



## UConn 4-H S.T.E.M. Outreach Kit Program

Marc Cournoyer, Sara Tomis, Heidi Herz

University of Connecticut College of Agriculture, Health and Natural Resources

### Beginnings and Beyond

Started in the summer of 2021 as a way to reach youth audiences during the height of the COVID pandemic, the 4-H S.T.E.M. Outreach Kit Program was introduced to families in New London County Connecticut. 4-H Educator Pamela Gray and her team partnered with local libraries and other community partners to deliver educational kits to youth with STEM based activities that could be completed at home. The kits consisted of five distinct activity material packets based around a specific theme. Each activity came with an instruction sheet and link to a tutorial video created by Pam and her team that described the activity and how to complete it. These videos were hosted on the UConn Extension YouTube page and could be viewed by anyone with internet access.

Community partners were sought to assist with distribution of kit materials. Through an existing relationship with local libraries, Pam and her team were able to reach a broad audience in an effort to continue 4-H educational outreach during a time when face to face interaction was not available. COVID required educators across the country to find innovative ways to deliver program content and this was just one example of how this could be achieved. Each week's activities also links to supplemental materials including descriptive cards that connected the activity to a potential career or additional relevance, children's book recommendations and the like.



4-H program assistant Sara Tomis demonstrates the inner working of a flower with the Monster Flower activity as part of the summer 2021 "Farm Tales" outreach program.

The first series was called "Farm Tales" and offered five unique, educational activity kits for youth to complete. The five activity themes were:

- Lesson 1: **Wind Farms** – Activity: Paper Windmill
- Lesson 2: **Flower Farms** – Activity: Monster Flower
- Lesson 3: **Bee Farms** – Activity: Bee Bots
- Lesson 4: **Hog Farms** – Activity: Iris Folding Pig
- Lesson 5: **Fish Farms** – Activity: Koinobori Windsock



Koinobori fish windsock created as part of the tutorial video for "Farm Tales" lesson 5.

The program was again offered in the summer of 2022 with the theme of "Ocean Discovery". This time the se-

ries focused on ocean life where participants learned awareness. The five activity themes are: to learned about bioluminescence, how a submarine Lesson 1: **Renewable Energy** - Activity: Pizza Box Solar works, the five oceanic zones and more. Again, youth Oven were equipped with materials to follow along with the Lesson 2: **Vermiculture** - Activity: Create Your Own Compost videos created by Pam and her staff.

The summer of 2022 also saw Marc Cournoyer take Lesson 3: **The Environment** - Activity: Nature Scaven- over as the 4-H educator for New London County with ger Hunt & "Bug Hut" Build the retirement of Pam Gray. Upon Marc's arrival, the Lesson 4: **Pollinators** - Activity: Honey Bee Challenge program added a second series to now provide sum- Lesson 5: **Food Web** - Activity: Food Web Board Game mer and winter series with different themes each time. Summer 2023 saw a return to an ocean theme with the connection to the National 4-H STEM Challenge "Explorers of the Deep". Series lessons involved designing a paper fish, learning about deep sea divers, the science of nautical flags, how tribal cultures construct- ed their own fishing nets and oil spill clean-up.

Supplies and Tools	
Signal Flag Cutout Sheets (available from the <a href="#">National Park Service website</a> )	
String	
Scissors	
Tape	



Instructions for creating a name sign with nautical flags as part of the "Explorers of the Deep" 4-H STEM Kit outreach series

In an effort to support the CT library summer reading theme, the program focused on personal empowerment in the summer of 2023 with the "Finding Your Voice" series. Lessons explored ways to find personal direction and fulfillment. Lessons were:

- Lesson 1: **Personal Puzzle** - Activity: Individual puzzle
- Lesson 2: **My Marionette** - Activity: Marionette puppet
- Lesson 3: **A Light for Others** - Activity: Stained glass candle holder
- Lesson 4: **Zen Garden** - Activity: Tabletop Zen garden
- Lesson 5: **Dream A Little Dream** - Activity: Personal journal and postcard



Video intro card for Zen Garden tutorial video.

In the fall of 2023, Jennifer Cushman joined the project in an effort to expand the program beyond New London County. She worked with Marc and the team to create a pilot launch of the program in Hartford County with the winter 2024 series. The theme of the winter 2024 series focused on topics around the area of Healthy Living. Lessons explored financial literacy, physical activity and nutrition, mindfulness and emergency preparedness.

In the summer of 2024, the program was expanded to statewide distribution with the addition of Middlesex, and Tolland County. The ultimate goal is to have a presence in all eight Connecticut counties by early 2025. The 2024 summer series is called "Earth Agents" and focuses around conservation and environmental



Promotional materials for the summer 2024 4-H STEM Library Outreach program

### Our Partners

Along with local libraries, the program has also developed fruitful relationships with the Mashantucket Pequot Tribal Nation through the USDA FRTEP grant program, and the NLO Naval Submarine Base CYP and MWR program in Groton, CT.

Partner agencies report that they love the program because UConn does all the content creation, kit assembly and "heavy lifting". All the partner agencies have to do is deliver the programs and record participant numbers. Currently each 5 activity kits costs \$15. For summer 2024 there are 275 kits being produced with over 1300 unique activities being distributed to youth throughout Connecticut.

To learn more about the program and ways that you could replicate it in your state contact Marc Cournoyer at [marc.cournoyer@uconn.edu](mailto:marc.cournoyer@uconn.edu) or use the QR code below to see the website.

