

# Agenda



**8:30am - 9:15am** Registration

**9:15am- 9:30 am** Welcoming Address

**9:30am - 9:55am** Climate Change 101

This will be an introductory talk on the basics of climate change, including terminology, primary causes and effects of climate change, how climate change affects North Carolina, and what is being done to mitigate this crisis.

**10am - 10:40am & 10:50am - 11:30am** Morning Workshops (Choose 2 to attend)

**Planning for Climate Justice - Dr. Danielle Spurlock, UNC Department of City & Regional Planning**

This solutions-focused lecture will introduce best practices to create equitable plans that are shaped with community participation.

**Queer Ecologies for Community - Kati Henderson and Amal Dadi, Duke Gardens**

This interactive workshop will help you collectively identify ways to make your schools greener and healthier for both your classmates and the environment.

**Radical Repair - Julia Gartrell, Radical Repair Workshop**

In this workshop RRW will present a brief slide show and teach skills for hands-on clothing repair.

**Urban Heat Islands - Xuwei Wang and Katherine Burley, UNC Data-Driven EnviroLab**

Become a citizen scientist today and learn more about Urban Heat Islands!

**11:30am -12:30pm** Lunch by Slice 325 and Explore the Museum of Life and Science

**12:30pm - 1:10pm & 1:20pm - 2pm** Afternoon Workshops (Choose 2 to attend)

**Generate: The Game of Energy Choices - Youth Led with support from Kelly Witter, U.S. E.P.A.**

Student teams compete to achieve the lowest cost energy grid while also considering environmental impacts.

**Imagine Durham 2100 - Tomara Gee, Museum of Life and Science**

Workshop participants will imagine the future community through the lens of one of the UN Sustainability Goals.

**Tallest Tower - Youth Led with support from Jenna Hartley, UNC Center for Public Engagement with Science.**

Student teams compete to achieve the lowest cost energy grid while also considering environmental impacts.

**YOUth Have the Power: Lobby for Change - Citizen's Climate Lobby Triangle Youth Team**

This lobbying workshop will empower you to interact with your elected officials to advocate for change!

