



**Interest meeting:**

**Tuesday, April 17th at 6:00pm at Groundswell Gathering Space  
201 3rd avenue SW, Cedar Rapids, Iowa**

## **Home Hydroponics On**

Hydroponics is a type of hydroculture in which plants are grown, without soil, utilizing mineral based solutions suspended in water. Drought, food shortages, natural resource degradation, high levels of greenhouse gas emissions and further waste accumulation are fundamental issues that we as living beings must face to survive on Earth, in space and on other planets. Hydroponics, and other hydroculture systems, have the potential to grow foods, medicines, fibers and other materials reducing their productions contribution to a these issues, while informing our response to them.

*Home Hydroponics On* is a 10 week, three stage, program in which Steam On members are invited to utilize STEAM principles throughout the design and construction of hydroponic systems. Participants will work to create prototypes of hydroponic systems with the goal of producing food, medicine, fibers or other materials focusing on upcycling, automation and beauty. The group will present their findings and prototypes at the Linn County Fair.

### **Stage One: Rapid Prototyping**

STEAMers will work together to gain an understanding of hydroponic systems and establish what they would like to produce before individually utilizing found materials to create a rapid prototype; informing experiments and models to come.

### **Stage Two: Formal Prototyping**

Next STEAMers will reflect on the successes and failures of their Rapid Prototypes, focusing on the environmental inputs that affect growth and production. Once these factors have been identified they will work in small groups to incorporate sensors and mechanisms into their designs culminating in an automated prototype.

### **Stage Three: Production Modeling**

Finally STEAMers again reflect on success and failures this time focusing on creating something beautiful. As a group STEAMers will decide on an intended purpose and location for the final model, or models, ensuring it blends seamlessly into its environment and serving more than its intended purpose.

**To register and for more infromatoin please visit [STEAMOn.Net](http://STEAMOn.Net)  
Please contact August with any questions at [Steamon@hub25.org](mailto:Steamon@hub25.org)**

STEAM On Presents  
Home Hydroponics On  
A STEAM Generating Project hosted by Matthew 25



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Meetings will generally be held Tuesdays from 6:00- 9:00 pm at Groundswell Gathering Space.  
During the third stage we will expand to two days a week meeting Wednesdays from 6-9 pm.  
Additional open workshop hours will be determined based on space and participant availability.

**Program Timeline:**

Tuesday, April 17th- Interest meeting

**Stage One:**

Tuesday, April 24th- Spaceship Earth and Plant Spaceships

Tuesday, March 1st- Rapid Prototyping

**Stage Two:**

Tuesday, May 8th- Diagrams and Designs

Tuesday, May 15th- Components and Action Steps

Tuesday, May 22st- Formalizing and Finalizing

Tuesday, May 29th-Formal Prototyping

**Stage Three:**

Tuesday, June 5th- Reflection and Direction

Wednesday, June 6th- Reflection and Direction\*

Tuesday, June 12th- Design Build

Wednesday, June 13th- Design build\*

Tuesday, June 19th- Production Modeling

Tuesday, June 24th- Presentation and Discussion

**Exhibitions:**

Wednesday, May 30th- STEAMers are encouraged to invite their friends and family's to Groundswell.

June 27th-30th- STEAMers will present their models and prototypes at the Linn County Fair

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