

Introduction to Bee Hives

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Designed as a quick-reference guide for beginners

1. What Is a Bee Hive?

Aspect	Description
Definition	A man-made structure that provides a safe home for a colony of honeybees (usually <i>Apis mellifera</i>).
Purpose	- Shelter and brood rearing - Storage of honey and pollen - Space for the queen to lay eggs
Typical Users	Hobbyist beekeepers, commercial apiaries, research labs, and educational programs.

2. Main Types of Hives

Hive Type	Key Features	Advantages	Common Uses
Langstroth	Removable frames in a rectangular box; “bee space” of 6-9mm between combs.	Easy inspection, scalable, widely available equipment.	Most hobbyists & commercial operations.
Top-Bar	Horizontal bars (no frames) where bees build natural combs.	Mimics wild nests, minimal wax building, simple construction.	Natural beekeeping, low-cost setups.
Warre (Vertical Top-Bar)	Stacked boxes with top bars; small brood chamber.	Low disturbance, low honey harvest, promotes strong colonies.	Organic and sustainable beekeeping.
National / British	Smaller than Langstroth, uses “bee space” frames.	Compact, good for limited space.	Small-scale hobbyists, urban beekeeping.
Flow Hive	Modified Langstroth with built-in honey extraction channels.	Harvest honey without opening the hive.	Beginners who want a “hands-off” harvest.

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3. Hive Anatomy (Langstroth Example)

Outer Cover (weather protection)	
Inner Cover (ventilation, entrance reducer)	
Super(s) – honey storage (8–10 frames each)	
Brood Box – queen lays eggs (10 frames)	
Bottom Board – floor, entrance reducer	
Stand / Legs – lifts hive off ground	

- **Frames** – Hold wax comb; can be removed for inspection.
- **Bee Space** – 6–9mm gap that prevents bees from gluing components together.
- **Entrance Reducer** – Controls traffic, helps protect against robbing and pests.

4. Life Inside the Hive

Cast	Role	Lifespan
Queen	Sole egg layer; produces pheromones that regulate colony behavior.	3–5 years (productive life ?? years).
Worker	Forage, feed brood, build/maintain comb, defend hive.	5–6 weeks (summer), up to 6 months (winter).
Drone	Mates with virgin queens; fed by workers.	8 weeks (dies after mating or in winter).

- **Brood Cycle:** Egg ? Larva (3–5 days) ? Pupa (12 days) ? Adult.
- **Seasonal Rhythm:**
 - **Spring** – Queen ramps up egg laying; colony expands.
 - **Summer** – Foraging peaks; honey storage.
 - **Fall** – Swarm preparation, honey consolidation.
 - **Winter** – Cluster formation, consumption of stored