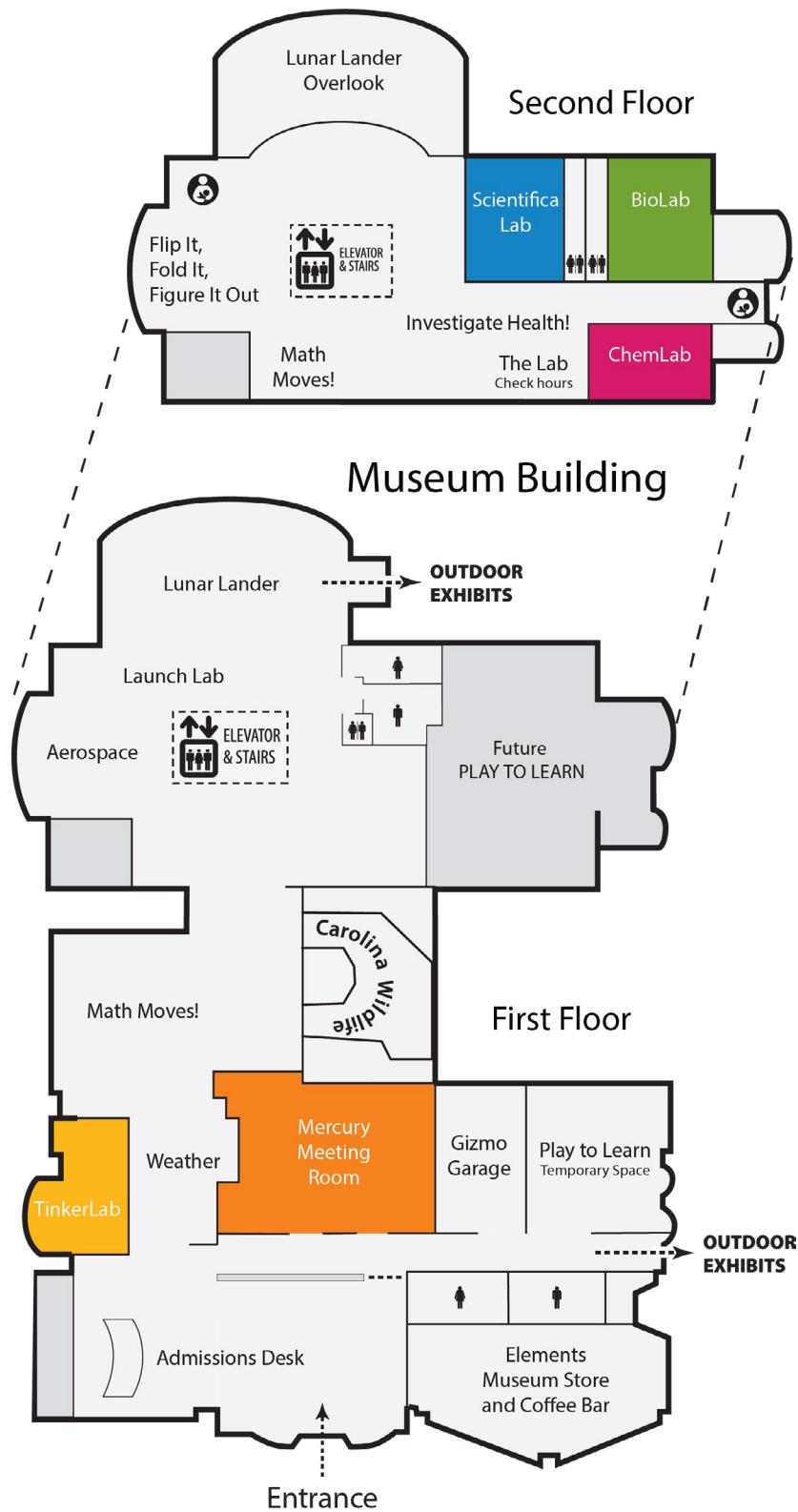
**2:10pm - 2:50pm** Youth Voices and Intro to Climate Action Planning

Hear from teens who are successful engaged in climate action in their communities and learn about how to create and implement a successful Climate Action Plan.

**2:50pm - 3:30pm** Climate Action Planning

**3:35pm - 4:00pm** Closing and Evaluation

# Museum Map



## Activity Locations

### BioLab - 2nd Floor

- Planning for Climate Justice
- Imagine Durham 2100

### Scientifica - 2nd Floor

- Queer Ecology for Community
- Generate: The Game of Energy Choices

### ChemLab - 2nd Floor

- Urban Heat Islands
- YOUTH Have Power: Lobbying for Change

### TinkerLab - 1st Floor

- Radical Repair
- Tallest Tower - Exploring Climate Privilege

### Mercury Meeting Room - 1st Floor

- Climate Change 101
- Youth Voices
- Intro to Climate Action Planning

# Climate Change 101



This will be an introductory talk on the basics of climate change, including terminology, primary causes and effects of climate change, how climate change affects North Carolina, and what is being done to mitigate this crisis.



**Audrey Vaughn** is an AmeriCorps Environmental Educator serving at the Eno River Association in Durham. She has a Masters in Wildlife Conservation Biology and wrote her thesis on human tolerance of snakes in North Carolina. Audrey has taken courses and workshops on climate change communication and is passionate about integrating climate change science into her educational programming.

## Morning Workshops

Students will choose two sessions to attend.

### Planning for Climate Justice: Rewriting Systems of Power and Inequality

This session will introduce and illustrate how different types of power influences the systems of inequality that place marginalized communities at higher risk for negative effects of climate change. It will then describe best practices to create equitable plans that are 1) shaped with community residents, and 2) support implementation.



