






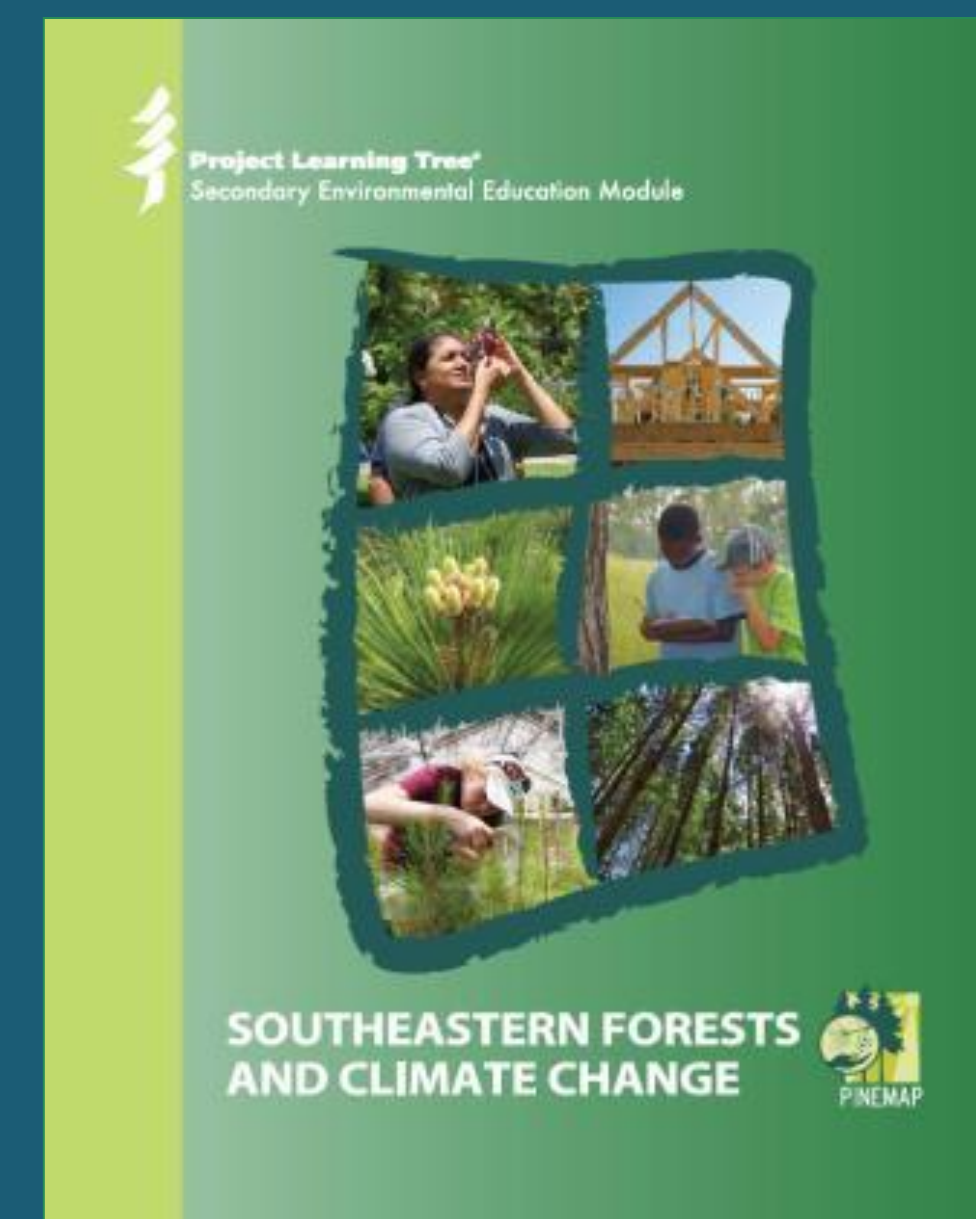


Project Learning Tree® (PLT) and PINEMAP recently released a secondary module about climate change impacts on southeastern forest ecosystems, the role of forests in sequestering carbon, and strategies for reducing atmospheric carbon dioxide and adapting to changing climatic conditions.

Activities

The module contains 14 activities, designed for use in life science, environmental science, and agriculture courses in grades 9-12, with potential for use in middle school or community college courses. The activities focus on increasing student knowledge, building systems-thinking and decision-making skills, and instilling confidence that individual and community actions can help address climate change.

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Section 1: Climate Change and Forests
Forests influence and are influenced by our climate.
 1. Stepping through Climate Science
 2. Clearing the Air
 3. Atlas of Change
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Section 2: Forest Management and Adaptation
Forests can be managed to thrive in a changing climate.
 4. The Changing Forests
 5. Managing Forests for Change
 6. Mapping Seed Sources
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Section 3: Carbon Sequestration
Forests can be managed to reduce atmospheric greenhouse gases.
 7. Carbon on the Move
 8. Counting Carbon
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Section 4: Life Cycle Assessment
Consumer choices can play a role in reducing carbon emissions.
 9. The Real Cost
 10. Adventures in Life Cycle Assessment
 11. Life Cycle Assessment Debate
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Section 5: Solutions for Change
Individual and group actions can create sustainable forests and communities.
 12. The Carbon Puzzle
 13. Future of Our Forests
 14. Starting a Climate Service-Learning Project



Ramp Up: Facilitator Trainings

Three “train-the-trainer” workshops introduced the module to PLT state coordinators, workshop facilitators, and educators. In total, we trained 94 people and had representation at the workshops from 12 southeastern states. Workshops ranged from 1 to 2 days in length, and participants were engaged in completing several of the module activities and developing plans to use the module in their states.

Pre and post workshop survey results show that self-efficacy in teaching about climate change significantly increased after all three workshops ($t = 10.80$, $df = 70$, $p < 0.001$). In addition, workshop participants ($n = 85$) indicated that it is very likely that they will

- recommend this educational resource to their colleagues (mean = 4.74/5, SD = 0.60),
- use this educational resource in their future work (mean = 4.72/5, SD = 0.61), and
- expand the coverage on climate change in their work (mean = 4.52/5, SD = 0.70).



Roll Out: Educator Workshops

Since being finalized in September 2014, more than 2,600 printed books have been shipped to PLT state coordinators, facilitators, educators, and other stakeholders, and more than 250 people have registered on the website to access the module materials.

Mini-grants totaling \$26,000 have been distributed to 11 states through PLT to assist with upcoming educator workshops. In total, this first round of workshops aims to reach almost 1,000 educators in the region. In addition, the module is being used outside of the Southeast region, with workshops being planned in Illinois, Michigan, Minnesota, and Pennsylvania.

Several states have plans to train educators to use the module during summer institutes, workshops, and teacher tours (e.g., AR, NC, MS, OK, SC, TX, VA). Workshop facilitators welcome participation from PINEMAP researchers, staff, and graduate students. For details on what is happening in your state, contact your PLT state coordinator, Martha Monroe (mcmonroe@ufl.edu), or Annie Oxarart (oxarart@ufl.edu).

Website

www.sfrc.ufl.edu/extension/ee/climate

The accompanying module website provides slide presentations, handouts, videos, and answer keys to enhance each activity. In addition, the website includes online training components, such as short introductions to each activity, videos explaining key concepts, and quizzes for teachers to check their understanding.

