

# **Brain Compatible Education in Practice 2**

**Teaching about our planet with  
GoogleEarth**

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BCEI Booklet #9

## Brain Compatible Education in Practice: Using GoogleEarth

Atlas work, mapping, latitude and longitude, coordinate planes are common enough subjects in middle school usually taught with reams of photocopies, school atlases and the drudgery of paperwork. Brain compatible learning, however, can be more fun than that. Using *GoogleEarth* you can quickly zero in on someone's house or apartment block anywhere in the world. Suddenly our planet is a very small place indeed, and parts of our social studies curriculum can be made even more exciting by visiting it. Brain compatible learning strategies, where students enjoy a great deal of choice within the confines of a subject area, and can approach the learning and report what they have learned through a multitude of pathways, were used to provide a high interest and fun program.

The idea was to get the students to pretend that where they live in the future is real now and we have the map coordinates. I wrote an email to my future ex-students from my beach hut on Pentecost Island where I retired in 2030 ( $16^{\circ} 0'26.73''S$ ,  $168^{\circ}13'51.53''E$ ). I am old and doddering. I have forgotten much about the world. Would my students help me? They are all now

## Brain Compatible Education in Practice: Using GoogleEarth

in their thirties and working all over the planet. This is what they were told:

The year is 2030 (but politics and prices are all the same as today). Merapi Class students are now grown up and looking after themselves. They get jobs all over the world. Some get high salaries, some low. Pak Derek emails everybody and gets map coordinates of where they live. Pak Derek is now 70 years old. He doesn't know much about the modern world anymore, so you have to tell him.

The students first had to choose where they were to be living with only minimal information. I gave them a list of map references to houses or apartments, and an annual income connected to each house only. Some of the canny students recognized from the map references roughly where they would be – north or south, east or west and they could use this information to give bias to where they wanted to be – eg Paris (48°53'4.85"N, 2°20'17.23"E – nice apartment near Mont Matre) or London near St Paul's (51°30'52.84"N, 0° 6'0.79"W).

Some students were blinded by high salaries and ended up in Kabul (34°31'33.64"N, 69°11'20.34"E) or the Casey Station in

## Brain Compatible Education in Practice: Using GoogleEarth

Antarctica ( $66^{\circ}16'57.15''\text{S}$ ,  $110^{\circ}31'29.89''\text{E}$ ) on big money but with challenges the other kids didn't need to face. One lived in a multi million dollar harbor side mansion in Rose Bay in Sydney ( $33^{\circ}52'5.52''\text{S}$ ,  $151^{\circ}16'11.05''\text{E}$ ) but his \$40,000 cook's salary would barely pay the rates so he had other problems to solve.

Once the kids found out where they were living 22 years in the future there was much to find out. Using brain compatible education strategies I was aiming to build the use of higher level thinking into the activity rather than just fact gathering and get the kids to weigh up alternatives and make decisions. I wanted them to get a feel of what it would be really like to live in their new place. They were guided by a number of questions and their final project became a letter to their old teacher that included photographs. The questions were about the good and the bad, the local economy, the (realistic) reason for living there, background information on the city and country and about living conditions. They were encouraged to use their imagination about their home life, but they were required to base everything on fact.

## Brain Compatible Education in Practice: Using GoogleEarth

The resultant presentations from the class varied. Some were more difficult projects than others – the young girl who became a 32 year old oil executive in a rural town in Saudi Arabia (26°20'9.09"N, 43°58'3.59"E) found her new life quite daunting and was shocked at the laws she would have to contend with. The boy who found himself running a bomb making factory in suburban Kabul really didn't get the idea.

Others reveled in the project and I got some amazing "emails" from them in reply. One girl had us practically smelling the doggy doos on the streets of Paris. We now know to be home early if we visit Bangui in the Central African Republic as the streets at night are dangerous (4°22'1.04"N,18°35'12.26"E). We also know that sometimes St Paul's bells are a bit loud if you live next door, the shopping is great in Warsaw (52°13'59.79"N, 21° 0'39.82"E), and how did the boy who lived in a Rose Bay mansion earning \$40,000 per year salary as a cook pay the bills? Easy, he married well - his wife earns \$15000 per month.

Regina, grade 7, starred in this project and is happy for me to reproduce her letter here. It demonstrates the depth of her

## Brain Compatible Education in Practice: Using GoogleEarth

research and you feel she has a true understanding of a city she's never been to. She "lived" in Ulaan Baatar, Mongolia....

