**Honors Biology Final 4Cs Project- Designer Organism**

Idea: You are a team of advanced bioengineers tasked with creating a new hybrid species. Your newly-minted GMO should be designed to solve some issue/problem in human society.

Method: Using todays current technologies and a massive (aka endless!!! \*insert sinister laugh here\*) budget – your team will modify an existing organism by adding a trait from a second living organism. An example of this is the spider silk producing goat. To produce spider silk in large quantities, scientists have transplanted the genetic sequence for spider silk from a spider to the goat. Now, when the goat produces milk, the milk contains large quantities of spider silk.

The required research: existing organisms, the process of creating a transgenic organism, potential impacts of GMO species on society

Finished product: You will create a single full size poster board that has a detailed illustration of your new species. This illustration is to be the focal point of your poster and should be in the center and large in illustration. Surrounding your new genetically modified organism, you are to completely detail the following:

* A description of the problem/issue that you’re trying to solve by creating this GMO
* A description of how/why your organism solves the problem/issue
* Why the organisms used in your project are ideal for solving the problem/issue.
* An infographic or labeled diagram of the process of transgenic modification.
* The potential positive and negative impacts of your GMO on the environment/ecosystem
* The potential positive and negative impacts economic impact of your GMO
* The potential positive and negative impacts of your GMO on human health
* A proposal for minimizing the potential negative impacts of your GMO described above