

Urban Ecology: Carbon Footprint

Brooklyn College City as a Lab GK-12 Program
Academy for Urban Planning

Time: 90 min
(1 class period)
Hands On? Yes ; Internet? NO

Standards Met: *Living Environment: Standard 4; PI 5.1, 6.3c.7.1 ; Earth Science: Standards: 6; Key Idea 4,5,6 Standard 7: Key Idea 1,2. Standard 4, PI 2.1*

Title: Carbon Footprint
Grade and Subject: 11th (Urban Ecology)
Number of Days for Completion: 1
Overreaching Goals/ Outcomes: Students will learn about how they contribute to atmospheric carbon production and if trees can solve the problem.
Learning Goals/Outcomes: SWBAT- estimate their school's carbon footprint to determine if the trees on campus are offsetting.
Materials: data sheets, tree data measurements previous lab, calculators
Introduction: This is a 1 day lab activity where students will estimate carbon production from their school and carbon sequestration from AUPs trees (previous lab see "TreeSurveyLesson").
Instruction/Direct Experience: An introduction on carbon footprints will be given, explaining the various ways carbon is emitted into the atmosphere and why this is important. Students will be shown 2 videos, one on carbon footprints in NYC and another on how trees sequester carbon from the atmosphere. Students will be guided through the carbon footprint worksheet and asked to estimate the number of appliances in their school. Students will calculate the tree sequestration based on previous measurements completed by them in a previous lab. They will be asked to compare their school's carbon emissions with their school's tree sequestration. They will evaluate how many trees their campus would need to absorb their school's carbon footprint.
Independent Activities: NA
Assessment: Students will tally their results in an excel table on the classroom computer and discuss their results.
Connections: This lesson is a continuation of the Tree Survey Lesson. Students will understand how much carbon trees can store over a life time compared to fossil fuel burning they need to obtain electrical energy.