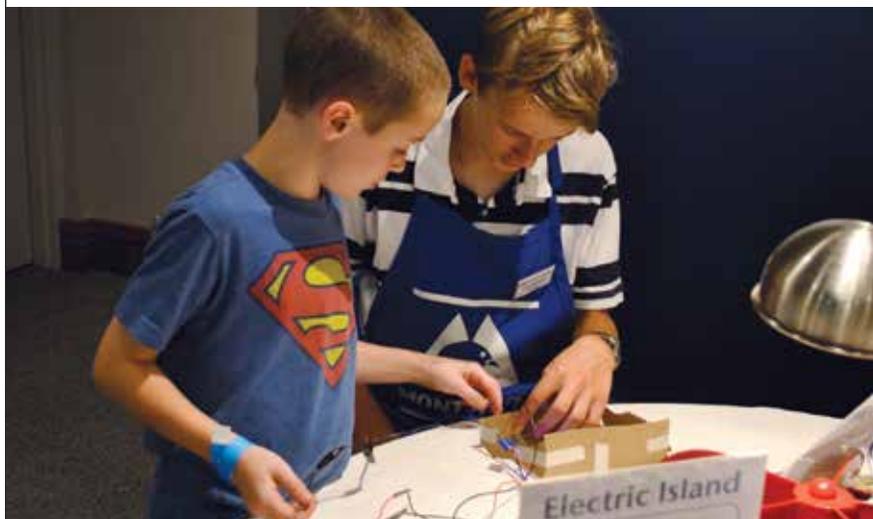


# Engaging Teens



If you think your children have outgrown the Montshire, think again. We have created a variety of new experiences to engage older children and teens—and they're working! Many of these opportunities are building upon the national 'maker' movement that explores engineering and hands-on design.

*The Tinkering Lab* is a new activity space in our exhibit hall where older children and adults work with everyday materials to build whimsical Scribblebots, design an Electric Island, and engineer new worlds with Design Planks.

Our *Friday Nights for Teen Tinkerers* program is a drop-in opportunity for middle school youth held monthly from October through April. Young teens enjoy hanging out with friends while using their imaginations and engineering skills to build something cool: a robot that draws, an electronic blinky bug, tessellating designs. Since we introduced the program two years ago, more than 60 teens have enjoyed cool activities, snacks, music, and a new challenge each month.

*Who says it's possible to outgrow the Montshire?*

Montshire Summer Camp has always provided rich programming for middle school-aged youth, and we continue to expand and refine our offerings. Summer 2015 featured *Makers Camp* and *Sketchbook Studio*.

We also piloted a new summer program this year for high school students. The Summer Teen Program provides an opportunity to engage in science and engineering activities under the mentorship of Museum staff. This summer, six teens, all rising freshmen and sophomores at local high schools, worked with visitors, facilitated design challenges in *The Tinkering Lab*, and led a number of hands-on science activities in David Goudy Science Park. Lessons learned from this summer's pilot will inform future programs for our teenage audience.

"I've been enjoying helping visitors in the Tinkering Lab and out in Science Park as they explore the different things they can do with the exhibits here," said Andy Rightmire, one of our Summer Teen Program participants and a veteran of several Montshire programs. "I think I'm becoming a better communicator, especially with younger children."

This fall, the Montshire will offer a workshop for individuals who are age 15 and older—*Make with Technology: An Introduction to Arduino*. Teens and adults are invited to build digital devices and interactive objects that can sense and react to the physical world.



I have a secret—I got a C in high school physics. I worked really hard, but there was something about the way physics was taught in my class (mostly on a chalkboard) that didn't quite resonate with my learning style.

A few weeks later, I found myself working at a science museum, explaining science to visiting families. While acquainting myself with the exhibits, I found a series of hands-on experiences that brought to life physics concepts that had eluded me in the classroom. The museum's hands-on approach ignited my enthusiasm for physics.

Looking back, working in a science museum as a teen was an incredible gift that helped me become an extremely curious adult. Museums can play a pivotal role in youth development—especially with teens. The relationship is reciprocal: museums provide a safe space for kids to explore science, and kids of all ages help inspire adults to explore alternative ways to solve problems.

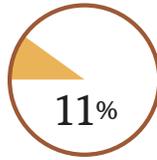
I've been thrilled to see the first cohort of our Summer Teen Program "trying out" science with visitors at the Montshire. Thank you for helping keep people of all ages engaged in science!

Marcos Stafne, Ph.D.  
Executive Director

# Your Gift Matters!



Only 51% of the cost of each visit is covered by memberships, admission fees, and retail sales.