*Hi Pak Derek, it's Regina, your student from year 2008–2009 in Indonesia. Do you remember me? I sure hope so. How are you and your family? I have heard that you are already 70 years old and don't know a lot about the world anymore. I can't tell you so much about the world, but I can tell you about the place that I live in.*

*I live in the capital and largest city of Mongolia, Ulaan Baatar. Mongolia is in East–Central Asia. China is South of Mongolia, and Russia North. Mongolia has a parliamentary political system. Life in Mongolia is good but a little crowded. Ulaan Baatar has one–third of the population of Mongolia. I work as a photographer and I also do some paintings once in a while. I usually do paintings of the country, landscapes... I live here because, as a photographer for newspapers and magazines, I take pictures of Ulaan Baatar, and sometimes other places in Mongolia. I took a lot of pictures of the Nomads and their yaks. I even lived with them for a while for a photographing trip. Their food is not very satisfying but is a great help against the cold. I had to eat food such as Yaks fat, and all those stuff.*

*I stay in an apartment hotel called 'Dream hotel' with my two kids and our dog, Muffy. My children named him that way*

## Brain Compatible Education in Practice: Using GoogleEarth

*because they thought he looked like a muffin. Well, he is chubby and also brown. My husband is all the way in Germany.*

*We were always in touch with him, but since he never visited us these two years, our connections got bad. Now we are barely in touch. I hope things will get better, though. My two kids are 7 and 8 years old, one boy and one girl. They are Mathias and Maggie. Both of them are smart and very adorable. My parents live in Germany in my grandmother's house and are very proud of their grandchildren, my children and my brother's. My grandmother died peacefully in her sleep of old age, (god bless her soul). My parents are both, of course, retired and we are always in touch. My children and I visit my parents every Christmas, so do my brother and his children who live in Moscow, Russia. I also visit my brother in Russia once in a while when I have time.*

*Ulaan Baatar is surrounded by mountains and is very, very cold. Actually, Ulaan Baatar is one of the coldest capitals in the world. That is one of the challenges we have in Mongolia... Also, there are many dangers, challenges, and sometimes also annoyances such as drunks, begging, corruption, electricity and hot water shortage. The worst daily challenge and annoyance is traffic. To get to work, I usually take my car. But if the traffic is too unbearable, then I go work by foot. The traffic depends on the time, though. My children walk to school since school's not so far. They go to an international school and have German lessons. We save hot water and electricity as much as we can*

## Brain Compatible Education in Practice: Using GoogleEarth

*daily. We really need the hot water for winter. It is unbearably cold in winter. Begging is a real problem in Mongolia. I wish someone will do something about it. It really breaks my heart every time I see them.*

*There are also good things about living here; there is a circus nearby, where I bring my Maggie and Matthias every 6 month, when clowns all over the world come and compete to get first place. Muffy loves going to the circus as much as them. I also bring my parents there once a year. Other than the circus there is a water fountain park and other parks, a theater, a museum, temples and more. There are also a lot of statues here, especially statues of the long-time-ago-rulers as in the Khans. To live in Ulaan Baatar is easier than living in other cities of Mongolia. Ulaan Baatar has more modern technology than other cities and has everything you need. That is, except for nature. I really miss the green, so we take trips to the mountains once in a while to see the yaks. At summertime the nature of Mongolia is really beautiful. Maggie and Matthias love to see the yaks but are a little afraid.*

*Meat in Mongolia is very common. In many markets in Mongolia, meat is sold in big chunks or sometimes sold with the whole body. And if they want to cut the meat to smaller chunks they actually use an axe! This would not be a really pleasurable country for vegetarians...But not to worry, as long as you have money, food is no problem in Ulaan Baatar. There is always imported food here. When I don't have time to go to big grocery*



## Brain Compatible Education in Practice: Using GoogleEarth

*stores, I usually go to the little stores that all over Ulaan Baatar. They have little grocery but enough. They even have imported food in their stores. How handy!*

*In Mongolia, traditional inhabitants use the Mongolian language. But now Mandarin is spreading, especially in Ulaan Baatar. There are only some parts in cities that use the English language. For example, the company that I work for uses English. But most of the workers there speak Mandarin to each other. I can understand Mandarin, since I had to learn the language for school as a child. I also can understand Mongolian a bit. Writing in Mongolian is complicated so I didn't learn it.*

*This year I got an option to move to another country for photographing. I would get paid about three times as much as I get paid now in Ulaan baatar. The option is to move to Antarctica. But I have chosen to stay here. Of course! Maggie and Matthias would have to fight even more against cold and there would be no school at Antarctica. Unless they would go to their father in Germany, but it's just impossible. So, I'd rather stay here. It's the best for all of us. And I don't mind about the payment here, it's enough.*

*How do you think about Ulaan Baatar? I hope you can visit us sometime...Maybe Harry can come with you. How old is Harry now? 24? 25? I hope the best for you and your family. Please reply soon and could you send a few pictures for Maggie and*

## Brain Compatible Education in Practice: Using GoogleEarth

*Matthias? They are curious about you. Here are some photographs that I took:*

*(Pictures not included in this pdf)*

*These pictures were taken when I was living with the Mongolians for a while.*

*Best wishes from,*

*Regina, Maggie and Mathias*



*Derek Pugh is an experienced Principal and teacher in both Australian and International Schools. He now runs workshops in Brain Compatible Education for students, teachers, parents and corporate groups worldwide. Workshop participants discover the*

*latest in neuroscience and why knowledge of the brain is a powerful tool in education; the 'SEWBaD model' of preparation for learning; what brain 'plasticity' means to education; individual learning profiles and how to use them for effective learning and teaching; how to teach or learn efficiently; and models of brain operation and function.*

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(New Horizon School, Bahrain)  
*Owner's Guide to the Teenage Brain*

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