SPEAK FOR THE TREES, Boston

TreeBoston.org | @Trees_Boston | trees@treeboston.org

Speak for the Trees
Researching Tree Equity

Grades: 7th - 12th

Standards: 7.LS.2.4 / 8.ESS.3.5 / HS.ESS.2.6

Setting: Indoor and Outdoor

Purpose of Lesson: Students will be able to learn how to use TES programming to identify the trees in their school neighborhood.

Essential Questions:
- What is the Tree Equity Score(TES)?
- How could we use TES to learn about trees in Boston?
- What are some trees in our community?

Materials:
- Any technological device (phone, laptop, iPad)
- paper to record notes
- Pencils
- map

Program Session Schedule [~65mins]:
Self Introduction & Group Check-ins: 5 mins
Discussion of lesson topic: 20 mins
Activity: 30 mins
Review & Wrap-Up: 10 mins

Lesson Implementation

Self Introduction & Group Check-ins (5 mins): Take this time to introduce ourselves and our organization, who we are, what we do, and our goal for today's lesson. Use this time to let the students share their names and grades.

Guided Discussion (20 mins): Students will learn about tree equity before learning how to use the Tree Equity Score (TES) map developed by American Forests.

- ➢ What is urban forestry and Tree Equity?
  - "What does an urban forest look like?"
    - Allow students to think about this term and try defining it before providing this definition:
      - A forest or collection of trees that grow in a city.
  - "What is Tree Equity?"
    - Tree Equity ensures fair access to the benefits of trees, especially in low-income and minority communities. It addresses disparities in tree distribution within communities.

- Why are trees important in urban environments? What happens to ecosystems without trees, and how does that affect the people living there? Why do we need trees?
    - Ecosystems suffer from increased air pollution, disrupted water cycles, loss of habitat for wildlife, and decreased biodiversity, which degrades overall environmental health and resilience.
    - Trees allow us to clean our air out, cool our neighborhoods, and improve our mental and physical health. They also prevent major flood damage and prevent erosion.
    - A lack of trees also leads to CO2 build-up, which can lead to rising temperatures, which can cause other natural disasters (e.g., Sweltering heat waves, intense rainfall, hazy skies filled with smoke, and contaminated water).

*Questions to answer in this discussion using the Google Slides and showcasing TES:

- What is TES?
    - TES is an online free website that allows individuals to explore, gather data, support, and identify trees in neighborhoods throughout Boston.
    - Many individuals use TES as a resource to ask questions, explore data to find answers, gather data to support a project proposal, acquire funding, outreach, raise awareness about tree inquiry, identify neighborhood areas worth protecting, and educate others about trees in Boston.

- What does TES look like?
    - Pull up the TES website to the screen and share with students how to find certain data and how to identify trees in different neighborhoods or communities.
    - You will guide students through the TES tool, focusing on the following elements of it:
        - Explaining the colors of the map that reveal the Tree Equity Scores of Boston communities.
        - Show how the City of Boston can be viewed at both the census block level and municipal level. Students can zoom into their exact address to view canopy coverage %.
        - Be sure to explain the various factors that make up the TES. They are all shown on the left-hand side of the screen when a census block is selected.
        - Use the layers filter to show students how to view the map using demographics other than the Tree Equity Score.

- How will we use TES for today's activity?
    - Students will use TES to identify the canopy coverage in their community, near their homes, near their school, or other areas important to them.
    - Students will then discuss the state of the tree canopy and the positive or adverse effects of that reality.

Activity (30 mins): This activity aims to allow students to apply what they have learned about TES and further analyze the tree canopy in their communities. Students will find the community that they live in and analyze the data for that census block. After selecting the area, the students will answer the questions below.

1. What is the Tree Equity Score of the selected census block?
2. What is the current canopy coverage of this area?
3. What are the average surface temperatures of the area?
4. What are the area's demographics (age, race, income level)?
5. What is the health risk index of the area?

Review & Wrap-Up (10 mins): Once students have answered the above questions, time will be allowed for the students to discuss their findings. The teacher will ask questions like:

1. What are some key observations of your community?
2. Do you live in a well-canopied community? An under-canopied community?
3. Why do you believe your community has the current canopy coverage that it does? What historical/political factors may have contributed to that coverage?
4. What negative outcomes will your community face because of a lower tree canopy?
5. What can we do to improve your community's tree canopy?