in automobiles?

Have you seen the state of our roads lately? Most of the damage has been caused by the immense weight of the vehicles traveling over our highways. Any effort at reducing the average mass of these vehicles will translate into less road wear, and hence a saving for our (increasingly) poor taxpayers. Surely, as a fiscally responsible citizen, you cannot object to giving up the benefits of leaded glass under these circumstances.

Mr. AB, of Surrey, BC, asks:
Why do some of the hairs in my eyebrows grow to three or more inches in length?

Evolution has caused us to diverge from our early simian ancestors by making minor changes and short additions to many of the immense number of genes which now govern our development. Damage to some of these genes, as caused by certain chemicals, cosmic rays or the emissions of radioactive substances can cause cleavage of the DNA helices at the older ending points. This has resulted in you having the eyebrows of an ape. One can only wonder what other parts of your anatomy have also been affected.

Ms. FH of Vancouver, BC, asks:
How were seedless grapes developed and was it considered ethical?

In the late 1940s it was discovered that grape vines and orange trees, in particular, were extremely succeptible to hypnosis. Falsely making these plants believe that they have been pollinated results in the production of fruit with no seeds. This is extremely unethical, but very tasty. Incidentally, it is considered rude to inquire into the reproductive habits of other organisms.

Ms. LG, of Crawford Bay, BC, asks:
Of what are the finger cymbals used by belly dancers made?

Finger cymbals, or "zills," as they are properly called, are made from galvanized uranium. This naturally makes them very heavy and has led to the recent scandals wherein belly dancers were caught taking steroids. Unfortunately, as the uranium slowly changes to lead by radioactive decay, the sound of the zills changes. The bright, bell-like character of these charming little instruments is generally gone after about 10^9 years.

Mr. SC, of Edmonton, Alta, asks:
Why does a kink appear in my telephone cord when I'm not looking?

Despite being negatively charged, electrons are very happy-go-lucky little creatures, who just want to have fun. When they observe that you are not looking they pick a spot in your phone cord and rush madly around in circles. The interaction between the magnetic field they create in this manner and the Earth's magnetic field causes a kink to form in the cord. Notice that the kink obeys the right-hand rule: if you point your right index finger along the cord towards the phone, and your thumb towards due north and your little finger towards the sun, the kink will be in the same direction as the painfull twist in your wrist.

Mr. DH, of Surrey, BC, asks;
What are the commercial uses for the explosive, Semtex?

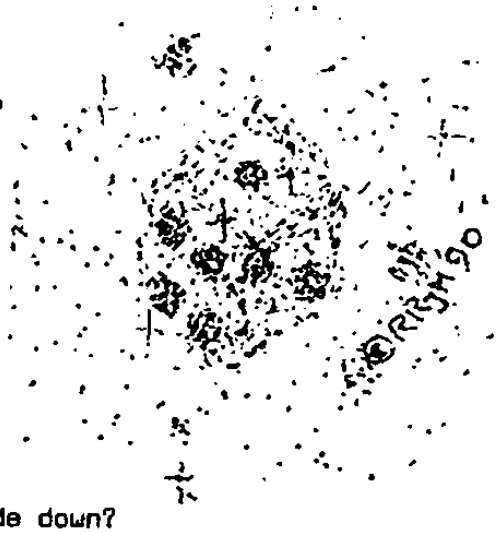
Until recently only the terrorism industry made use of this substance. Now, however, experiments are being performed to develop a circular explosive lens with Semtex as one component, and an explosive of different burning rate, such as C4, as the other. If this charge is wrapped around the base of a tree trunk, the focussed shock wave can sever the tree and drive the pulverized stump into the ground, resulting in a particularly clean method of clear-cutting for the forest industry.

Ms. JH, of Seattle, WA, asks:
What is the iridium layer?

In the 1940's a certain manufacturer made razor blades with the cutting edges plated with iridium for improved hardness. Many millions of these were discarded in land fills, and over the years the iron blades have oxidized, leaving only an iridium layer. How this came to be associated with the extinction of the dinosaurs, not even Mr. Science knows.

Ms. BW, of Nepean, Ont., asks:
Was Einstein right?

Although no experiment, however subtle, has ever disproved any prediction of special or general relativity, recent computer generated models of the universe, where each plotted point represents the observed position of a super cluster of galaxies, has disproved Einstein's belief that "God does not play dice with the universe." See accompanying illustration. Our galaxy is located near the edge of the spot on the "one" face.



Mr. ST, of Vancouver, BC, asks;
Why does toast always fall buttered side down?

