Name: Aaron Nelson
Major: Chemical Engineering
Employer: Johnson & Johnson
Term: Fall 2007

I worked for Johnson & Johnson Consumer and Personal Products Worldwide in Skillman, NJ during my first co-op term. J&J is a massive international company with 120,000 employees split among consumer, pharmaceutical, and medical device divisions. My research group of about 10 people works for the Johnson’s® brand of products, which makes the famous baby shampoo, along with many other washes and lotions that sell about $1.5 billion/year across the globe.

Many ingredients go into each cleansing product, but chemicals called surfactants are responsible for pulling the dirt and oil off skin, as well as creating the foam that consumers demand. My primary research project involved the detailed study of surfactants such as sodium lauryl sulfate and cocamidopropyl betaine, and all of their effects on cleansers. Traditionally, surfactants that foam the most also irritate skin the most. I experimented with many different surfactants to learn how they behave when used in a shampoo or wash.

In a side project, I tested the effect of different cleansers on the longevity and look of Neutrogena sunless tanner. If a difference is noticed in the final tans, then some new claims for the cleansers could be advertised. For this project I recruited other J&J employees and did an actual clinical study on six people. Potential consumer products are often tested that way first, then passed out to a larger number of general consumers.

Chemical engineering knowledge I relied on during my co-op included mass transfer, thermodynamics, fluid mechanics, and organic chemistry. While scientific knowledge is required for research, being able to communicate the findings—both
verbally and in writing—is necessary to make any business progress. J&J’s business research environment gave me the opportunity to present a few PowerPoints to colleagues and participate in some technical writing summarizing my work.

Considering I didn’t even know what a surfactant was when I started here, I have gained at least a semester’s worth of knowledge during my fall co-op. I had to ask a lot of my coworkers for help to understand the instruments I was using and to find lab supplies. The people in my research group always helped me with a smile on their face and didn’t mind having meetings to talk about my work.

Outside of work I enjoyed my time off from school and spent the weekends biking and hiking in nearby parks. Central New Jersey has a lot of nice natural places to visit. My apartment was only an eight-minute drive away from work and located close to shopping areas. The housing J&J found for me was relatively cheap and very nice because they subsidized the rent. My apartment was brand new. Co-ops went out to bars, movies, etc. with each other fairly often.

Overall, my co-op at J&J was enlightening and definitely positive. I don’t know of much, if anything, that J&J could do to make it better. Anyone interested in the consumer products industry or related research areas would enjoy a Johnson & Johnson co-op.
I worked for Johnson & Johnson Consumer and Personal Products Worldwide in Skillman, NJ during my first and second co-op terms. J&J is the largest international healthcare company with 120,000 employees split among consumer, pharmaceutical, and medical device sectors. My research group of about 20 people is called Advanced Technologies and they are responsible for conducting long term research and developing innovative technologies that can be applied to many different types of consumer products.

My project for this term focused on chemicals called surfactants and polymers, which are the ingredients in cleansing products responsible for removing dirt and oil from skin, as well as creating the foam that consumers demand. My primary research project involved the detailed study of the thermodynamics of surfactant-polymer interactions. Traditionally, surfactants that foam the most also irritate skin the most. I experimented with many different surfactants to learn how they might interact with a particular polymer when used in a shampoo or body wash. The results allowed development of milder cleansing formulations with good foam properties.

Chemical engineering knowledge I relied on during my second term of co-op included thermodynamics and organic chemistry. While scientific knowledge is required for research, being able to communicate the findings—both verbally and in writing—is necessary to make any business progress. J&J's applied research environment gave me the opportunity to give several presentations to colleagues and document my results with technical writing.
Considering I didn’t even know what a surfactant was when I started here for my first co-op term, I have gained a thorough understanding of surfactants and their role in cleansing products. I had to ask a few of my coworkers for help to understand the instruments I was using and to find lab supplies. The people in my research group always helped me with a smile on their face and didn’t mind having meetings to talk about my work.

Outside of work I enjoyed my time off from school and spent the weekends hiking in nearby parks and travelling to Manhattan. Central New Jersey has a lot of nice natural places to visit. Manhattan is like no other city I have been to and I am glad I was able to see a few of the famous landmarks. My apartment was a long forty-minute drive away from work and located in downtown New Brunswick. However, I enjoyed driving by the farms and hills on the way to and from work. The housing J&J found for me at Rutgers in New Brunswick was free and nice enough for a college dorm environment.

Co-ops and interns went out to bars, movies, etc. with each other fairly often.

Overall, my co-op at J&J was enlightening and definitely positive. I don’t know of much that J&J could do to make it better. Anyone interested in the consumer products industry or related research areas would enjoy a Johnson & Johnson co-op.