



## Group Assignments (1 of 3)

### Climate Scientist Group

**YOUR TASK:** As a group, create a 5- to 10-minute presentation and one-page handout to explain why scientists believe that humans are impacting the climate and focus on the types of changes that will affect your state.

You can start your research with the following websites and documents:

- **TACCIMO Climate Report** ([www.sgcp.ncsu.edu:8090/about.aspx](http://www.sgcp.ncsu.edu:8090/about.aspx)): Under the *Generate a Report* tab, click *Climate Report* and select your state. This report will contain a range of potential future climate projections represented by different combinations of global climate models and scenarios.
- **NOAA Climate** ([www.climate.gov](http://www.climate.gov)): This website provides information, maps, and videos to help you understand climate science.
- **Climate Change: Evidence, Impacts, and Choices** (<http://nas-sites.org/americasclimatechoices/more-resources-on-climate-change/climate-change-lines-of-evidence-booklet>): This booklet explains climate change, impacts expected in this century, and how science can inform management and reduce risks. At this site, you can also find a video and figures to help with your presentation.
- **Climate Change: Evidence and Causes** ([http://www.nap.edu/catalog.php?record\\_id=18730](http://www.nap.edu/catalog.php?record_id=18730)): This short booklet provides clear answers to 20 common questions and background basics to climate change science.
- **NASA Global Climate Change** (<http://climate.nasa.gov>): This website provides information on the evidence, causes, effects, and uncertainties of climate change. There is also recent data on global temperature, carbon dioxide levels, and the rate of sea level rise.

### Forest Ecologist Group

**YOUR TASK:** As a group, create a 5- to 10-minute presentation and one-page handout to build on the Climate Scientists' summary and apply these projected climate changes to forests. Which changes are likely to affect the forests in your state? How? What types of changes could people experience?

You can start your research with the following websites and documents.

- **Climate Change, Forest Impacts and Adaptation** ([www.epa.gov/climatechange/impacts-adaptation/forests.html](http://www.epa.gov/climatechange/impacts-adaptation/forests.html)): This website discusses the impacts of climate change on forests and productivity as well as the role of disturbances.
- **Earth & Sky, Neil Sampson Says Climate Change Speeding Flux of Forest Ecosystems** (<http://earthsky.org/earth/climate-change-speeding-flux-of-forest-ecosystems>): During this 90-second interview, scientist Neil Sampson describes how forests may be affected by climate change.
- **Forests and Global Climate Change: Potential Impacts on U.S. Forest Resources, Section 2 of Report, Ecological Impact** ([www.c2es.org/docUploads/forestry.pdf](http://www.c2es.org/docUploads/forestry.pdf)): This report discusses the link between climate change and ecosystem shifts. Both past and projected changes are considered.
- **Tree Atlas** ([www.nrs.fs.fed.us/atlas/tree](http://www.nrs.fs.fed.us/atlas/tree)): This site includes information about climate models and projects how forest ecosystems in the eastern U.S. might fluctuate as the climate changes.



## Group Assignments (2 of 3)

### Forest Manager Group

**YOUR TASK:** As a group, create a 5- to 10-minute presentation and one-page handout about managing forests under changing climate conditions. What exactly should forest landowners do to protect and conserve their forest resources? Why?

You can start your research with the following websites and documents.

- **Southern Forests for the Future** ([www.seesouthernforests.org](http://www.seesouthernforests.org)): This website contains maps, photos, and information you can use in your presentation.
- **Protecting Your Forest Asset: Managing Risks in Changing Times** ([http://www.pinemap.org/publications/fact-sheets/Protecting\\_Your\\_Forest\\_Asset.pdf](http://www.pinemap.org/publications/fact-sheets/Protecting_Your_Forest_Asset.pdf)): This pamphlet reviews healthy forest strategies and approaches to decrease the risks associated with projected climate change impacts.
- **Southern Group of State Foresters** ([www.southernforests.org](http://www.southernforests.org)): This website provides links to explore your state forest agency's website to learn about forest management.