Genuine butter possesses unusual aerodynamic properties not found in margarine. Slippery molecules on the surface of the butter cause more rapid movement of air across this surface of the falling toast. This imparts a torque which causes the toast to rotate. If it was dropped from a height of more than 2.3 feet and less than 5.1 feet, it will land buttered side down. Note that the air is rotating in the opposite direction to the toast. Thus, there is no violation of the law of conservation of angular momentum.

Mr. BS, of Kiev, USSR, asks:
What does Mr. Science think of Synchro-energizers?

When synchro-energizers work, they work very well, indeed. They have, unfortunately, a bad habit of becoming asynchronous without warning, and with catastrophic results. One need only mention the name of Chernobyl to understand. They are now being replaced by Super Synchro-energizers, which have a slightly higher reliability factor.

Mr. DG, of Crawford Bay, BC, asks:
Is rhubarb good for me?

No. The leaves of the rhubarb plant contain oxalic acid, and are therefore toxic. The part most people eat is, for the most part, just an unpleasant tasting, disgustingly useless vegetable. Less well known, however, is the fact that when rhubarb is cooked in an aluminum pot with turmeric (a major ingredient of curry powder), aluminum rhubarbinate is synthesized, which can be converted to aluminum rhubarbiturate by boiling with cumin (also a constituent of curry), in the presence of any hydrogenated vegetable oil. Israeli chemists recently published a total synthesis of tetrahydrorhubarbinol, an illegal psychotropic substance.

Ms. FS, of Burnaby, BC, asks:
Why do rivers have banks?

Rivers have banks in order to deposit surplus sand. It may interest you to know that one can account in this way for the huge balance of bonded sand which accrues on the downstream edge of a curved river current. Cheque it out for yourself.

Ms. VO, of White Rock, BC., asks:
Why does a man appear shorter when wearing a tuxedo?

The US military and nuclear power industries have a major disposal problem: how to get rid of about one hundred thousand tons of depleted uranium. Several years ago a secret deal was signed with the manufacturers of men's formal wear to make the shoulder pads of tuxedo jackets out of this material. The extreme weight of these shoulder pads causes the wearer to loose, temporarily, about four inches of height. Since no one wore a tuxedo during the 1960s or 70s, the normal weight of these garments had been forgotten.

Ms. DM, of Vancouver, BC, asks:
Why does my sleeping husband make snore-like sounds when he exhales?

You are right to suspect that this is not normal snoring, which always occurs solely during the inhale phase. Your mate is suffering from PUS--Pudgy Uvula Syndrome. The easiest way to alleviate this problem is to switch to a diet low in organ meats and perform daily uvula exercises. The most effective exercise is to pull the tongue down sharply into the lower jaw as far as possible, while simultaneously thrusting the head forward. A sequence of fifty of these "uvula push-ups" should be performed, to be repeated four times per day. In a matter of six months or less, your nights will be significantly quieter.

Ms. SC, of Richmond, BC, asks:
What is a light(sic)-year?

Every few years scientists find it necessary to add one second of time between 23:59:60 and 00:00:00 on New Year's Eve, to allow for variations in the rotation rate of the Earth. In certain far less frequent years it is necessary to subtract a second, thus giving a year with 31,535,999 seconds, instead of the usual 31,536,000. This is known as a lite-year.

Mr. JM, of Burnaby, BC, asks:
I have heard of blue cascades and green flashes. Does science come in other colours, too?

Science is now interested only in those things which ordinary people cannot observe. Thus rainbows and those phenomena to which you refer are not of scientific importance. Science is now built around observing the x-ray and ultraviolet renditions of the sky, and infrared images of almost anything. (The continued use of eyedrops containing small amounts of the dye 3,3'-diethylthiadicarbocyanine iodide dissolved in DMSO will result in the extension of the intrinsic sensitivity of the human eye well into the the near infrared portion of the spectrum. Valuable observations can then be made easily, but if too many people do this, science will completely lose interest, moving on to more complex observations which require elaborate and very expensive equipment to perform.)

Mr. RM, of Port Moody, BC, asks:
Why do I hear the ocean when I put a large seashell to my ear?

Mr. Science regrets to inform you that the situation is not as you perceive it to be. The hissing sound you hear in a seashell is caused by the vibration of random length columns of single-file molecules which arch slightly above the inside surface of the shell. What you have always thought to be the sound of the surf is, in reality, the sum of the sounds emitted by uncounted millions of seashells.

Mr. (initials witheld), of (deleted), BC, asks:
Why are feces brown?

