

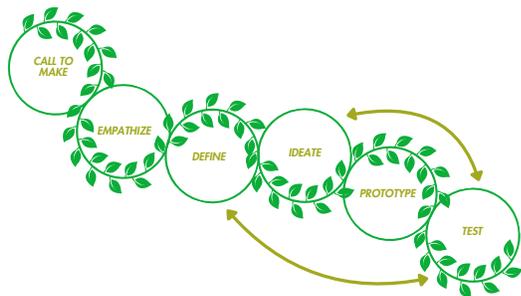
Making a bee friendly garden space

Learn about bees and how we can make a welcoming space for them in our Garden.

Setup

Create a scan/log of the living species in your yard. Note what types and where they are predominantly located.

Content



Call to make

Bees are our most important pollinators and are under threat from parasites and other stressors throughout the world. What if we could make spaces in our own gardens to support native bees? What do you know about bees? What can you learn about bees?

Empathize

Everyone is familiar with native bees, but not everyone is friendly towards them. We generally fear the bee “sting” when in reality no bee will sting unless under threat. What we fear is other “bee-looking” insects like wasps and hornets.

Did you know that 80% of all our cultivated crops are pollinated by bee

We also work very hard removing weeds and cultivating our living spaces, removing natural pollinators and making the space unfriendly for bees. Between the varroa mite, “murder hornets” and reduced pollinators our native bee populations are under threat? What can we do to help them? How can we make our spaces more friendly and useful for bees?

Define

What do bees need? What are we doing to our current outdoor spaces that we can change to help bees? What sorts of spaces do bees require to nest or live? What are some natural pollinators that are easy to plant...or just leave...in our gardens?



Skills

- Making
- Investigation
- Communication
- Observation

Materials

- Seeds
- Planting Materials
- Other tools as necessary



Ideate

What seeds do you have on hand to plant? What attractive flowering weeds do you already have in your garden? What clumps of brush already exist in your garden? How can you balance the needs of the bees with the want of a nice looking garden?

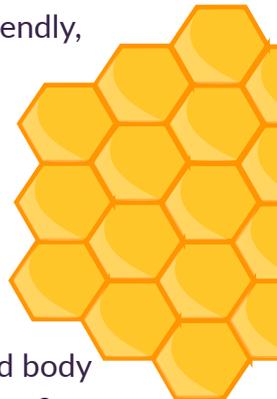
Prototype

Keep a log of your bee encounters in your bee-friendly garden. Note which of the plants they are drawn to, which ones they are not pollinating, and whether they seem to be around your garden more.

Test

Are you seeing more bees? Are your flowers doing well? To properly test this, you could leave your garden as is for a week, (early-mid June in most of the Atlantic Provinces) and keep a record of your bee sightings. Then after you have done some work to make it more friendly, keep a record of your bee sightings for a week and compare.

What if our land use can be adapted to be supportive of the species we need to help pollinate our crops?



Teachable Moments

Math

What patterns are observed in bee habitats and behaviour? Examine the structure and body of a bee. Describe any elements of symmetry. Why are honeycombs hexagonal in nature? Why is this the most efficient geometric shape? Compare the bee’s flight range to the acres it can pollinate. Estimate how many bees do you need in your region to help with pollination?

Science



Describe local and regional bee habitats. What other plants & animals can also be typically found in this habitat? How are bees able to meet their basic needs? What are some of the adaptations for flowers that allow for bees to help pollinate better? What are some of the behaviors that bees exhibit that allow them to survive in their habitat better? What is the role of bees in the food chain? Describe. Predict how the reduction or removal of flowering plants would have on the bee population? How would this impact humans?

Suggest an improvement to the habitats of bees in your area? What are some new questions that resulted from what you learned from learning about bees? What information did you collect that would help to answer your questions about bees?

Visual Arts

Create a 2D or 3D replica of a bee or a bee habitat.

Language Arts

Create a journal for the day in the life of a bee. Write a letter to the editor of a local newspaper or news organization outlining the importance of bees in our community. Create a book about the life cycle of a bee.

Music

Create your own music composition that replicates the patterns and behaviours of the flight of your bees that you observed.

Physical Education

Can you keep up with a bee? Copy the flight range of a bee.



Social Studies

Describe the life and/or activities of bees during the different seasons of the year. Describe the roles and responsibilities of the different classes of bees. What are the causes of colony collapse disorder? What would be the economic impact of bee loss? Locally, nationally, globally. What laws and/or policies are in place locally, nationally and globally to help address Colony Collapse Disorder?

