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| **Day in Unit** | **Main Activities** |
| Day 1 | **Introduce Unit*** Review nitrogen cycle, photosynthesis, and various farming methods.
* Assign groups and distribute design logs.
* Introduce debate and research paper.
* Groups sign up for farming method to focus on for debate and research paper.
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| Day 2 | **Debate Research*** Research debate and paper topic for selected farming method.
* Computer lab may be needed for this day.
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| Day 3 | **Debate*** Groups debate with paired group.
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| Day 4 | **Introduce Aquaponics** * Overview of aquaponics
* Groups explore and discuss materials.
* Review safety procedures.
* Students turn in research papers.
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| Day 5 | **Aquaponics Design*** Brainstorm and record aquaponics system ideas.
* Discuss system designs with partnering group(s). Vote on best design for construction if groups are combined.
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| Day 6 | **Fish & Plants*** Research best types of fish and plants to be used in aquaponics systems.

Computer lab may be needed for this day.  |
| Day 7 | **Selecting Fish & Plants*** Present best types of fish and plants to use for the aquaponics systems.
* Vote on fish and plants to be used.
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| Day 8 | **Construction day!** * Students gather materials and construct aquaponics systems.
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| Day 9 | **Construction day!** * Students should finish construction.
* Those finished should start cycling water with nitrifying bacteria.
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| Day 10 | **Reflection day!** * Assess and plan the redesign of systems to improve overall effectiveness.
* Complete design logs, connecting engineering task to goals.
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*Outline of the unit’s day-to-day’s activities.*