There is a strong chemical relationship between chlorophyll, the green colored substance of photosynthetic plants, and hemoglobin, the red, oxygen carrying substance in your blood. When you eat vegetable matter your body converts the chlorophyll not needed for keeping your breath fresh into hemoglobin by substituting an iron atom for a copper atom which holds together the two large heterocyclic ends of the molecule. Therefore, the brown color of feces is caused by the excretion of oxides and other compounds of copper. If you should decide to become a carnitarian (one who will not eat vegetable matter) the color of your stool will change from brown to something between grey and near-white, for the rest of your life. All six weeks of it.

Mr. DB, of Toronto, Ont, asks:
If bread always falls buttered-side down, and cats always land on their feet, what would happen if I tied a piece of buttered bread on a cat's back, and then dropped it?

WARNING! Do not proceed with this experiment! Whenever immutable laws of nature are pitted against one another, the results are always catastrophic. The extinction of the dinosaurs was the result of such an event. The "big bang" was another.

Mr. ST, of Vancouver, BC, asks:
Why is there no channel 1 on my TV set?

Mr. Science's television set receives channel 1. Yours is clearly defective.

Mr. CMcL, of Surrey, BC, asks:
Ship 'A' decides to engage light-speed drive and sets its co-ordinates. Further away, ship 'B' has already entered light-speed at the same co-ordinates. They collide. How could they have avoided this?

There is a fundamental flaw in your scenario. The ships not only do not collide, but they cannot be made to collide. At light speed the ships have Lorentz-contracted to zero length. Since two objects of zero length can easily occupy the same space simultaneously, there can be no collision. They must not jump out of light-speed while in the same space, however.

Ms. SB, of Coquitlam, BC, asks:
Why did the Titanic sink?

Although it was kept secret from the passengers, crew and public, the Titanic was engaged in a metallurgical testing program aimed at finding a new alloy for rivets. One large hull plate was fastened in place with rivets made of a sodium/steel alloy which had been formulated incorrectly by a dyslexic chemist who reversed the intended proportions of 3% sodium and 97% iron. The sodium remained reactive, and slowly dissolved in the cold seawater. When the plate fell away, the 'unsinkable' Titanic went down.

Ms. TF, of Burnaby, BC, asks:
How can I ensure that I become a fossil after I die?

There are two methods to achieve this noble goal, both of which will require the assistance of one other (still living) person. In the first, your associate should collect, in advance of need, several hundred kilograms of good quality resin from fir or pine trees. After filtering the resin your mortal remains should be encapsulated in it. A large bathtub makes a good mold. Upon drying, which should be done very, very slowly to avoid cracking, you will be beautifully preserved in amber, very much like an Eocene insect.
The second method requires that your remains be embedded in tightly packed sand, and left where mineral bearing water may drip upon you for many millenia. It is difficult to think of a suitable location unlikely to be disturbed by busibodies, however. For this reason, and the fact that only your bones will be preserved by mineralization, the first method is more likely to give satisfactory results.

Mr. EB, of Richmond, B.C., asks:
What effect will the heat death of the universe have on Science Fiction conventions?

That the universe will die a heat death is certain, but the nature of that heat death is determined by whether the universe is open or closed. If the universe is open, that is, if, as it now appears, there is insufficient mass to cause the gravitational reversal of the present expansion, VCONs, beginning about VCON $8X10^{10}$ would become much more sedate affairs. Indeed, affairs themselves would finally cease (though not without a struggle) since with the continued expansion would come ever lower temperatures and reduction of available energy. UBC and other Northwest venues would be pleased to see parties become quieter as entropy increased to new record values. Those in charge of programming would be searching for 'hot topics,' and panelists would be observed huddling together for warmth. Even filk-singing would finally be frozen into eternal silence!
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If the universe contains enough mass to be gravitationally closed, the situation will be entirely different. The current expansion phase will end and contraction will begin. As the universe grows smaller its temperature will rise. SF conventions will become even greater hotbeds of activity of all kinds. There will be cadres of energetic persons competing for the privilege of chairing such conventions, but hotels will be more and more reluctant to host crowds of thermally unruly fans. Membership must be carefully screened to weed out troublemakers, hot-heads and those with sexually transmitted diseases. But for those lucky enough to attend, the experience will be truly remarkable. And those present at the last convention will have grandstand seats to witness the 'Tiny Implosion.' They will not, unfortunately, survive to witness the next 'Big Bang,' 10^{-23} second later.

The end is not yet determined and Mr. Science would rather see conventions go out with a roar, instead of a whimper. If each person on Earth finds only TEN GRAMS of missing mass, an extrapolation will close the universe! Do your part, Fandom. Find some missing mass today!