**Dr. Danielle Spurlock** is an assistant professor in the Department of City and Regional Planning at the University of North Carolina at Chapel Hill. Her research focuses on the quality and implementation of plans and policy in urban contexts with special attention to environmental and social justice. Dr. Spurlock's work investigates how technical expertise and local knowledge can be synthesized within local policies that address green gentrification, displacement, and health disparities. Her motivation to engage in this research stems from the disincentives many stakeholders have to alter their behavior and decision-making processes to protect the health and well-being of marginalized populations and environmental resources. She holds a Ph.D. in Land Use and Environmental Planning, a MRP in Housing and Community Development, a MPH in Public Health from the University of North Carolina at Chapel Hill, and a BA in Human Biology from Stanford University.

### Queer Ecologies for Community

Queer Ecology is a scientific theory that aims to bring together queer theory and ecology to shift paradigms away from binary, rigid and heteronormative ways of understanding nature towards interdependency and fluidity. Learn how a queer ecology framework can support your relationship with the environment and your work developing healthier communities. Workshop participants will collectively identify ways to make your schools greener and healthier for both your classmates and the environment. This workshop will be focused on big picture questions: How are dominant systems of oppression influencing our connections? What can queer theory teach us about our relationships to each other and to our environment? What changes do our communities need to promote both equity and environmental health?



**Amal Dadi** is a biologist, a science educator, an environmental advocate, and a volunteer at Duke Gardens. She has a background in racial justice activism and believes deeply in the power of intersectional community building. In her spare time, Amal enjoys cooking, hiking, climbing, and snuggling with her cat.



**Kati Henderson** works at Duke Gardens, connecting groups to the spaces and resources of the garden to support their learning, cultural practices, and wellbeing. She loves growing connections for a healthier world, including housing her queerness among a queer community of people and beyond-human, and building supportive & restorative relationships as a white settler.

## Radical Repair Workshop

The Radical Repair Workshop is a traveling public art project dedicated to the idea that repair techniques can be used in non-traditional ways to preserve memory and reuse materials. Created by artist Julia Gartrell, the RRW approaches to repair from the angle of a sculptural practice. The project is housed in a vintage camper and includes a gallery, teaching space, and studio space. In this workshop RRW will present a brief slide show and teach a skills hands-on clothing repair project.



**Julia Gartrell** is an artist and educator based in Durham, NC. She holds an MFA from the Rhode Island School of Design and delights in teaching art to all ages and abilities. Julia's artwork focuses on material culture, Appalachian craft traditions, and the use of repair as a site of memory



## Urban Heat Islands

In this workshop participants will engage in an interactive exercise using PocketLab sensors and iPads to measure temperature at various land cover surfaces throughout the Museum grounds. In our urban setting, hot days can be amplified by the lack of tree canopy cover and lots of impervious surfaces (like roads and parking lots) which absorb and emit heat from the sun. Though we all "feel the heat" of climate change, the effects of extreme heat are disproportionately severe on low-income and previously redlined communities and neighborhoods. Addressing urban heat islands is an essential part of climate equity and community resilience that requires hard data to support meaningful changes.



**Xuewei Wang** is a data Scientist at the Data-Driven Lab. Xuewei's professional experience includes building machine learning models for the environment problem-solving and geospatial data API development. Xuewei has been leading the Heat mapping campaign and Urban heat Island study in Chapel Hill.



**Katherine Burley** is a graduate research assistant at the Data-Driven Lab, currently pursuing a PhD in Public Policy at the University of North Carolina at Chapel Hill. Her research interests include energy and environmental policy, specifically how subnational governments and electric utilities respond to climate change issues and the ongoing renewable energy transition.

## Afternoon Workshops

Students will choose two sessions to attend.

### Generate: The Game of Energy Choices

In this interactive session participants will explore energy choices and learn about the considerations and costs in deciding what type of energy generation to build. Participants will be placed on one of five teams, each representing a different state. The teams compete to achieve the lowest energy cost, while also considering greenhouse gas emissions and air quality. This interactive board game encourages students to develop evidence-based decision making as they collaborate with team members to select the energy mix for their community. Multiple rounds allow students to work under different constraints that model real-world scenarios. Extensions to the game bring in components such as mathematics, civics, and economics. For more information, go to [www.epa.gov/climate-research/generate-game-energy-choices](http://www.epa.gov/climate-research/generate-game-energy-choices).