Only 11% of members give at the donor level.



No revenue for the Museum's operations comes from government.

## 5 Reasons to Give



1

VISITING EXHIBITIONS

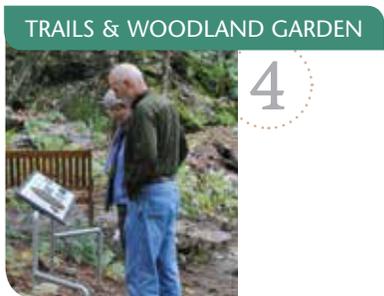
2

SCHOOL PARTNERSHIPS



3

EXPLAINER TRAINING



4

TRAILS & WOODLAND GARDEN

5

SCHOLARSHIP PROGRAMS



And many more!



### NEW TO THE MUSEUM



This summer we welcomed **Courtney Adams** to the Montshire as our new Development Assistant. In this role she'll help coordinate a variety of development and membership functions and provide support to the administrative office. Courtney received a B.A. in Art and Art History from Rutgers University and an M.A. in Museum Studies from Arizona State University. She has worked for Dartmouth College's Arts and Sciences division and the Hopkins Center for the Arts, as well as several technology start-ups in Massachusetts. An avid gardener, she lives with her family in Plainfield, New Hampshire.



Please welcome **Garry Collins** as our Facilities Manager. For the past 14 years Gary worked with or has overseen facilities management at the Rivendell Interstate School District. He graduated with a degree in Hospitality Management from Champlain College in 1991. He is also a Northwest Energy Efficiency Council Certified Building Operator level I & II, National Recreation & Parks Association Certified Playground Safety Inspector, and Federal Emergency Management Agency National Incident Management System 100, 200 & 700 certified. He is a firefighter with a local fire department, as well as a nationally certified EMT, CPR & First Aid instructor. He has a passion for traveling with his family.

### VOLUNTEER OPPORTUNITIES

The Montshire offers a variety of volunteer opportunities.

- **Explainers** interact with visitors to enhance their experience in the Museum. Training will be provided this fall.
- **Young Scientist Program volunteers** work with a staff teacher to introduce science to young children.
- **Magic Carpet volunteers** organize the popular Magic Carpet luncheon series.
- **Auction volunteers** provide leadership and creativity to make the Museum's principal fundraiser a success.

For additional information, including time commitment and an application, visit our website at [www.montshire.org](http://www.montshire.org), or email us at [volunteer@montshire.org](mailto:volunteer@montshire.org).

### GRANTS FUND SPECIAL INITIATIVES

Montshire Museum recently received grants from several private foundations to support special programming in schools and the community. Your individual contributions give us the strength to pursue these kinds of special donations—thank you!

- **The Dorr Foundation** awarded a grant to expand Montshire's educational programs in schools. Over the next 18 months, we will be engaging students in rigorous science investigations in their schoolyards and community open spaces.
- **The A.D. Henderson Foundation** has provided support for inquiry science curricula and professional development for early childhood specialists in schools, child care centers, and at the Museum.
- **The Kettering Family Foundation** has provided a grant to the David Goudy Warm Welcome Endowment Fund, which supports Museum access for low-income families. Additional contributions are needed to match the gift that established this important fund in 2014. For more information, call 802-649-2200, ext. 225.



### AFTERSCHOOL STUDENTS TO ENGAGE IN EXTENDED SESSIONS OF CREATIVE TINKERING.

1,080 Montshire Tinkering Kits were assembled this summer and sent to Vermont Afterschool, Inc. The kits will be distributed to 12 afterschool sites throughout Vermont. Each site will receive a teacher guide and three sets of tinkering activities—enough for 30 students to spend 9-10 hours building, designing, and learning science and engineering skills. Montshire educator Rachel Donegan (above, right, along with intern Ellen Weburg) will also lead an afterschool teacher workshop in September. The project is funded through Vermont Afterschool, Inc.

## CHILDREN AND YOUTH

### Books and Beyond! Science for Preschoolers

*Mondays, September 14,  
October 19, November 16,  
December 7,  
10:15 or 11:30 a.m.*

Children's literature and hands-on activities are combined for fun science learning and exploration. Each day features a different book and related science activity. For children ages 3-5 and their parents or caregivers.

*Free with Museum admission.*

### Young Scientist Program

*Session 1: September 9–  
October 21 (7 weeks)*

*Session 2: October 28 –  
December 16 (7 weeks)*

*Mornings 9:30–11:30 a.m.;*

*Afternoons, 1–3 p.m.*

This weekly program includes hands-on experiments, fun projects, and individual explorations in the physical and natural sciences. Designed to engage and excite preschoolers (ages 4+) and kindergartners about science.

