

# Education Research & Outreach Newsletter

## Happy New Year from the EROL!

It is an exciting time in the Education Research and Outreach lab, as we continue to meet new team members, plan new events, and embark on new projects!

With this newsletter, you can keep up to date with what the lab has been doing recently, find out about upcoming events, and learn about all of our new resources available online.

From all of us at the EROL, we wish you a healthy and happy 2022, and we are excited to be able to support you in this year's academic endeavors!



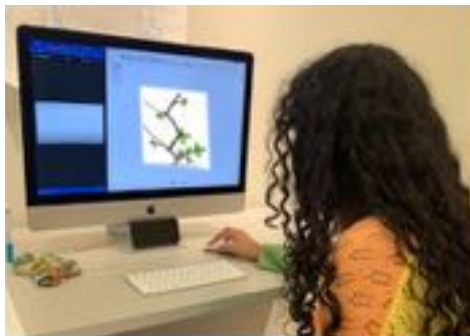
## High School Students' 3D Modeling of Danforth Research Plants

The SPARK! bioscience program from the Parkway and Rockwood school districts, led by teacher Meredith Jacques, worked with 21 students modeling alfalfa, flowers of corn, and volvox algae.

Students received training on modeling software, designed and created models in teams of art-, science- and tech-oriented students, wrote one-page worksheets, and presented their work.

The students were also introduced to augmented and virtual reality technologies where their models will be used.

If you are interested in implementing this activity, contact Dr. Sandra Arango-Caro at [sarango-caro@danforthcenter.org](mailto:sarango-caro@danforthcenter.org).



*A student creating a three-dimensional model of an alfalfa plant.*

## Dr. Lisa Walsh's USDA Postdoctoral Fellowship

For her USDA postdoctoral fellowship, Dr. Lisa L. Walsh will evaluate the current "pipeline" to agricultural science and identify areas of recruitment outside of 4-H and Future Farmers of America (FFA).

Previous research from College of Ag programs has been conducted for individual institutions, but Dr. Walsh will develop, validate and implement a survey to better understand who is pursuing a higher degree in ag science (and why) nationwide to improve recruitment and pre-collegiate preparation.

In addition, Dr. Walsh will develop, validate, and implement a survey to evaluate how student value and interest in ag science change after field trips, citizen science participation, or authentic research experiences in the classroom.

## New Program: EMBARK

The EMBARK program is an opportunity for high schools to have postdoctoral researchers from the Danforth Center teach college-level biotech and life sciences classes at the school. These classes from St. Louis Community College will count for dual enrollment credit towards a certificate of life sciences at STLCC.

If your school is interested in offering these courses in the fall of 2022, please contact Ellen Wottrich at [ewottrich@stlcc.edu](mailto:ewottrich@stlcc.edu).

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## Science Educator Workshops: Educational Technologies

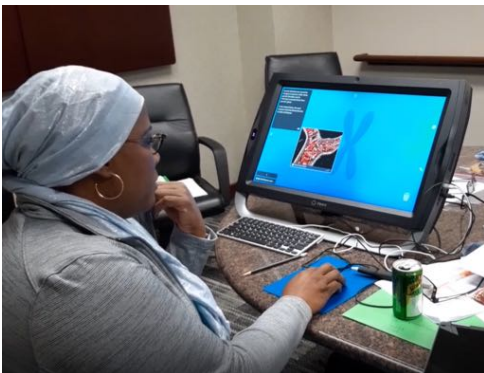
Science educators from middle school to college level are invited to learn about activities to implement in their classrooms using augmented and virtual reality, 3D modeling, and computer gaming.

**February 19, 2022,  
8:30 am to 3:30 pm**

**Donald Danforth Plant  
Science Center  
(975 N Warson Rd,  
Olivette, MO 63132)**

This is a free workshop, and equipment and training will be available for the classroom.

Click [here](#) to see the flyer and click [here](#) to register. If you have any questions, contact Sandra Arango-Caro at [sarango-caro@danforthcenter.org](mailto:sarango-caro@danforthcenter.org).



## Science Educator Workshops: Additional February Workshops

We have two additional workshops for educators being offered this February (specific dates to be announced):

- **Mutant Millets** - Discover a mutant grass that can provide scientists with new tools to model climate change, breed new and better food crops, and understand the genetic control of mutations.



- **Plants Fight Back** – Learn about a program that helps scientists understand how peptides can prevent fungal infections in tomato plants.



If you are interested in attending these workshops, look for the upcoming flyer on our social media, which will provide the final dates and times. If you have any questions, contact Dr. Kate Parsley at [kparsley@danforthcenter.org](mailto:kparsley@danforthcenter.org).

## New Online Resources Check out our website!

The EROL website has been undergoing renovations in order to provide more online resources for educators! These changes are ongoing; so far we have added many online protocols and instructional videos to support teachers and students participating in our programs.

All materials are sorted by the relevant programs, so if you are interested or participating in any of our AREs, CURES, or other activities, check the website for more information and digital materials!

You can find our website by clicking [here](#), or at <https://www.danforthcenter.org/our-work/education-outreach/>.



DONALD DANFORTH  
PLANT SCIENCE CENTER