The article “Thirty Years Later” from the Smithsonian Magazine, discusses an ongoing construction project to build a metal arch over the crumbling concrete covering the nuclear waste from the Chernobyl power plant. After the power plant melted down, the Soviet government encased the radioactive material from the powerplant in concrete. Now the concrete is falling apart, threatening to release radiation into the surrounding environment. The Ukrainian government’s project seeks to further enclose the concrete in a metal arch which will continue to enclose the radioactive material after the concrete has collapsed. The article “How Many People Does it Take to Make a New Light Bulb” discusses the company SunNight Solar’s “Buy One, Give One” campaign where for every solar powered light someone in the US buys, the company donates one to an African.

In *Engineering and the Mind’s Eye*, Ferguson argues for the importance of the mind’s eye, a term he uses to refer to the ability to visualize complex physical ideas in the mind. According to Ferguson, there mind’s eye is especially useful to engineers and inventors as it enables them to come up with new ideas more readily than by relying on words alone. *Engineering and the Mind’s Eye* presents several examples from history of instances where experts, such as Einstein and Chrysler, found images more useful than words for describing their ideas. The author goes on to assert that those who are more adept with words, are at a disadvantage when it comes to formulating new innovations. I haven’t thoroughly considered the importance of the mind’s eye in engineering. After reading, the article, though, I realize that I do use my mind’s eye fairly often when I’m coming up with ideas or visualizing problems. I do not consider myself to have a penchant for the arts, although I do enjoy doing artistic things for fun as a break for more logical or mathematical work. I suppose I enjoy experiencing other people’s art more than I enjoy making my own art.

Dylan, I also find the subject of biomimicry interesting. Many engineering labs researching robot designs are taking inspiration from nature, since animals are almost universally more adept at maneuvering in their specialized environments than robots. Researchers take inspiration from the design of animals and use this information to inform the designs and movements of their robots. It also can go the other way. Some biologists use build robots based on animals, so that they can then study the robots in ways that would not be practical with the live animal, allowing them to gain new insights into how the animal moves and the reasons for its body’s shape.

Brandon, your view on the water filters TED Talk makes a lot of sense. In the developed world, people often argue for a centralized solution to public problems. Usually, they point to increased efficiency and consistency of fewer, larger providers of a good or service over more dispersed, smaller providers. However, according to the TED Talk, the opposite holds true—at least in some instances—in the developing world. When the success of a project is uncertain and it needs to serve a dispersed group of people, it seems logical that many cheap devices would be more attractive than a single expensive one.

Fernando, I also read the lightbulb article. I like how the company SunNight Solar is using a “Buy One, Give One” campaign to provide lightbulbs to Africans through purchases in the United States. It seems like these kind of campaigns have become quite popular as a means to raise funds from Americans for giving items to impoverished people. I suppose people like the idea of contributing to what they see as a good cause while also buying things for themselves. However, I am rather surprised that people wouldn’t rather just spend the money directly to benefit the Africans. I suppose this provides a means for people to experience the item that their money is paying to donate.

Bartosz, I also read the Chernobyl article from the Smithsonian Magazine. The stories of the people who were forced to build the originally concrete enclosure after the meltdown was caused by the ignorance and irresponsibility of others is quite tragic. As you said, it certainly would be a shame if their sacrifice went to waste. Fortunately, the Ukrainian government is now more prepared to deal with the situation and they have taken the time to research and plan a proper solution through their design contest. The government is now much more interested in humanitarian concerns and is taking the proper precautions to protect their citizenry and the construction workers.

Shelby, I had no idea that cement was harmful for the environment and now I’m interested in learning more about it. Is it the processes involved in the manufacturing of cement that are harmful, or is the harm done as the cement erodes enters the water supply and soil? It is concerning that concrete, which has been used so widely for so many years is environmentally damaging. I think we often take old technologies, such as concrete, for granted and assume that they will always be the same without considering how they could be improved. It’s good that Nikolaos Vlasopoulos is looking for new ways of accomplishing the same task as this old technology.

Mariah, I also was first introduced to robotics through an educational kit; although for me, it was VEX EDR rather than LEGO Mindstorms. I think these sort of educational tech toys are becoming very popular as parents look for ways for their kids to learn while having fun. I’m sure there are many other engineering students who were first inspired by toys of these kind. Considering LEGO Mindstorms is a relatively new concept, I wonder how these systems will continue to develop and what new ones we’ll see in another ten years. I think many adults are jealous that they did not have such toys when they were growing up.