



DIG DEEPER

INSECT INSIGHTS

What roles do insects play in our urban forest?

Insects are important to the health of all ecosystems, including the urban forest. Insects in Surrey provide us with many benefits. Consider who they are, what they do, and why some are considered pests.

GUIDING QUESTIONS

- + What are the characteristics of insects? What makes them unique?
- + What do insect habitats look like?
- + What are the most common insects in Surrey?
- + What evidence of insects can you find in our urban forest?
- + What are the benefits of specific kinds of insects (e.g. pollinators, decomposers)?
- + Are insects critical to a healthy ecosystem? Why?
- + Why are insects generally considered good indicator species?
- + Which insects are considered to be pests in Surrey? Why?
- + How should nuisance insects (pests) be managed? What if they play an important role in our ecosystem? (e.g. aphids and wasps)
- + What are some of the environmental impacts associated with pesticide use?
- + What are some alternatives to pesticides?

BACKGROUND

Insects often get a bad reputation because of a few negative experiences. In urban environments, we may be confronted by insects in places we don't expect (or want) to see them. However, many children are very curious about insects and happy to learn more about them – which in turn helps foster an appreciation for the role that insects and other arthropods play in the ecosystem. Observing insects in their natural environment and learning about their life cycles and benefits can help us round out our perspectives of these tiny creatures. They are decomposers, pollinators, food sources, and more.

Healthy trees are home to many kinds of animals, including insects. Unfortunately, some insects can be a nuisance or could be harmful to trees; in these cases, we call them pests. It's estimated that 99% of insects are beneficial, and only 1% are pests. Some common inconveniences include the sticky honeydew left behind by aphids as it falls on vehicles below, lawns damaged by chafer beetles, and foliage eaten beyond repair by caterpillars.

The City of Surrey manages pests on City-planted shade trees using integrated pest management principles. By using this approach, Surrey:

- uses an ecological approach,
- decreases risk to people and the environment,
- minimizes pesticide use,
- considers community values, and
- thinks about the long-term financial benefits.



CURRICULAR CONNECTIONS

Content for students to explore:

Kindergarten: observable features

Grade 1: classification of living and non-living things, names of local animals

Grade 2: metamorphic and non-metamorphic life cycles of different organisms, similarities and differences between offspring and parent

Grade 3: biodiversity in the local environment

Grade 4: sensing and responding (animals)

Curricular competencies for students to develop:

- Make exploratory observations using their senses
- Experience and interpret the local environment
- Make observations aimed at identifying their questions about the natural world
- Identify some of the social, ethical, and environment implications



ADDITIONAL RESOURCES

City of Surrey *Integrated Pest Management Plan*

[Canada Encyclopedia \(search insects\)](#)

iNaturalist inaturalist.org

Insect Identification insectidentification.org



**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.