

# Urban Beekeeping

By Colby Hurtubise



# Project Proposal

## Purpose

In this project, we will be creating an observation hive, and learn about beekeeping hands-on.

## Problem Statement

Eight different species of bees are now on the endangered species list and we want to help out in any way we can, and hopefully spread awareness.

## Goals

1. **Research and Preparation Phase**
  - a. In this phase, the team shall work on researching different existing designs of domesticated beehives to give us a starting place in the designing/building phase.



# Project Proposal - Reflection

A large, detailed sculpture of a bee, constructed from straw and wire, stands in a green field under a clear blue sky. The bee is positioned in the center-left of the frame, facing left. Its body is made of straw, and its wings are made of wire mesh. The background shows a line of trees and a fence in the distance.

Our proposal included more stages, including fundraising and building a beehive in the school.

My job in the project was to do research.

For my research, I went to the Portland Public Library to borrow a book, looked at websites online and I interviewed a beekeeper in Buxton Maine about keeping bees and taking care of hives.

I would say my part of the project was pretty successful. I learned a bunch of stuff about bees and about doing research. I am hoping to get some credit for my research standards with this project.

# Interview with the bee guy

- Queen lays 1,200-1,500 eggs a day
- Worker bee and the queen are girls
- Royal jelly food determines male or female
- Bees need to be kept at 45 degrees or warmer
- The worker bees flap their wings all winter to keep the queen and hive around 90 degrees
- Skip orders a “nuc” to get the hive started
- Skip puts rigid foam insulation on top of the hives in the winter to help keep the bees warm
- The bees have to come out every 45 days to poop during winter
- Takes 1 year to build wax, then they produce honey
- 1:1 ratio sugar/water in spring for food
- 2:1 ratio sugar/water in fall for food
- Called “capping” to get the layer of wax off?
- Put the frame into the center vise to spin it to get the honey out
- He has Carniolan and Italian bees