*Limit: 15 children*

*Members \$200, non-members \$220*

### Montshire FIRST® LEGO® League Team

*Mid-September to  
mid-November*

Montshire is sponsoring a FIRST® LEGO® League (FLL) team for children ages 9–14 (grades 4–8). The Montshire FLL team will work together to solve a design challenge using LEGO robotics, and will participate in a regional competition with other teams demonstrating their LEGO robot and teamwork skills.

*Limit: 8 children.*

*(4 spots for boys, 4 spots for girls) Members \$50,  
non-members \$55.*



Friday Nights for Teen Tinkerers

### Homeschoolers Series Earth Science

*Thursdays, October 1, 8 & 15*

*Ages 6-8, 10:30 a.m.–12 p.m.*

*Ages 9-12, 1–2:30 p.m.*

Join other homeschooled children in this three-part series focused on Earth science. Learn about rocks, fossils, and how water shapes the land using steam tables. Each week we will explore new topics while using specimens from the Museum's collection. *Limit: 14 children. Members \$70, non-members \$77.*

### Afterschool Adventures Doing Science

*Series 1: Tuesdays, September 15, 22 & 29*

*Series 2: Mondays, October 26,  
Nov 2 & 9*

*Drop off between 3:15 and 3:30, pick-up at 5:15 p.m.*

For kids who love "doing" science! Explore science and nature using hands-on experiences. We will hypothesize, test, observe, and use our creativity. Explore a different theme each week! For children in grades K-2.

*Limit: 12 children. Members \$90, non-members \$100.*

### Afterschool Adventures Inventors Afterschool

*Tuesdays, November 3, 10 & 17*

*Drop off between 3:15 and 3:30, pick-up at 5:15 p.m.*

This three-part series is perfect for children who enjoy building, tinkering, and

figuring out how things work. We will design and build amazing machines and learn about energy transfer and mechanics. For children in grades 3–6. *Limit: 12 children. Members \$95, non-members \$105.*

### Friday Nights for Teen Tinkerers

*Fridays 6:30–8 p.m.*

The tinkering studio is open for youth in grades 6 through 9! Design, create, and build something cool—a robot that draws, an electronic blinky bug, tessellating designs. You'll have a chance to use your imagination and sharpen your neurons. Sign-up for one session, or all of them, or just drop in. Each month will explore a different topic.

*Fee: \$8. Pre-registration encouraged.*

### October 2: Costume Creation

Cardboard will be your main source of inspiration as you dream up a larger-than-life costume for Halloween.

### November 6: Stop-Motion Animation:

Use our iPads or bring your own for some movie-making magic.

### December 4: Frankenstuffedies

Wire circuits into stuffed animals to make creations straight out of a mad scientist's lab.

## FAMILY

### Homeschoolers Day Science and Nature

Thursday, September 17,  
10 a.m.–3 p.m.

Throughout the day we will use our 100-acre Museum as the laboratory to do science. We will experiment, observe, and collect data using the nature found inside and outside the Montshire. *Free with Museum admission.*

### Archaeology Day

Saturday, September 26,  
10:30 a.m.–4 p.m.

How did Vermonters live in the past? What tools did they make and how did they make them? What was going on in the Upper Connecticut Valley during the last 12,900 years? Find out for yourself at Archaeology Day! Activities include Native pottery and stone tool making demonstrations, an archaeology “road show,” atlatl throwing practice, a hands-on archaeological dig and a lecture from local archaeologists for the adult visitors. *Free with Museum admission*

### Take Apart Day

Saturday, November 7  
1–4 p.m.

Ever wonder what’s inside the household appliances you use every day? Join us to explore the “guts” of VCRs, toasters, cameras, and toys. You’ll find gears, cams, linkages, speakers, motors, and other components that work together to form complex mechanical and electrical machines. *Free with Museum admission.*



## TEENS/ADULTS

### Mushroom Walk

Sunday, October 4, 1–4 p.m.  
Mushrooms and other fungi are commonly seen on the forest floor in autumn. But how can you tell which ones are edible and which ones should be avoided? Join expert Faith Hunt on this annual foray that will introduce you to a spectacular variety of local fungi. The program concludes with samples of some of the edible finds. *Limit 12 adults. Members \$60, non-members \$70.*

