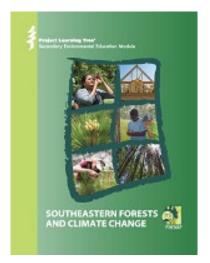## SOUTHEASTERN FORESTS & CLIMATE CHANGE

Project Learning Tree and the University of Florida developed this secondary module to help educators in the Southeast teach about
- climate change impacts on forest ecosystems
- the role of forests in sequestering carbon, and
- strategies for reducing greenhouse gas emissions and adapting to changing climatic conditions.

The module explores these concepts in 14 experiential activities (see details below) by using research related to the goals of PINEMAP—a regional research, education, and extension program focused on southern pine management and climate change.

While this resource was created with southeastern forests in mind, the lessons that comprise this module can be used with students across the United States. **Educators can now access the entire module online for free.**
https://www.plt.org/curriculum/southeastern-forests-climate-change/

ACTIVITY 1: STEPPING THROUGH CLIMATE SCIENCE

The activity provides an overview of the connections between forests and climate. Students create a timeline of climate science over the past 200 years and gather information from U.S. Forest Service video about climate mitigation and adaptation strategies for forests.

Please find a few additional SCIENCE and POLICY events that transpired since 2014 that you may wish to include as you plan to conduct this activity. You will also find an additional list of resources following the chart below. Feel free to pick and choose from these recent listings!

Science or Policy	Year	Event
Policy	2014	Hundreds of thousands of people gathered in the streets of New York for the first annual People's Climate March, spurring the creation of the Peoples Climate Movement (PCM). The PCM became a coalition of organizations working together to solve the climate crisis, including non-profits and teacher federations.
Science	2015	The National Oceanic and Atmospheric Administration (NOAA) reported July 2015 as the warmest month ever recorded for the globe.
Policy	2015	21 youth filed the Juliana vs U.S. lawsuit stating the U.S. government knowingly violated their constitutional rights to protect them from climate change and its consequences.
Science	2016	High sea temperatures caused the worst bleaching of corals ever recorded on Australia's Great Barrier reef, killing an estimate of 67% of existing corals. Previous bleaching events occurred in 1998 and 2002. https://www.bbc.com/news/world-australia-38127320

Science or Policy	Year	Event
Science	2017	In July, the Larsen C iceberg separated from the Larsen Ice Shelf in the Weddell Sea in Antarctica, leaving the ice shelf at its smallest extent on record. https://climatenexus.org/climate-change-news/2017-climate-impacts-around-world/
Policy	2017	After the removal of all references to climate change from the White House's website, scientists organized the March for Science in Washington, DC to support science's role in society and champion extended environmental policies.
Science	2017	A trifecta of hurricanes (Harvey, Irma, and Maria) battered Florida, the Gulf Coast, and Puerto Rico, causing significant casualties and widespread destruction. A group of scientists found climate change increased the amount of flooding rainfall from Harvey. https://www.climatecentral.org/news/the-10-most-important-us-climate-stories-in-2017-21785
Science	2017	The Western wildfire season is 105 days longer than it was 45 years ago as climate change fuels more and bigger blazes, such as The Thomas Fire. It was California's largest wildfire to date, burning an estimated 281, 620 acres. https://www.climatecentral.org/news/the-10-most-important-us-climate-stories-in-2017-21785
Science	2018	California had its most deadly and most destructive wildfire in history. https://www.wri.org/blog/2018/12/2018-year-climate-extremes
Policy	2018	Great Thunberg, Swedish environmental activist, founded the School Strike for Climate movement to raise awareness on climate change and its effect on current, young generations. https://www.britannica.com/biography/Greta-Thunberg
Science	2019	The World Meteorological Organization (WMO) reported that the five-year (2015-2019) and ten-year (2010-2019) averages make them the warmest period and decade on record.
Science	2019	Australia experienced its hottest and driest year on record, fueling the one of the worst early-season fire activity in the country.
Policy	2019	Greta Thunberg traveled on an emissions-free yacht from Sweden to New York City to speak at a United Nations climate event. Her influence on people's views and behaviors regarding climate change has coined the term, "the Great effect." https://www.britannica.com/biography/Greta-Thunberg
Science	2020	January 2020 was the warmest January on record. https://mashable.com/article/climate-change-2020-records/

Additional Resources:
- EPA's local climate action list (2017): https://19january2017snapshot.epa.gov/statelocalclimate/local-examples-climate-action_.html
- NOAA offers climate-related news and could be a great source for finding recent science tidbits: https://www.climate.gov/news-features/category/extreme-events
- Data to support the addition of another interval sign to continue charting atmospheric carbon dioxide levels after 2013: https://www.esrl.noaa.gov/gmd/ccgg/trends/index.html