# V's Bees...

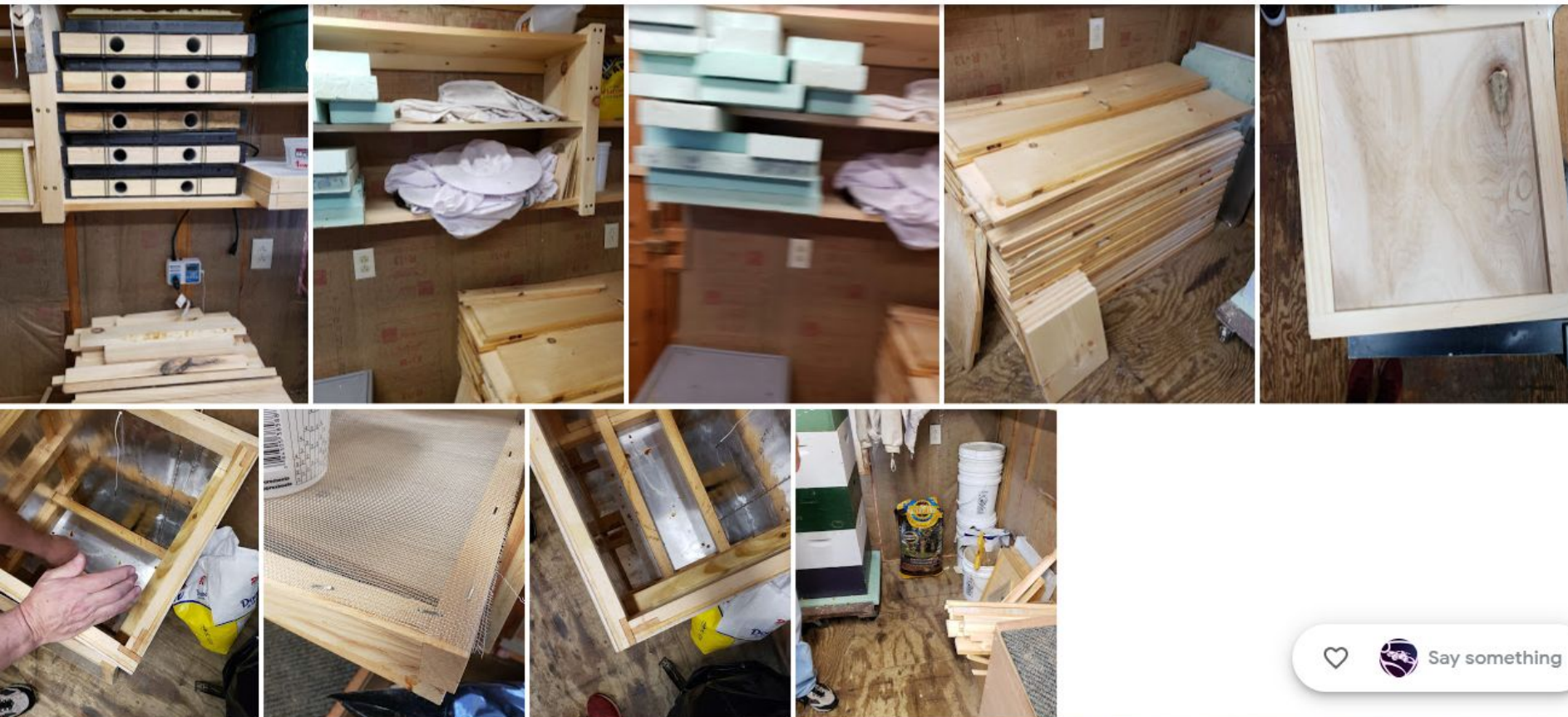


# V's Bees...



Say something

# V's Bees...



Say something

# Inquiry questions

Keeping bees in **Maine**:

- Why can't we just buy bees that can survive the winter the best as well as summer or any seasons?
- Do different bees need different kinds of food for each species?

**Hive** construction:

- How do we get honey out?
- How are we getting the bees?
- When the hive is built, how/where do we start?
- How do we get the food the bees need?
- Are there bees that compete against each other?

Bees at **baxter**:

- Who will help us just in case of no school on Fridays or if there's no school for a week?
- What do we do when we can't have bees anymore?

Spreading **bee awareness**:

- How would bees positively impact Maine or just Portland?
- What is the percentage rate that bees can survive through all 4 seasons?



# Inquiry questions

## Follow up questions for Bee guy

- How much food they need in spring/summer and in fall/winter to stay alive?
- What are names of diff parts that make up the “hive”
- Why does Skip builds his hives but orders the frames
- How does Royal Jelly food for bees to see how that determines the sex of the egg
- How much honey Skip’s bees produce per year
- What is a “nuc” is and how that starts a hive
- What are the Pros and cons to nucs?
- What happens if the bees come out in the winter to poop and it is not 45 degrees out
- What happens if they don’t come out to poop every 45 days?

# 7 Facts about Bees

- Honey bees must gather nectar from two million flowers to make one pound of honey
- The average bee will make only 1/12th of a teaspoon of honey in its lifetime
- A honey bee visits 50 to 100 flowers during a collection trip
- A honey bee can fly for up to six miles, and as fast as 15 miles per hour
- It is able to make complex calculations on distance travelled and foraging efficiency
- Honey bees communicate with one another by dancing
- A colony of bees consists of 20,000-60,000 honey bees and one queen. Worker honey bees are female, live for about 6 weeks and do all the work

<https://matteroftrust.org/20-amazing-honey-bee-facts/>

# 7 more Facts about Bees

- The queen bee can live up to 5 years and is the only bee that lays eggs. She is the busiest in the summer months, when the hive needs to be at its maximum strength, and lays up to 2500 eggs per day
- Larger than the worker bees, the male honey bees (also called drones), have no stinger and do no work. All they do is mate
- Honey has always been highly regarded as a medicine. It is thought to help with everything from sore throats and digestive disorders to skin problems and hay fever
- The natural fruit sugars in honey – fructose and glucose – are quickly digested by the body
- Honey lasts an incredibly long time
- When a bee finds a good source of nectar it flies back to the hive and shows its friends where the nectar source is by doing a dance which positions the flower in relation to the sun and hive
- Honey is incredibly healthy and includes enzymes, vitamins, minerals. It's the only food that contains “pinocembrin”, an antioxidant associated with improved brain functioning.

- *Colletes cunicularis* needs just seven trips. Each trip involves visiting tens to hundreds of flowers
- Many unique pollen-collecting hairs sized to meet the specs of the pollen grains associated with their preferred floral host
- 



## Sources

### The Bees in Your Backyard: A Guide to North America's Bees

<https://matteroftrust.org/20-amazing-honey-bee-facts/>

Personal interview with

V's Bees out of Buxton, ME and the owners are Valora and Skip Baker

Their FB page is: <https://www.facebook.com/Vs-Bees-111123983770498/>