Health

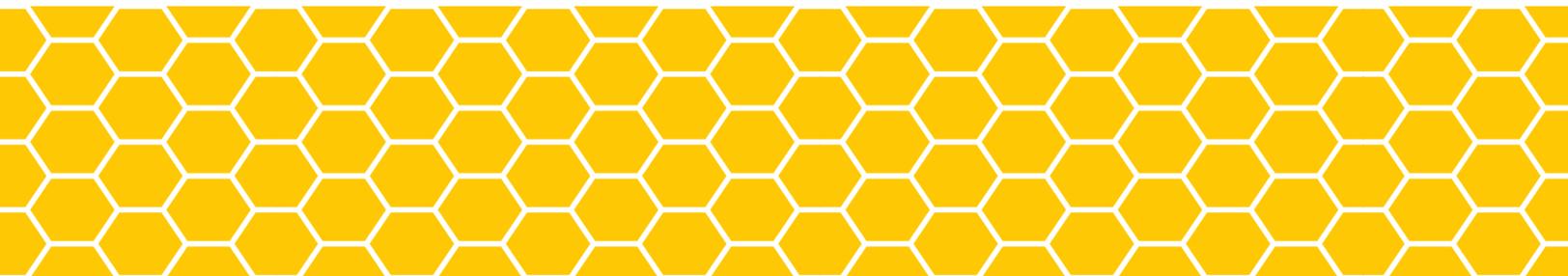
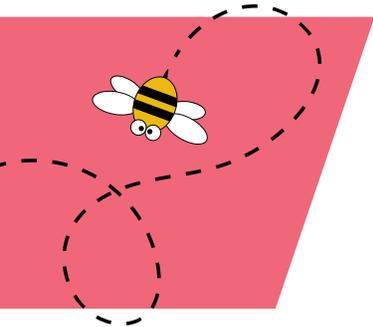
What are the health benefits of honey over other sweeteners? How could eating/buying organic products help bees?

Technology, Education, and Engineering

How could scientists and technology help with Colony Collapse disorder? How has scientists and previous research contributed to Colony Collapse Disorder? (i.e. pesticide development)

Take it Further

Investigate what actions or groups are active in your area to help with bee preservation. Take action and help and volunteer. How does bee preservation play a role in helping to combat the SDG of zero poverty?



Glossary

Pollinator

animals (primarily insect, but sometimes avian or mammalian) that fertilize plants, resulting in the formation of seeds and the fruit surrounding seeds

Colony Collapse Disorder

A serious occurrence in hives that occurs when all the worker bees disappear, leaving only the queen, lots of food and a few bees to nurse immature brood.

Bee-friendly

Acts by companies, farms and individuals to support and maintain the natural/local bee populations through reduced use of pesticides, habitat protection/creation, and sustainable planting.



Resources

Bee friendly gardening

<https://drive.google.com/file/d/1zyOwoKUOSPS8hIPMWAUMEJjKQmVLLDu/view>

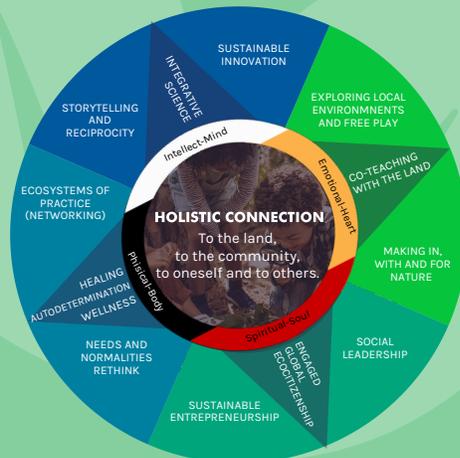
Makers at home: A Bees Knees Garden

<https://www.youtube.com/watch?v=ojuGucJHuh8>

Learning continuum: Sustainable Innovation Through Holistic Connection

Based on three emerging pedagogies* and in recognition of indigenous knowledge, the natural maker educational continuum aims to support the learner through a holistic journey of connection to the earth, the community, oneself and others, in order to evolve globally towards a more open, humble, democratic and decolonized way of thinking, learning and living.

* wild pedagogies, conscious pedagogies and decolonization of education



#EarthDayforNature

#ActForEarth #ClimateAction

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