What would it be like if you were living on an earth where there were no tectonic forces at work? (150 words)

The Earth's crust consists of a number of moving pieces or tectonic plates that are always colliding or pulling apart. Volcanoes and earthquakes occur at the boundaries of these tectonic plates. This is because the impact of the plate movements is the greatest there. Let's explore the social, economic, political, climatic and aesthetic impact of living in a world without plate tectonics.

Without tectonic forces, our lives will be greatly changed. Let's look at the social implications first. Without plate tectonics, there will be far less human deaths from natural disasters such as earthquakes, volcanic eruptions and even tsunamis. There would be much less destruction to the Earth. This is one of the negative effects of plate tectonics at work on the Earth. Thus, the Earth would be a safer place to live in and population would increase as life expectancy increases.

Volcanoes can clearly cause much damage and destruction, but on the flip side, economically, they also have benefited people. Over thousands to millions of years, the physical breakdown and chemical weathering of volcanic rocks have formed some of the most fertile soils on Earth eg. the rice-growing regions near active volcanoes in Indonesia. Thus, the agricultural economy of a world without plate tectonics would be affected as there are fewer suitable areas for cultivation of crops.

Also, most of the metallic minerals mined in the world, such as copper, gold, silver, lead, and zinc are associated with magmas found deep within the roots of extinct volcanoes. Without plate tectonics, how will we get these minerals? The jewellery industry would come to a standstill as there will be no more gold and silver to mine. Industries using minerals such as copper, lead and zinc would be affected too. Thus, I feel that plate tectonics is fundamental to obtaining such minerals.

Living in a world without plate tectonics also means losing another source of energy, geothermal heat from volcanoes. Geothermal heat can be used to run turbines to generate electricity. Thus, the price of oil will escalate as the demand for oil increases;
Because many major population centers are located near very active fault zones, such as the San Andreas fault, millions of people have suffered from personal and economic losses as a result of very huge earthquakes. The Government of these places spend huge amounts of funds in rebuilding homes, offices and re-establishing damaged infrastructure. A world without tectonic plates would not have this problem of economic losses from earthquakes and other natural disasters.

However, politically, if the world had no tectonic forces acting on it, it would be joined together and Pangaea would still be here. I feel that there might even be world peace as there would be less or no political boundaries. In my opinion, this might make the world a better and safer place to live in. The world might even be ruled by only one government. Travelling would, invariably be easier as you may not need passports to cross boundaries and you need not cross oceans to travel from one place to another.

Without the mountainous terrain formed by the plates movement, we can expect climatic changes. Now, there are two basic effects on precipitation caused by mountains. On the windward side, there is a greater amount of rainfall and on the leeward side, a significantly reduced amount of it. This is why Kentfield, in Marin County can receive 1300mm of rain per year while San Francisco only 500mm. Without mountains, there will be a more uniform distribution of rainfall.

Aesthetically, over time, plate movements, together with other geologic processes, have created some of Nature’s most magnificent scenery. The Himalayas, the Swiss Alps, and the Andes are some spectacular examples. Without plate movements, the world would not have any mountains, ridge and volcanoes which greatly beautify the world in many ways.

Thus, I feel that a world without plate movements would be very dull as our landforms will be boring and monotonous. Although death rates will decrease, however, there will also be economic losses. A world with tectonic plates is more practical as we will have the means to obtain our natural resources and there is amazing and varied scenery in the natural landforms caused by it. I only hope that a time will come when there is a warning system so advanced it will prepare people to flee from the affected zones when the natural disasters occur.

Done by

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**VICTORIA SCHOOL**  
**SEC 1 GEOGRAPHY**  
**RUBRIC FOR REFLECTIVE ESSAY**

Name___________________________________ (            )   Class: Sec 1______      Date:____________       Marks:24/ 25  
Parent’s Signature:___________________

**Title:** How would it be like if you were living on an Earth where there were no tectonic forces at work?*

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<th><strong>EXEMPLARY [5]</strong></th>
<th><strong>COMMENDABLE [4-3]</strong></th>
<th><strong>DEVELOPING SKILLS [2-1]</strong></th>
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<tr>
<td><strong>Depth of thought</strong></td>
<td>√ Demonstrates fresh, original thought and ideas. Point of view is thoroughly explored and clearly expressed.</td>
<td>√ Essay shows thoughtful reflection. Writer’s point of view is apparent.</td>
<td>√ Contains some interesting ideas, but the writer does not explore them thoroughly. Lacks detailed explanation or supporting examples.</td>
<td>√ The writer simply restates facts rather than reflecting on his or her own experience. The writer’s point of view is not evident</td>
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<td><strong>Personal Application</strong></td>
<td>√ Connects insights/thoughts to personal life</td>
<td>√ Connects insights/thoughts to personal life</td>
<td>√ Some attempts to connect insights/thoughts to personal life</td>
<td>√ Does not personalize reflections at all</td>
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<td></td>
<td>√ Independently uses information to support inferences and to justify conclusions appropriate to context and audience.</td>
<td>√ Able to make some inferences and draw conclusions independently; sometimes inappropriate to context and audience.</td>
<td>√ Can make some inferences and draw some conclusions. Often inappropriate to content and audience.</td>
<td>√ Can draw few accurate inferences and conclusions even with guidance.</td>
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<td><strong>Organization</strong></td>
<td>√ Organization enhances the main ideas. Supporting information is presented logically, with no extraneous details. Transitions are smooth.</td>
<td>√ Organization is generally good, but there may be some extraneous details or unclear transitions.</td>
<td>√ Includes an organizational skeleton (intro, body, conclusion), but often strays from the main idea. Lacks transitions.</td>
<td>√ No clear direction. Main ideas are vague and connections are confusing or incomplete.</td>
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<td><strong>Communicates information in written form</strong></td>
<td>√ Clearly and effectively communicates the main idea or theme with appropriate supporting evidence/analysis; no errors</td>
<td>√ Clearly communicates the main idea or theme with suitable supporting evidence/analysis; contains a few errors</td>
<td>√ Communicates important information but not a clear theme or overall structure; may have major errors.</td>
<td>√ Communicates information in isolated pieces in a random fashion; errors may distract.</td>
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<td><strong>Length</strong></td>
<td>√ Meets or exceeds assignment guidelines</td>
<td>√ 1/4 less than assigned guidelines</td>
<td>√ 1/2 less than assigned guidelines</td>
<td>√ 1/4 of assigned guidelines</td>
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Teacher’s Feedback: An excellent piece Brandon! I am impressed with your thorough reflection which has dealt with the question from various perspectives/angles. Your reflection has depth and you have substantiated your ideas with many good examples. You have done a great job! Keep up the good work!