

Brentwood Community News

Environment News

WELCOME BACK FARMERS' MARKET: Mark those calendars! The Northland Farmers' Market will begin its new season on Tuesday, 13th June 1999, 4-8 p.m. You'll find it in the same location as last year, near the Northland Recycling Depot at the NE corner of the Northland Mall parking lot. The market will continue each Tuesday throughout the growing season.

Did you know that the market is an initiative of Grassroots NW Environmental Awareness Society? Proceeds go back into the community in the form of grants, especially to schools, to promote education and awareness of environmental concerns. Many Brentwood children benefit from these grants in the form of innovative theatre performances, subscriptions, speakers, and support for recycling, composting, and gardening projects. Grassroots also awards prizes at the Calgary Youth Science Fair each year. Shop the Market!

CALGARY YOUTH SCIENCE FAIR: The 39th Annual Fair exhibited over 1,000 projects this year. Brentwood's Simon Fraser Junior High School entered eleven students with seven projects. Every one of them reached the final round of judging. Cam Semper received an Honorable mention for 'travel' to Alpha Centauri; Andrew Lim and Scott Robertson won Silver Medals for brine shrimp fertilization effects; Danielle Cheadle and Jennifer Forsyth won Silver Medals for their tests on exercise effects on short term memory; and Jared Williams and Sean Jmaeff also won Silver Medals for their study using human hair to clean up oil spills. The following three Gold Medal winning projects also won invitations to the Mayor's Environment Expo in June (see below); so look for their great projects there! Todd Freeborn and Kyle Parrott, also recipients of the prestigious Grant McEwan Environmental Award, used soil from a reclaimed coal mine in Northern Alberta to grow local plants, and compared the results with local soil. The reclaimed soil worked remarkably well! Rod Leland, carrying his last year's national award winning work in a new direction, studied the

effects of zeolites on paper decomposition in Calgary landfill soil. Nathan Zondervan, Grade 8, came away a big winner. His project studied the effects of corrosion on various metals in different areas of Calgary and an accelerated aging experiment in the lab. As well as his Gold Medal, and Environment Fair invitation, he won the award for the Best Visual Display at the Fair, and the National Association of Corrosion Engineers Award. As well, he was chosen to represent Calgary at the National Science Fair in London, Ontario, and won a Terry Allan Bursary to support his travel there. This is the second year in a row that SFJH has sent a student to the Nationals! Well done local students, and your proud parents and teachers!*

11TH ANNUAL MAYOR'S ENVIRONMENT EXPO: June 6-8, 9am-3pm, in the mainfloor atrium of the Calgary Municipal Building. Enjoy free admission, theatre, entertainment, information, science fair projects, interactive displays, and more! Check out their website at <<http://www.gov.calgary.ab.ca/environment/green.html>> or phone the Office for the Environment at 268-8050. Pack a lunch, or wander by with a take-away; you'll take away some interesting ideas and insights.

CALGARY TOWER CLIMB FOR THE WILDERNESS: Many Brentwood residents were again caught huffing and puffing at the top of the Calgary Tower in celebration of Earth Day last April. This year's annual event raised over \$70,000 to better protect Alberta's spaces and species. Ward Neale, age 77, maintained his ten times up the 802 steps. The oldest climber, an 84-year old woman, went up twice. The youngest was 3! The Cockett brothers chased each other up and down, and managed a tie for the most multiple climbs by a youth, at 16 climbs each. Did you head up the Tower? Let us know. Next year they've promised to have both elevators operating, and the chef has sworn not to cook anything that will set off the smoke alarm causing the fire brigade to arrive, shutting down the remaining



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elevator and causing numerous attacks of pyro- and claustrophobia high atop Calgary.

SIGHTINGS: Visiting Bluebirds Galore! Jillian Lemmen and Colleen Connelly discovered a flock of about two dozen male and female Mountain Bluebirds taking asylum from the snowstorm of 14th April in the alcoves by the library of Dr. Coffin School. It was an extraordinarily special treat to see the glorious azure blue of these shy country birds in our neighborhood. The following dawn, their assemblage decorated the poplar tree by the school, as they awaited the brightening day and the storm's abatement. Then, off they flew, pair by pair, to their less urban destinations.

Joey Shapkin, budding ornithologist, has observed some interesting behavior of the Yellow-Shafted Northern Flicker in his yard recently. A woodpecker, the Flicker likes to eat ants; but also it squishes ants and uses the remains to preen itself. The formic acid in the ants can kill parasites on the skin and feathers of the bird.

Have you seen or done anything environmentally interesting recently? Has your school or child participated in an enviro-event?

*If you live, work, or go to school in Brentwood, we'd like to include your enviro/science doings and sightings in the Bugle. Give us a shout.

Environmentally yours,
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Summer
2000

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Rudolf Industries Presents the Flash

by Stephen Rudolf

Winner of the Engineering Award in the 1999 Science Essay Challenge
Simon Fraser Junior High
teacher: Mrs. Martin

Fuel Cells will change the electricity landscape forever.
Margaret Lamb

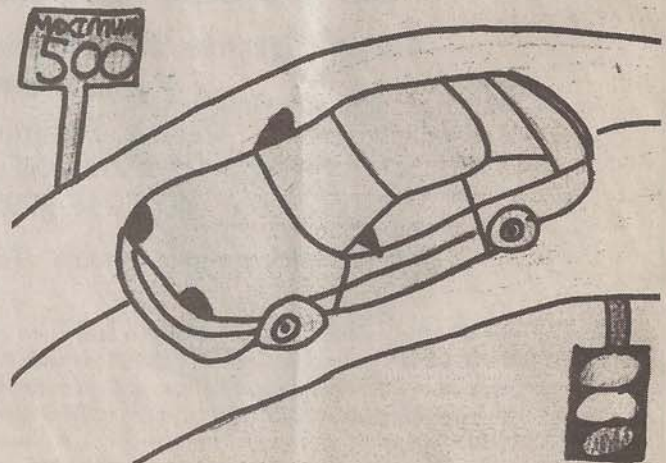
Are you fed up with your vehicle? Is it too expensive to run and and maintain? Rudolf Industries has a simple solution to your problem! We present the all new "Flash," a cost-wise, safe, simple and long-lasting car which can seat up to five people, travel at speeds of up to 150 kilometers per hour, and only needs refueling every 2000 kilometers. The secret is a small fuel-cell-powered engine in the front part of the car made to replace a normal gasoline engine.

