ECODETECTIVES: THE PERIL RIVER

https://biomanbio.com/HTML5GamesandLabs/EcoGames/ecodetectiveshtml5page.html

The Peril River Watershed is in trouble! Use your scientific reasoning and analytical skills to figure out who is damaging the river, and how to fix it! You will be learning about the history of the river, collecting data to test 3 hypotheses, and determining the best plan of action to improve biodiversity in the Peril River.

Click on the link, then "Start a New Game", read all instructions carefully, and answer the questions in the tutorial. Remember, in order to solve the problem, you have to do the background research. You will need to answer the questions below as you conduct your investigation. You may have to enable FLASH before playing and you will need a calculator for this activity.

Step 1 Background Research: Biodiversity of the River & Water Quality

1. What has happened to the biodiversity of the Peril River from the 1950s to the present time?

2. After researching water quality, what is causing the water to be green?

3. How does the dissolved oxygen level affect the living organisms in the river?

Step 2 The Mission: Click on "Investigate and Experiment!"-This is where you will test the 3 hypotheses. You need to conduct all 3 tests to learn more about the river. You can click on "Review the Problem" if you don't remember what you learned in step 2.

1. Hypothesis 1: _____
   a. What are nitrates and how do they harm the river?

   b. Where were the nitrates coming from?

2. Hypothesis 2: _____
   a. What are acids?

   b. Was there a problem with acids in the river?

3. Hypothesis 3: _____
   a. What are pesticides?

   b. What was the source of pesticides in the Peril River?

   c. Why was the DDT higher in pelicans?

<u>Step 3: Restoration</u>-This is where you will choose the BEST way to help improve the health of the river.

1. What recommendations did you submit? (List each one and the cost)

Take a screenshot of the "Species Abundance" bar graph by using "ctrl + ▢‖ "(at the top of the keyboard). It will save the picture in the "Downloads" folder of the Chromebook. Upload the screenshot on The Peril River assignment on google classroom and submit. ~~Turn in this handout when you finish.~~ Click "Finish" on "Liveworksheets" to turn in your answers.