### Make with Technology: Introduction to Arduino

Saturday, November 21  
Teens and adults are invited to create their own project using the latest in DIY technology—programmable Arduino microcontrollers. Arduinos allow hobbyists to create digital devices with sensors that react to the physical world. You’ll receive a Sparkfun Inventor’s Kit (value: \$100) that’s yours to keep. This is an introductory course—no experience with electronics or coding is necessary. *Ages 15–18 \$45, Member adults \$145, non-member adults \$160.*

### Tinkerers’ Ball

Friday, October 23  
6 p.m. to 10 p.m.  
Join us for an adult evening of tinkering, music, food, and more at our first annual Tinkerers’ Ball! Come dressed to party, or dressed to geek out, or both! We’ll have a variety of tinkering activities set-up, including opportunities to accessorize yourself with some electronic bling, create a wild hat, paint with light, design and build a scribble bot, and play some pinball with a machine of your own creation. All the exhibits will be open, a DJ will be spinning tunes, food trucks will be at the Museum’s entrance, and there will be a cash bar fea-

turing local brews and wine. *Adults only. Members \$22, non-members \$25.*

### Montshire Unleashed: An Evening for Adults

Friday, September 18,  
November 20, 6–9 p.m.  
Allow your inner curiosity to run wild! The Montshire is open after hours for adults of all ages. Pull up a stool at the Science Discovery Lab for some amazing activities or simply explore the Museum’s visiting and permanent exhibits on your own. Jasper Murdock Ale and wine from the Norwich Inn will be available for purchase. *Adults 18+ only. Free with Museum admission*

## MAGIC CARPET SERIES

Join Magic Carpet volunteers for an extraordinary travelogue and a regionally inspired meal. Programs begin at 11 a.m.; lunch is served at noon. All proceeds benefit Montshire’s educational mission. *Members \$15, non-members \$18.*



### October 5

Midway  
Tom Wilson

### November 9

New Zealand  
Cappy Nunlist

### December 14

Madagascar  
Richard Neugass

### January 11

Coastal Norway  
Margaret Spicer  
Ray Lougeay

### February 8

Maiden Voyage  
Tania Aebi

### March 14

Palestine  
Anne Chandler

# Business Partnerships

Ask your company to join the Montshire Corporate Associates (MCA).

Our region's business community is built on a strong foundation of science innovation and research, leading to many productive business-museum collaborations. Serving 150,000 visitors annually, Montshire Museum helps foster the community's economic and cultural health, attracting and inspiring a stable and strong workforce.

Why is the MCA, Montshire's corporate membership program important?

- It is an Ideal way for companies to engage with the Museum.
- MCA employees receive access to the Museum.
- Membership demonstrates to the community that your company is a valued partner.
- It raises a company's profile among Montshire members and visitors.
- Members support the Museum's educational mission.

Visit [montshire.org/mca](http://montshire.org/mca) to learn more about MCA benefits and events, and to see a list of current members.

**"Our company has a long tradition of supporting community organizations and we're proud to be partners in this program"**

—Suzanne McDowell  
Co-CEO, King Arthur Flour

## MCA Employee Appreciation Night

Wednesday, Sept. 30  
5:30 to 7 p.m.

Employees of Montshire Corporate Associates are invited to a free evening at the Museum with their families. (Please bring a company ID.)



## UPCOMING EXHIBIT

# The Outside Story

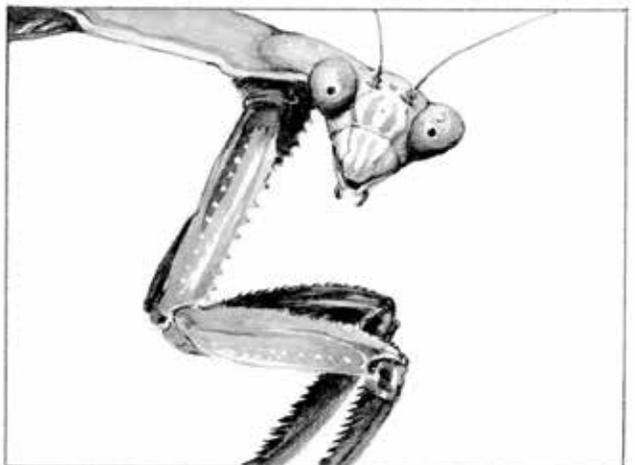
Artwork by Adelaide Tyrol

October 17–November 29

Close observation—it's a central process in doing science, and it's also where many artists begin their interpretation of the world. This fall, Montshire visitors will have the opportunity to see the results of one remarkable artist's close observations, artistic skills, and lifelong fascination with the natural world. *The Outside Story: Artwork by Adelaide Tyrol* opens October 17. With a keen eye and deft hand, Tyrol transforms her observations into images that engage us with a deeper understanding of the world around us. "Art presents the opportunity to reveal truths other than analytical ones," said Tyrol. "A random moment, fully recognized, can embrace the spirit and lead us to a deeper understanding of life."