### Forest Researcher Group

**YOUR TASK:** As a group, create a 5- to 10-minute presentation and one-page handout that provides insights into the many ways researchers are helping managers improve southeastern forests.

You can start your research with the following websites and documents.

- **State Climatologist Interview with NC People** (<http://video.pbs.org/video/2134881398/?starttime=671000>): This video is an interview with the North Carolina State Climatologist to explain how climate impacts forests in the region.
- **The Forest Service and Climate Change** ([www.fs.fed.us/video/climate](http://www.fs.fed.us/video/climate)): This video introduces climate change science, impacts on forest ecosystems, and how the U.S. Forest Service is responding to climate change.
- **PINEMAP** (<http://pinemap.org>): This website contains research summaries, newsletters, photos, and videos that describe current research related to pine plantations and climate change in the Southeast.
- **WaSSI** (<http://www.forestthreats.org/research/tools/WaSSI>): This web-based tool provides information about how changes in precipitation and temperature may affect water resources and forest ecosystems at the regional watershed level.



## Group Assignments (3 of 3)

### Tree Biologist Group

**YOUR TASK:** As a group, create a 5-to 10-minute presentation and one-page handout about the carbon cycle and how trees sequester carbon. Your group can discuss the estimated levels of carbon sequestration that can be expected from maintaining the productivity of forests in the Southeast and planting trees on less productive agricultural land. Your group can also discuss the effect of higher carbon dioxide levels on tree growth.

You can start your research with the following websites and documents.

- **Earth & Sky, Greg McPherson's Tree Carbon Calculator** (<http://earthsky.org/earth/greg-mcphersons-tree-carbon-calculator>): Scientist Greg McPherson talks about a tool he developed to help determine how much carbon a tree sequesters and the value of knowing this information.
- **The Carbon Cycle** (<http://earthobservatory.nasa.gov/Features/CarbonCycle/>): This website contains an overview of the importance of carbon and the carbon cycle.
- **I-Tree** (<http://www.itreetools.org/index.php>): This website provides information on the benefits provided by urban trees.
- **Carbon Dioxide and Future Forests** (<http://ns.umich.edu/new/releases/8614>): This article from the University of Michigan discusses the effect of higher levels of carbon dioxide and ozone on tree growth.
- **Tree Growth Spurt** ([http://www.nytimes.com/2010/02/02/science/earth/02trees.html?\\_r=0](http://www.nytimes.com/2010/02/02/science/earth/02trees.html?_r=0)): This *New York Times* article provides information on recent research about growth spurts in trees due to increasing levels of carbon dioxide in the atmosphere.

### Forest Industry Group

**YOUR TASK:** As a group, create a 5- to 10-minute presentation and one-page handout about how forest products play a role in reducing atmospheric carbon. Your group is part of a company that produces a variety of products from forest resources—particularly lumber, OSB (oriented strand board), and plywood. These products sequester carbon, and when consumers purchase them, the carbon stays sequestered for the lifetime of the product. Even more carbon emissions can be eliminated if these products were purchased instead of similar products that rely on fossil fuels or limestone for production (such as those made from concrete or steel). You can explain the life cycle assessment of wood products and how using wood can be a valuable contribution to mitigating the effects of climate change.

You can start your research with the following websites and documents.

- **Consortium for Research on Renewable Industrial Materials, CORRIM** (<http://www.corrim.org>): This website provides fact sheets, videos, and other resources. In particular the *Editorials* (under *Publications* tab) provide helpful information for your presentation.
- **The Carbon Cycle Poster, The Forest Foundation** (<http://www.calforestfoundation.org/pdf/carbon-poster.pdf>): This poster highlights the role of forests and wood products in the carbon cycle.
- **Forest Carbon Management: Let's Brainstorm the Tradeoffs** (<http://www.treehugger.com/corporate-responsibility/forest-carbon-management-lets-brainstorm-the-trade-offs.html>): This website provides information about carbon sequestration in forests and carbon pools.