Why do Glo Fish Glow?

**What is a Glo Fish?**

GloFish® fluorescent fish were originally bred to help detect environmental pollutants. By adding a natural fluorescence gene to the fish, scientists hope to one day quickly and easily determine when a waterway is contaminated. The first step in developing a pollution-detecting fish was to create fish that would be fluorescent all the time. Scientists soon realized the public's interest in sharing the benefits of this research, a process which lead to GloFish® fluorescent fish[[1]](https://docs.google.com/document/d/1S4IRZKWV73AHgMuTl8dEbdJYUiO3QohxhqNyyPaspOk/pub" \l "ftnt1).

Video [Videos for a second viewing of Glo Fish](http://www.google.com/url?q=http%3A%2F%2Fwww.glofish.com%2Fvideo.asp&sa=D&sntz=1&usg=AFQjCNG796t2Tej66H94DyXRa80G55t76w)

Directions:

1. Partner with another student at your table group.
2. One person in your group open the template
3. Share that document with your partner.
4. In your group, discuss, research, analyze and answer the presented questions concerning Glo Fish.
5. Include on your document pictures, videos, images, written descriptions (by you and not copied and pasted).

Analysis & Application:

Discuss and answer the following questions after examining the following resources.

1. Why do Glo Fish Glow?
2. Based on your answer, what process allows this to occur? (Hint: it has to do with proteins): [A place to start your thinking and research](http://www.google.com/url?q=http%3A%2F%2Fwww.telegraph.co.uk%2Fearth%2Fagriculture%2Fgeneticmodification%2F8423764%2FGenetically-modified-animals-questions-and-answers.html&sa=D&sntz=1&usg=AFQjCNH1cfs5WoYajpcjzq919CvE5_JwBg)
3. [What are GMO’s](http://www.google.com/url?q=http%3A%2F%2Fwww.telegraph.co.uk%2Fearth%2Fagriculture%2Fgeneticmodification%2F8423764%2FGenetically-modified-animals-questions-and-answers.html&sa=D&sntz=1&usg=AFQjCNH1cfs5WoYajpcjzq919CvE5_JwBg)
4. How might the use of Glo Fish be helpful in the real world?  [Here is one example that can start your thinking](http://www.google.com/url?q=http%3A%2F%2Fwww.sciencedaily.com%2Freleases%2F2012%2F03%2F120308174649.htm&sa=D&sntz=1&usg=AFQjCNE74O9AOlPnNh_m0MxEC9-e182yEQ) and another [concerning cancer](http://www.google.com/url?q=http%3A%2F%2Fwww.ted.com%2Ftalks%2Feva_vertes_looks_to_the_future_of_medicine.html&sa=D&sntz=1&usg=AFQjCNGePvRvNbvJbtyhZDd8vTzOCssHvA).
5. Find example of an organism, probably used by you at some point in your life, that is genetically modified and describe how it has been genetically modified and what it is used for.

Turn In:

1. Make sure both your names are on the document.
2. Turn In: