



# Vermont Institute of Natural Science Presents: The Science Symposium May 19, 20, and 21, 2020

## Notes about the Event:

- Dates are filled on a first come, first served basis. Additional day(s) may be added based on the number of classrooms participating.
- Each topic below is an *example* of what could fall under each category. This is not a comprehensive list of topics that teachers need to select from. Some project ideas may fit well into two different days / themes (i.e. Protect Reptiles and Amphibians).

## Tuesday, May 19, 2020: Habitat Protectors

### 1. Protection of local flora & fauna

- Freshwater Mussels going extinct
  - <https://www.vnews.com/Outside-Story-on-endangered-freshwater-mussels-26962875>
  - <https://val.vtecostudies.org/projects/vermont-freshwater-mussel-atlas/>
  - <https://www.inaturalist.org/projects/vermont-freshwater-mussel-survey>
- Protecting Bears
  - [Vermont Fish & Wildlife information](#)
- Protecting Trees
  - [Protect trees from pests](#)
  - [Keeping a Healthy Forest](#)
  - [New Hampshire forest health information](#)
- Protect Reptiles & Amphibians -- Why help turtles (salamanders, frogs, etc.) cross the road?
  - [List of project ideas](#) (such as mapping important breeding or road crossing areas)

### 2. Water Quality

- Protection of shorelines - riparian buffers
- Vermonters can help the state's Clean Water Board to determine the best ways to spend money on for water quality protection [[article](#)] (vote ends on Sept. 6, 2019)
- Water Monitoring - [Vermont Lay Monitoring Program](#) - citizen science program
- [Protecting Floodplains and Wetlands](#)

### 3. Pollinators

- [Vermont Fish & Wildlife - How you can help](#)

### 4. Keeping Native Wildlife Wild

- Releasing a native pet into the wild (such as turtles) can cause disruption to the wild populations [[article](#)]

### 5. Helping Vermont's Endangered Little Brown Bat

- [[VT Fish & Wildlife information](#)]
- [Probiotic bacteria reduces impact of white-nose syndrome](#) - Virginia Tech



## Wednesday, May 20, 2020: Environmental Action & Crime

### 1. Plastics & Trash

- [National Geographic - Vermont plastic ban](#)
- [Creating a Plastic-Free New England](#)
- [The war on trash](#)
- [Single use plastics](#)
- [NCEL - plastic pollution](#)

### 2. Invasive Plants & Insects

- Excellent resource - [VT Invasives](#) - with gallery of images
- New Hampshire plants (native and invasive) images and descriptions [[PDF](#)]
- Become a VIP ([Vermont Invasive Patroller](#) - does require access to a waterbody that can be paddled) and fight against invasives
- Become a [Forest Pest First Detector](#) to help learn tree species and monitor pest infestations
- User-friendly plant ID guide (and ID help) for New England [[GoBotany website](#)]
- Emerald Ash Borer (EAB)
  - <https://twitter.com/hashtag/vtinvasives?src=hash>; [Map of infested areas](#)
  - [Information on EAB ID, slowing the spread; quarantine information, etc.](#)
- Japanese Knotweed
  - [VT Fish and Wildlife Information](#)
  - Best Management Practices - New Hampshire Dept. of Agriculture [[PDF](#)]
- Milfoil (variable)
  - New Hampshire fact sheet [[PDF](#)]
  - NH Spread reduction bill [[article](#)]
  - [VT Fish and Wildlife Information](#)

### 3. Exotic pets released into the wild

- Exotic pets become invasive species [[National Geographic article](#)]
- When pets become pests: the role of the exotic pet trade in producing invasive vertebrate animals (not student-friendly) [[Journal article published June 2019](#)]

### 4. Wildlife removal

- Wood turtles - [Great Northern Forest Initiative, Orianna Society](#)

### 5. Climate Change

- Help scientists monitor Vermont's changing climate by monitoring ice melting on lakes and ponds [[link](#)]
- [Climate Change in VT](#) - How Vermonters are taking action & information regarding average temperatures, snow cover, etc.; Steps to build a stronger VT against climate change [[VT Climate Solutions](#)]
- Storing Carbon -- Steps we can take to keep greenhouse gases from being released into the atmosphere [[website](#)]
- [Global Climate Strike](#) - Sept 20-27, 2019
- BBC Article 7/24/19 -- We have 18 months to take action [[article](#)]
- Green New Deal [BBC 2/12/19 [article](#)]

### 6. Local Lakes & Ponds - Take Action

- Take action by checking-off what is happening around your lake on this [checklist](#). If something isn't happening, find out how to take action!

