

HEADWATERS

A core publication of the Lilly Center for Lakes & Streams | Autumn 2020

Meet the Teets family

Page 2

Lilly Center wish list

Page 3-4

K-12 & community education
updates

Page 6



LILLY CENTER FOR
**LAKES
& STREAMS**

What happens to the lakes during the winter?



This winter, we will likely endure below-zero temperatures and several inches of snow and ice. Although some brave the cold to go ice boating or fishing, for most of us, ice on the lakes brings water activities to a halt.

This might lead you to assume that the lake itself becomes inactive in the winter months. But under that layer of frozen water, life goes on -- just more slowly!

- The water temperature stays around **39 degrees Fahrenheit** for the entire winter except for the water very near the ice surface, which is close to the freezing point of 32 degrees.
- The ice insulates the lake and prevents it from getting much colder than it is when the ice initially forms.

In response, fish reduce their activity during the winter months. They enter a state called "torpor." This state allows them to reserve oxygen by limiting how much they move. Fish will stay in torpor until spring, when the ice melts and fresh oxygen is mixed into the water.

What do **you** plan to do until spring? We hope visiting our Facebook page (@centerforlakes) or website to learn more is on your list!

CONTENTS

- 2 The Teets family
- 3 The Lilly Center's wish list
- 4 College student impacts
- 5 K-12 and community education updates

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The Teets family's secret ingredient to growing kindness

INSTILLING INSPIRATION AND APPRECIATION IN K-12 STUDENTS THROUGH THE OUTDOORS

Christopher Teets has a fascination with nature, especially water. His enjoyment has taught his parents, Dick and Lisa, something about the outdoors, too: a love for creation helps all of us be more considerate of each other.

freshwater virtual aquarium. "This was the perfect vehicle for Christopher's attention," said Dick. "We knew it would be good for other learners, too."

The virtual aquarium is regularly used in the Lilly Center's K-12 curriculum. Students color a fish, scan it in, and watch it come to life in a 3-D format, "swimming" through the digital lakescape. They learn about camouflage, habitats, and more. The resource is a favorite of students and teachers alike! You can see a student enjoying the aquarium on the cover of this newsletter.



Left to right: Lisa, Dick and Christopher Teets

As a family, the Teets enjoy outdoor activities like fishing in the pond on their property. Christopher will join his father and older sisters as they drop their lines and wait patiently for a bite. They also have an aquarium in their home, which Christopher helps feed and maintain.

Especially for school-aged children, Dick said, the outdoors is important. "It's worthwhile to generate interest at a younger age," he added. "Nature teaches us to be kinder toward each other, and it improves our quality of life."

When the Teets family had the opportunity to fund the Lilly Center's virtual aquarium, they realized it fit their family perfectly. Christopher's enjoyment of fishing and underwater creatures prompted them to give toward the nation's first

IT'S WORTHWHILE TO GENERATE INTEREST AT A YOUNGER AGE. NATURE TEACHES US TO BE KINDER TOWARD EACH OTHER, AND IT IMPROVES OUR QUALITY OF LIFE.

"The Lilly Center does its homework," Dick said. "They make sure to understand which programs are high-quality before putting money there." When considering their gift, Dick and Lisa looked at the intention of the virtual aquarium... and found that it "just clicked" with their personal mission. "We decided that it was for us," he said. "We're happy to support what the Lilly Center does." •



THE LILLY CENTER'S 2020 WISH LIST

These seven wish list items will maintain and enhance what the Lilly Center's research and education teams are already doing. Will you consider giving toward one or more of these programs this year? Below are some suggested gift amounts to keep us moving forward.



VIRTUAL FIELD TRIPS | \$1400

Our field trips look a little different now. Rather than K-12 students visiting the Dr. Dane A. Miller Science Complex, we send an education team member to local classrooms -- virtually! When you support this program, you are supporting the next generation of water-literate community members.



PLAN AN EVENT | \$500

Have a passion for education? Consider giving to the Lilly Center's community education and outreach programs! We welcome you to join us for one or more of our events to see the impact your gift has.



ALGAE CENSUS | \$1,500

Equip our research team with increased capacity to identify and quantify all the algae in our local lakes. You will help us better understand algae toxins in each lake and keep people and pets safe and healthy.



ADOPT A FISH | \$25

By giving to this program area, you ensure that our 400+ fish remain healthy, whether they are placed in Classroom Lake Experience aquariums or stay at home in our lobby. You also help provide for our other aquatic critters, like the turtles, frogs and salamanders!



PUBLISH A PAPER | \$2,000

Enable our researchers to get their hard work in printed form by supporting the publication process! Your gift will help cover publication fees and printing costs, and help us better care for local lakes and streams.



PRINT A FACT SHEET | \$500

We believe our data should get into your hands and the hands of others around the lakes! By giving toward this program area, you can help cover printing and mailing costs, and time spent creating high-quality, in-depth fact sheets about important topics like boating and zebra mussels. Your support will help make the Lilly Center's research widely available.



STREAM SENSORS | \$1,000

The 12 stream sensors installed around six local lakes help us gauge what enters and leaves local lakes. Help us make sure they continue operating smoothly. With this gift, you support ongoing maintenance of equipment and help make the data publicly available.

READY TO GIVE?
VISIT [LAKES.GRACE.EDU/GIVE](https://lakes.grace.edu/give)



Your generosity toward our college students earlier this year is having an impact! Each member of our student team is essential to the mission of the Lilly Center. You also helped us welcome a record number of environmental science students to Grace College this fall. You enable us to continue offering them hands-on career preparation, while they further our mission of keeping the lakes clean, healthy, safe and beautiful. **Thank you!**