This youth-led workshop is facilitated by teens from the Youth Climate Summit Advisory board with support from Kelly Witter.



**Kelly Witter** is an Environmental Engineer and Director of EPA's Community Engagement & STEM Education Program in RTP. Kelly initiated the Program in 2003 to increase communication of EPA science to students, educators, and the public with the goal of increasing the public's knowledge on how protecting the environment protects human health. Kelly focuses on STEM outreach in low-income schools to help close the opportunity gap and build capacity for a more diverse workforce. She is a graduate of Duke University with a BS in Geology/Math, a MS in Civil & Environmental Engineering, and a MBA. Kelly has three adult children who are all graduates of Durham Public Schools.



### Imagine Durham 2100

This workshop encourages participants to imagine the future of our local community, through the lens of one of the UN Sustainability Goals. Participants are put into small groups, and given a large sheet of paper, pens, and other simple art supplies as desired. Groups select a Sustainability Goal as their focus, and collaborative design a future-state Durham based upon that goal. Mid-way through the program, a 'disruptor' is given to participants (e.g. a coal plant is cleared for construction on the town's periphery), and they must address this in their design. The program concludes with discussion about the designs, and the implications for action and decision-making now.



**Tomara Gee** is an educator and manager of group programs at the Museum of Life and Science. The curiosity of Durham's different communities has inspired her to create some of the most effective outreach programs at MLS including Sparks, STEM Adventures, and Science Nights.

### Tallest Tower

In this interactive workshop, youth will work in groups to build the tallest tower they can using materials they are given as they explore the concept of resource inequity and how this could relate to climate injustice in their communities. Climate change increases the likelihood of climate related hazards such as extreme heatwaves, flooding, and wildfires. Some people as well as land, infrastructure, and buildings are more vulnerable to these hazards. Factors that contribute to vulnerability include exposure sensitivity, and ability to respond to the hazard. This activity exposes youth to the concept of climate injustice and how the uneven or unequal distribution of resources and information contributes to climate injustice.



This youth-led workshop is facilitated by teens from the Youth Climate Summit Advisory board with support from the Center for Public Engagement with Science. The activity comes from curriculum created by the **Center for Public Engagement with Science** in the UNC Institute for the Environment and the NC Museum of Natural Sciences with support from the National Science Foundation. The YES Resilience curriculum consists of 21 youth-informed educational activities that personalized and place-based investigation of Climate hazards including extreme heat, extreme precipitation, and sea level rise, The role of justice in fostering climate resilience and Solutions that build community resilience.

### YOUth Have Power: Lobbying for Change

Have you ever desperately desired the refreshing sensation of Mint Chocolate Chip Ice Cream on your tongue, but the vile whiff of Birthday Cake Ice Cream stood in the way? Probably not. However, you have likely been in the position of wanting to create change without knowing how. Our lobbying workshop will give you the tools to make a difference, specifically in the realm of climate advocacy.

During our workshop, we will simulate a mock lobby meeting for climate legislation via the approachable topic of ice cream flavors. The dos, the don'ts. The ins and outs. Though ice cream melting is inevitable, we have the power to mitigate glacial melting. Join us as we work together to make youth voices heard. This workshop will give you the skills to interact with your elected officials and influence them on pressing issues.



**Citizens' Climate Lobby (CCL) Raleigh-Durham chapter youth team** is a nonprofit and nonpartisan climate change organization focused on gaining political will for national policies to address climate change. As a collective, we have lobbied members of Congress and performed grassroots outreach locally, state, and nationwide. Additionally, our team has given environmentally focused presentations to youth across the country and tabled at events in our area, including here at the Museum of Life and Science in Durham, NC. We hope to share our experience in climate advocacy with you, empowering youth to create change!