



DIG DEEPER

URBAN TREES PLEASE

What role do urban trees play in climate change adaptation and mitigation?

Urban trees are critical in helping our city adapt to and mitigate effects of climate change. As the impacts of climate change become apparent, urban forestry practices need to plan for current and future concerns. What are some of the concerns that are connected to climate change? Which of these can be addressed by growing the urban forest and planting more trees?

GUIDING QUESTIONS

- + What do you already know about the effects of climate change on the environment?
- + How are trees and stormwater runoff linked?
- + How do trees help protect us from the damages caused by flooding? Increased carbon?
- + Why is tree canopy coverage important? How is it measured?
- + What is urban heat island effect? What does it have to do with trees?
- + Do all trees help in the same way? Which trees do a better job?
- + What would the city look like without street trees?
- + How are long, hot summers affecting our native trees? (Hint: investigate cedar trees.)
- + How has tree biodiversity changed? What changes have Indigenous Peoples observed?
- + Why should people care about shade trees?
- + How does the City of Surrey take care of young shade trees?
- + How can we grow our urban forest in Surrey?
- + What is the difference between climate adaptation and mitigation?

BACKGROUND

Surrey's trees contribute to the livability of our city. The City of Surrey Urban Forestry team's work is guided by management plans that help us plan, design, develop and maintain trees across the city, protecting them for the health and enjoyment of generations to come. Natural areas and shade trees play important roles in the City of Surrey's efforts to adapt to and mitigate the effects of climate change. Some local topics to explore include:

- Carbon sequestration
- Urban heat island effect
- Storm water management and erosion
- Canopy coverage
- Local biodiversity
- Tree management practices
- Habitat restoration
- Effects of weather extremes on trees

Learning about local trees and the state of our urban forest can help students home in on the changes that occur over time, including changes connecting to climate change.

The City of Surrey's mapping online system (COSMOS) is a great resource to access information about specific trees. It provides detailed information about the species, location, planting date and estimated age of trees across the city.



CURRICULAR CONNECTIONS

Content for students to explore:

Grade 6: cooperation and responses to global issues, connections to community

Grade 7: climate change, First Nations knowledge of biodiversity changes over time

Secondary: climate change in a local context, mechanisms for the diversity of life, wicked problems, sustainability



Curricular competencies for students to develop:

- Identify questions to answer or problems to solve through scientific inquiry
- Experience and interpret the local environment
- Make observations aimed at identifying their questions about the natural world
- Plan investigations to investigate and solve problems they have identified
- Identify some of the social, ethical, and environment implications
- Communicate ideas, explanations, and processes in a variety of ways
- Social responsibility to the environment



ADDITIONAL RESOURCES

City of Surrey's Mapping Online System (COSMOS) at cosmos.surrey.ca

City of Surrey *Shade Tree Management Plan*

iCoolKit presented by UBC at icoolkit.net

[Urban Trees Climate Adaptation Video – Metro Vancouver](#)

[Urban Tree List for Metro Vancouver in a Changing Climate](#)



Surrey Parks works together with the community
to celebrate nature and protect the environment.

Visit us online to plan your park visits, connect with nearby nature
and help your students become stewards of our urban forest.