Buckminster Fuller: The Father of the Geodesic Dome

Buckminster Fuller (1895-1983), an American engineer, architect, and philosopher, is known as the "Father of the Geodesic Dome." He achieved international fame in 1967 with this design for the American Pavilion at the Montreal Expo. The pavilion was a large dome which used lightweight metal poles covered with an acrylic skin. It was considered very innovative because it was exceptionally strong, cheap and easy to build. As a result, many designers and organizations have understood the potential of the dome for people living in difficult conditions. This essay looks at how Fuller's geodesic dome has been used for shelter in emergencies and as affordable housing in developing countries around the world.

Thesis statement focuses on uses of domes around the world

Background details focus on his most famous inventions

Richard Buckminster Fuller was born in Milton, Massachusetts, on July 12th, 1895. Surprisingly, he was not good at math or geometry in high-school, but after graduation he attended Harvard University briefly. In the late 1920s, Fuller started working with a Japanese-American designer named Isamu Noguchi. From Noguchi's influence, Fuller became interested in making designs that were simple, environmentally friendly and efficient. Fuller dedicated himself to solving global problems of housing, transportation, education, environmental, and poverty. He held 28 patents for his inventions and published 28 books. All of his designs were to be mass produced in the most economical and environmentally friendly way. After his death in 1983, the Buckminster Fuller Institute was founded to develop innovative designs and ideas to help humans have better lives.

Part I: Biographical profile covers Fuller's whole life

Fuller's most famous invention, the geodesic dome, has been used for buildings all over the world, especially for emergency shelters and as low-cost permanent housing. Although he had many patents on his own ideas, the dome was not his. He purchased the patent for a design that was first used in Germany in 1928, developing the design further and making it famous. Fuller's dome has been used more than 300,000 times in numerous countries. Two of the most famous domes are the American Pavilion at the 1967 Montreal Expo and the Epcot Center in Florida. The Nagoya Dome is also based on his plan. Most importantly, Fuller's geodesic dome has helped solve housing problems experienced by people all around the world. Small domes have been used extensively in disaster relief to provide temporary housing to the homeless. These domes can be constructed quickly, and can withstand hurricane winds, earthquakes and cold temperatures. Such domes were used in the recent earthquake in Haiti in 2010, and more recently dome-building companies around the world offered emergency domes for the homeless in Tohoku, Japan. Fuller also thought that the geodesic dome could be a solution for housing problems related to poverty and the world's growing population. According to the United Nations, about 1.6 billion people live in substandard a housing; and one-hundred million people are homeless. Since its invention, Fuller's geodesic dome design has been used to give low-cost housing to people in third-world developing countries in Asia and Africa. Designs such as those produced by the Monolithic Dome Institute have been built at low cost--about $1500 (USD). These homes are simple to construct, strong and environmentally friendly.

Part II: Focuses on a special achievement and its application around the world.

In conclusion, Buckminster Fuller's geodesic dome has been used all around the world to provide emergency shelter and affordable housing in difficult conditions. With his philosophy of "more for less," he has influenced many designers, architects and scientists. His designs, which are simple, economical and environmentally friendly, have helped improve the lives of many people. With our planet's growing population, widespread poverty and serious environmental problems, his thinking will surely be important in the future.

Conclusion: Restates the thesis and summarizes the main points. It ends by discussing his importance in the future.