Terra Nova II Aquaponics

The year is 2050, overpopulation and declining air quality threatens all life on Earth. Scientists discover a temporal rift permitting human transmission they initiate a series of "pilgrimages" to a parallel "time stream" resembling Earth's Palaeogene Period. The colony is named "Terra Nova" for "New Earth" or "New World" in Latin

You have been chosen for your critical thinking and teamwork expertise to the planning team. The colony places

enormous emphasis on environmental responsibility. This time we need to structure society in a more connected way within the biosphere.

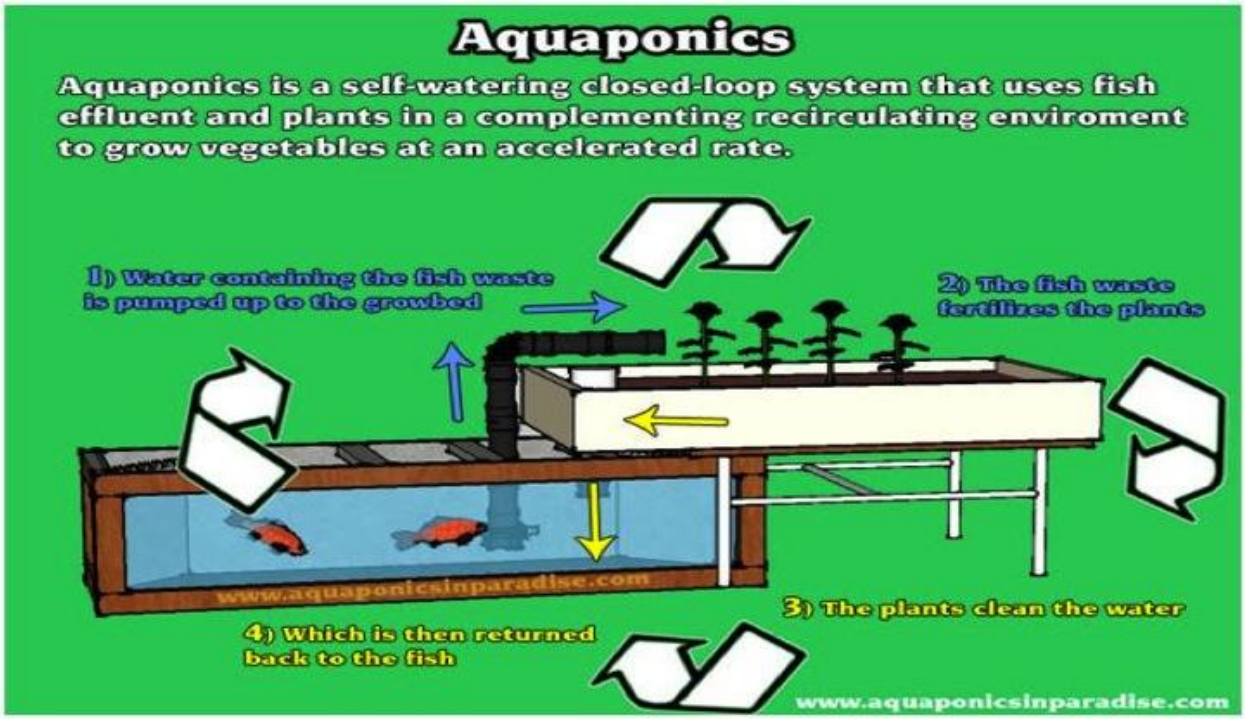
Your job will be to plan alternative ways for humans to meet their basic needs, and advance technology, in a sustainable manner on this new start.

Focus Question: *How can you provide protein and vegetables to your citizens in an indoor environment?*

Your colony is up and running, thanks to your energy solutions. Now you need to focus this energy to provide food, year round for your colony. You have built extensive greenhouses, and want to explore sustainable, permaculture, forest/gardens for the outdoor spaces, but you need to find a way to feed the colony's inhabitants in a short timeframe and in a sustainable manner. The main outdoor growing season has passed. How can you provide protein and vegetables to your citizens in an indoor environment?

Some introductory research leads you to believe that a system called Aquaponics could be the solution to your food issue. You will need to do some research and see how you could establish this type of system. How does it work?

What type of fish work best? Which plants grow best?



Presentation guidelines:

The presentation can be made using Microsoft PowerPoint, Google Presentation, Prezi, or other school compatible presentation software.

1.) Title page with your name and related graphics (10marks)

2.) Questions your presentation must answer:

a.) What is your technology? Describe it in as much detail as possible. (20 marks)

b.) Why is your choice of aquaponics design technology a good choice for a sustainable new future earth? (10marks)

3.) Reference to sources of information in a bibliographic APA format. (example of this style of bibliography can be found at this site: look for the appropriate source style eg. webpage, book, article, etc (10 marks)

: http://library.concordia.ca/help/howto/apa.php

Machine to make bibliography http://citationmachine.net/index2.php

4.) Remember you are presenting this to your peers. A working model would be the best way to see how the technology will work. Create a working model, to show your peers how this technology could be used. Check with Mr. Wessner before you build any models, or if you require some project guidance, and/or resources.

This model must be well planned

a.) Create a drawing or blueprint of your model. This can be made using Paint, Google Sketch up, Google draw, or other electronic drawing tools. (15 marks).

b.) Create a model using Lego, wood, papier-mâché, or scientific model to show how it will work (25 marks)

c.) legend and/or signage to label and explain how the model works. (10 marks)