Human population and plants

Visit the website below. Read the material and analyze the graph.

<https://ourworldindata.org/world-population-growth/>

1. What population does the graph predict for 2100? How does that compare with your calculations from the previous graphing activity? Explain any conflicts.
2. Explain how annual growth rate of the world population can drop dramatically, yet population predictions continue to increase.
3. The article suggests that world history can be broken into 3 time periods based on population trends:

* Identify those 3 time periods and the years spanning on the graph you produced.
* Give them a fitting name
* Provide a 1-2 sentence summary of the trend.
* What factors caused these trends in population growth?
* For each time period, brainstorm what roles plants might have had directly or indirectly in influencing human population trends.

In the graphing activity, we calculated the doubling rate. What factors need to be considered when calculating an organisms doubling rate.

STOP HERE

Introduce duckweed pop growth lab.

[http://ri.pbslearningmedia.org/resource/tdc02.sci.life.eco.lp\_popgrowth/population-growth](http://ri.pbslearningmedia.org/resource/tdc02.sci.life.eco.lp_popgrowth/population-growth/)/

Artificial pond water will serve as our control.

Your task is to manipulate one environmental variable to determine the optimal level for your variable. Each group will choose 1 variable and have multiple experimental groups. This way, as a class we can find the optimal conditions to maximize duckweed population growth. (Groups could study: Temp, light intensity, light color, nutrients, CO2)