

CLEANER

A worker bee’s first job is cleaning. As soon as she emerges from her cell, she turns around and begins to clean it out. When her cell is clean, she begins to clean other cells in the comb to make sure they are ready for the eggs the queen will lay. The queen inspects the cells and, if they are not clean enough, the worker bee cleans them again. Worker bees spend the first few days of their life cleaning.



UNDERTAKER

Just like any other living thing, bees die. Dead bees must be removed so the hive can keep working well. Taking dead bees out of the hive and depositing them far away is one of a worker bee’s many jobs.



BABYSITTER

When a worker bee is just 3 days old, she will begin to care for the younger bees. She is in charge of feeding all the larvae. She feeds pure royal jelly (from a special gland in her head) to the queen larvae. She feeds bee bread (honey and pollen—and a little royal jelly only on the first day) to the worker and drone larvae. A worker bee doing this job may check on a single larva 1,000 times per day.



BUILDER

At about 12 days old, worker bees become master builders. They produce wax from special glands, and the wax comes out in sheets from their abdomens. The bees chew the wax to make it soft and pliable. All the builder bees work together. They even share wax to chew so everyone can contribute to the preparation. They then use the wax to build the hexagonal cells in the honeycomb. They also use the wax to make lids for cells that are being used to store honey, pollen, nectar, or eggs.



HVAC: HEATING, VENTILATION, AND AIR CONDITIONING

The temperature in a hive must be kept under control and worker bees at a certain age are in charge of temperature. If the hive is too cold in winter, they huddle together and vibrate to warm it up. It is kind of like a group hug. If the hive is too hot in summer, worker bees can use their wings as fans to cool it down. Bees even put water on each other’s backs, so the fanning causes evaporation that creates their own air conditioning system.

GUARD

Someone has to guard the hive from intruders. Before bees get to leave the hive to find nectar and pollen, they have one last job at the entrance to the hive: guard. Worker bees that are guarding the hive buzz around the openings using their senses and their stingers to defend the hive. As bees approach, guards determine whether they belong to the hive or not through their sense of smell. Foreigners are chased away, unless they offer a successful bribe of nectar or pollen. If necessary, a guarding bee will sting a potential intruder, giving up her life for the safety of the hive.



FORAGER

A worker bee's last job is foraging: leaving the hive to collect nectar, pollen, and water in the fields. Foraging bees make as many as 10 trips in one day and fly up to 4 miles from the hive. When in the fields, they are collecting nectar and pollen from flowers and pollinating the plants as they move from one to another. They return to the hive at sunset and spend the night inside. Most worker bees die outside of the hive, while they are foraging.



QUEEN ... AND DRONES

The queen and drones have one job each for their entire lives. The queen's job is to lay eggs. She can lay up to 2,000 eggs per day. She fertilizes most of the eggs, creating worker bees. She leaves some of the eggs unfertilized, creating drones. She figures out which egg to lay based on the width of the cell the workers have created. When the time is right, she leads a swarm, which splits the hive by taking some of the bees to a new hive and leaving the current hive for a new queen. The drones' only job is to mate with the queen bee. Once his job is done, a drone dies.

QUEEN



DRONE