For many years, Tyrol has illustrated articles about the natural world in *Northern Woodlands Magazine*, as well as for a weekly newspaper column supported by the Well-born Ecology Fund that runs in several local publications, including *The Valley News*. A selection of these illustrations will be featured in the exhibition, along with more recent work, and the text of the original articles for which they were created.

*The Outside Story* will be on display in the Museum's first-floor west gallery October 17 through November 29. Watch the Montshire website and eNews this fall for announcements of additional programs and activities about observation and art.





## SEPTEMBER

- September 9 Young Scientist Program, Session 1 begins **C**  
 September 10 Montshire Corporation Annual Meeting (by invitation) **A**  
 September 14 Books and Beyond! Science for Preschoolers **C**  
 September 15 Afterschool Adventures: Doing Science, Series 1 begins **C**  
 September 17 Homeschoolers Day: Science and Nature **F**  
 September 18 Montshire Unleashed: An Evening for Adults **A**  
 September 26 Archaeology Day **F**  
 September 30 MCA Employee Appreciation Night **F**

## OCTOBER

- October 1 Homeschoolers Series: Earth Science begins **C**  
 October 2 Friday Nights for Teen Tinkerers **Y**  
 October 4 Mushroom Walk **A**  
 October 5 Magic Carpet Program, Midway **A**  
 October 17 *The Outside Story*, exhibition opens **F**  
 October 19 Books and Beyond! Science for Preschoolers **C**  
 October 23 Tinkerers' Ball **A**  
 October 26 Afterschool Adventures: Doing Science, Series 2 begins **C**  
 October 28 Young Scientist Program, Session 2 begins **C**  
 October 29 Montshire Fund Celebration (by invitation) **A**

## NOVEMBER

- November 3 Afterschool Adventures: Inventors Afterschool, Series begins **C**  
 November 6 Friday Nights for Teen Tinkerers **Y**  
 November 7 Take Apart Day **F**  
 November 9 Magic Carpet Program, New Zealand **A**  
 November 13 Shop, Save, Explore **F**  
 November 16 Books and Beyond! Science for Preschoolers **C**  
 November 20 Montshire Unleashed: An Evening for Adults **A**  
 November 21 Make with Technology: Introduction to Arduino **T** **A**

## DECEMBER

- December 4 Friday Nights for Teen Tinkerers **Y**  
 December 7 Books and Beyond! Science for Preschoolers **C**  
 December 14 Magic Carpet Program, Madagascar **A**

Always check [www.montshire.org](http://www.montshire.org) for the most up-to-date information, full program descriptions, and to register.

**C** = Children **F** = Families **A** = Adults **T** = Teen **Y** = Youth

# Calendar



## MONTSHIRE MUSEUM

The Montshire Museum of Science features exhibits and programs on natural and physical sciences. The Montshire is an interpretive center for the Silvio O. Conte National Fish and Wildlife Refuge. The outdoor David Goudy Science Park leads to a network of walking trails on our 110-acre property.

**Hours:** Open daily 10 a.m. to 5 p.m.  
Closed Thanksgiving, Christmas.

**Phone:** 802-649-2200

**Web:** [www.montshire.org](http://www.montshire.org)

### Admission fee

\$14 adults, \$11 children ages 2–17.

Summer rates: (June 20–Labor Day)

\$16 adults, \$13 children ages 2–17

Free for Museum members and children under the age of 2.

Non-Profit Org.  
U.S. Postage  
**PAID**  
Permit No. 170  
White River Jct., VT



## MONTSHIRE MUSEUM BOARD OF TRUSTEES

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Montshire Museum of Science  
One Montshire Road  
Norwich, Vermont 05055

## Bring the Montshire Experience Home



## MONTSHIRE NEWS

The Montshire Museum of Science publishes *Montshire News* three times a year. Montshire members receive a free subscription.

**Executive Director** Marcos Stafne

**Associate Director** Jennifer Rickards

**Editor** Beth Krusi

**Design** Wendy McMillan Design



First floor exhibit spaces and bathrooms are entirely wheelchair accessible. Second floor exhibit spaces can be reached by elevator. Several nature trails on the Quinn Nature Preserve are also wheelchair accessible.

### The Montshire Museum Store

Your source for books, science kits, games, and gifts.

Members save 10%,  
Supporting Members save 20%  
on purchases.

*All Museum Store purchases support Montshire's educational mission.*

