Misconceptions

1. We had a misconception regarding genetic inheritance. We thought that when mom and dad reproduce, they pass on **SOME** of their DNA, which results in similar features (I.E. mom's nose or dad's smile) and some of the DNA is uniquely engineered (kind of like mutations). However, this is not so. When mom and dad reproduce, **the offspring's DNA comes completely from mom and dad**. Their DNA is replicated exactly and passed on. So why are no two people on earth alike? Crossing over, independent assortment of chromosomes and random fertilization cause different combinations of genes and alleles to be given to a child.

2. Another misconception of our group dealt with was about dominant and recessive genes. We thought that the term "dominant gene" simply meant that a particular gene is more common than another. This is false. A dominant gene actually means that when that gene is paired up with a recessive gene, the dominant gene will be expressed. This is evident in Europe. Most people have blue eyes even though brown is dominant over blue. This is because there are more blue eye genes in the population, not because it is more dominant.

3. As a group, we also had the misconception of which genes are passed on. We thought that even if someone were to carry the trait of being homozygous recessive, they had the ability to produce an offspring with a dominant trait. However, this is not true. When one is homozygous recessive, they are only able to produce the recessive gene for that is the only one they carry. It is the same for those who are homozygous dominant; they are only able to produce the dominant gene for that is the only gene they carry.

4. The final misconception that we as a group had was the difference between codominance and incomplete dominance. In both cases, both genes are expressed. However, in incomplete dominance it is a mixture of the two (such as that of the hair in the oompah loompah assignment). Then in codominance, both genes are expressed evenly like that of people with type AB blood.