### 7. How can fungi help stop pollution?

- How fungi can help treat environmental damage [[article](#)]



- Four things to know about fungi ‘Climate Warriors’ [[article](#)]
- 8. Protect Reptiles & Amphibians**
- Why help turtles (salamanders, frogs, etc.) cross the road?
  - [List of project ideas](#) (such as mapping important breeding or road crossing areas)
- 9. Helping Vermont’s Endangered Little Brown Bat**
- [[VT Fish & Wildlife information](#)]
  - [Probiotic bacteria reduces impact of white-nose syndrome](#) - Virginia Tech



## Thursday, May 21, 2020: Community Problem Solvers

- 1. Our school's water is being tested for lead, what's next?**
  - [Vermont.gov article](#)
- 2. Electric Vehicles**
  - [Electric school bus pilot program](#) (Vermont)
  - [New Hampshire & Vermont article](#)
  - increasing electric vehicles and charging stations in VT [[article](#)], [[article](#)]
- 3. Making our school a safer place to learn**
  - VT schools can apply for grants up to \$25,000 to improve safety at their school [[article](#)]
- 4. Getting ready for the 2020 Composting Deadline / Universal Recycling Law**
  - [[article](#)]
  - [[Universal Recycling Law information and documents](#)]
- 5. Help the community to become flood ready**
  - [[website](#)]
- 6. Make your school idle-free**
  - [Idle-Free VT](#)
  - [Archives](#) (project steps) of Vermont Schools
  - Department of Environmental Conservation [[website](#)]
  - VT Statute - prohibited idling of motor vehicles [[website](#)]
  - [Breathe New Hampshire](#)
- 7. Safe Routes to School -- Kids walking and biking to school safely**
  - Safe Routes to School (SRTS) program [[Vermont website](#)] [[New Hampshire website](#)]
  - SRTS VT School Partner Program [[website](#)]
  - SRTS NH Getting Started Program [[website](#)]
- 8. Starting (or supporting) a Walk or Bike to School Day (or Week)**
  - Walk & Bike to School Day [[website](#)] -- Official date: May 6, 2020
- 9. Initiating a Lower Carbon Footprint in Your Town**
  - Are there adequate sidewalks in town to reduce the towns' carbon footprint?
  - Climate Change in Vermont - pollution goals [[website](#)]
  - Go! Vermont [[website](#)]
  - VBike [[website](#)]
- 10. Reducing Your School's Carbon Footprint**
  - [Top 10 Ways from Georgetown University](#)
  - [C40 Cities](#) - how to reduce carbon emissions
  - Example Climate Action Plan [[Hanover High School](#)]
- 11. Making Your Outdoor Classroom and Trails Accessible**
  - Accessible Nature - example trails that are accessible across the US [[Vermont](#), [New Hampshire](#)]
  - Green Mountain Club Accessible Trails [[website](#)]
  - Design Guidelines for Outdoor Classrooms and School Gardens [[Office of the State Superintendent of Education - PDF](#)]
- 12. Free Little Library(ies)**
  - Book containers around town (on corners, in front of busy buildings, etc.) that you can take books to / from to share the love of reading
  - Free Little Library [[website](#)]
  - Design ideas [[Pinterest](#)]



**Other Helpful Resources:**

- [Engine Earth - Time lapse images of the Earth \(any location\)](#)
- [Vermont Citizen Science Volunteer Opportunities](#)
- Excellent resource for Vermont Invasive species - [VT Invasives](#) - with gallery of images
- [VT threatened and endangered species list](#)