The engine, fed with hydrogen and oxygen, works much like an electrical circuit. The hydrogen is introduced to the fuel cell., where the fuel cell splits the hydrogen molecules into protons and electrons. The protons pass through the fuel cell's cathode and react with oxygen to produce water and heat. The electrons are unable to pass through the cathode and are forced to travel around it, creating DC electricity in the process. The only disposable emission from the "Flash" is clean water, which can easily be stored in the vehicle's water tank and be disposed of later at a water disposal area such as a river or a lake. The heat emissions from the "Flash" are stored in a heat regulator for future use to heat the vehicle. The hydrogen fuel which the car uses is abundant on earth, so it is a perfect fuel for the car. The downside is that,at present, it is expensive to produce and purchase pure hydrogen because it must be separated from H₂O first and that process requires advanced machinery. However, major improvements are taking place with this technology and the cost of hydrogen is expected to come down in the very near future.The "Flash" uses its DC energy to turn the vehicle's crankshaft. The transmission from there onward is automatic, with the basic system of a differential and the several different gears used in the transmission to propel the vehicle. When the driver wishes the car to accelerate, the amount of DC power used in turning the crankshaft is increased to suit the needs of the driver.

Safety tests on the advanced air bag system have shown that it works very well. The air bag system is activated by

the pull of an emergency release handle hidden in the dashboard, and if the vehicle crashes or if the engine fails to stop. We have created special seat belts that can only be released by a switch on the dashboard. In the event of a severe emergency, safety release buttons are provided hidden on the seat belt. In the "Flash" there are special sensors which detect the alcohol levels of each person in the vehicle. If these levels are too high, the car will start a shutdown timer and will stop. One safety feature that is important is a special mini video camera that can tell if someone in the car is severely injured. If someone is injured, a quiet alarm goes off and automatically notifies the emergency medical services.

At the Rudolf Industries factory we have designed the vehicle to withstand dangerous crashes by using titanium frame bars within the car and pressure-proof glass which acts just like bulletproof glass. Overall, the car is very safe for people of every age and the test models have never had engine failures or malfunctions. The "Flash" is definitely the right vehicle for families. Our car design eliminates dangerous fumes such as carbon monoxide so its passengers have no risk of carbon monoxide poisoning.The fuel cell technology that has been incorporated into the "Flash" has been around for many years, but no other company ventured to test it out. Rudolf Industries took this bold leap, spending millions of dollars in research and development, and we have now created the "Flash." We have done our part in an attempt to solve the energy crises, and found a solution that solves almost all energy-related problems. The long awaited car of the future is finally here!



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Our Expanding Universe



By Candice Shultz-Foulkes
Third Place Winner of the 1999
Science Essay Contest,
Winner of the Astronomy Award,
Simon Fraser Junior High School
Teacher: Mrs. Martin

Looking within a small geographic area, with limited knowledge of scientific principles and primitive communication, limits one's perspective of the world. As our ability to understand and apply technology increases and we are able to see more of the world, our point of view changes. We now look past our neighborhoods to the world for trading of goods, services and ideas. It takes less time to communicate with someone in Australia than it does to walk to a neighbor's house. Technology has expanded our own personal universe.

In order to discover how technology has enlarged our universe I wrote a survey. I distributed the survey over the Internet, inquiring what primary form of technology people used. The 153 responses I received were from around the world and yet had a common theme. The selections were not limited, but technologies associated with means of communication were the overwhelming choice. The histogram illustrates that the majority of technologies used provide some method of human interaction. It is clear from the survey that rapid communication, globally, is essential to people's personal and business lives. The respondents frequently commented that their families and friends are spread far and wide so they need to stay in touch. People are also working on a plane,

in a car or hotel room and less frequently in a traditional office.

Our communication technology has shifted the way our families are distributed and our businesses are organized. We no longer communicate locally, but rather worldwide and beyond. We are searching now, deep into space, to find other beings to communicate with. Stephen Hawking, the world famous physicist, describes a boundless universe, "where there are no boundaries marking the end of space or time." Our communication technology is expanding so rapidly that it also seems to fit into the boundless universe theory.

Many people stated that electronic communication is not always enough to build good business relationships. Ian Orfanides, of Portfolio Manager Algorithmics Inc. in Toronto, commented, "current technology is the next best thing to being there." The results of the survey indicate that there is a specific need for human beings to be in contact with one another. We as humans prefer to hear voices and see facial expressions in order to get to know and trust each other. Perhaps in the next century we will see people remembering that complicated communication methods are what distinguish us as humans. We will continue to develop and become more skilled. As a result we will create new, more sophisticated gadgets that will make travel more convenient and communication faster. In effect each human will amplify their influence and indeed experience their own "expanding universe." "The most exciting breakthroughs of the 21st century will occur not because of technology, but because of an expanding concept of what it means to be human." This research also supports the idea that human nature itself will add an interesting twist to whatever direction technological communication developments take in the future.

