HONEY BEES

A learning & sensory-activity guide for students of Overbrook School for the Blind
Walk through a field of flowers in early spring, summer, or fall & you might hear the BUZZZ of busy honey bees…

EXPLORE: Teacher plays audio track of honey bees buzzing
Honey bees are small, flying insects known for building hives out of wax and for making & storing honey.

They have dark black bodies with yellow banded stripes.

EXPLORE: If students are permitted to, students can taste a sampling of honey.
Honey bees fly long distances (up to 3 miles!) to feed on the sweet, sugary NECTAR from flowers. They use their long straw-like tongues (PRO’BO’SCIS) to drink.

EXPLORE: Students feel straws that simulate the bees’ long tongues. Students can sip sweet juice.
Honey bees’ bodies are covered in short, bristly hairs. These hairs capture sticky, powdery POLLEN from flowers.

Bees bring POLLEN and NECTAR back to their hives.

EXPLORE: Students feel boars’ hair hairbrushes & baby powder (pollen).
Honey bees move pollen from one flower to another. This process is called POLLINATION and helps plants to reproduce.

EXPLORE: Students pretend they are bees and hold spongy stress balls to simulate pollen grains. Students hand balls off to each other to enact how bees ‘drop’ pollen from one flower onto another.
Without POLLINATION, many plants could not produce FRUIT, or SEEDS. Honey bees help POLLINATE one-third of all fruits and vegetables - including apples, blackberries, tomatoes, celery, and more!

EXPLORE: Students feel, hold, or taste a variety of fruits and vegetables pollinated by honey bees.
Honey bees live in HIVES they build from beeswax. The cells of their hives are 6-sided HEXAGONS.

EXPLORE: Students feel beeswax granules, hexagonal blocks (tracing the sides), and honeycomb.
Honey bees are great team-players! There are three main jobs inside the colony: QUEEN, DRONE, AND WORKER.

EXPLORE: Students hold different clay models of the three types of bees to feel the difference in size of QUEEN, DRONE, WORKER as identifying factors of the bees in next (3) pages.
The QUEEN is the largest bee of the colony. She is the only one that can lay eggs. As the boss, she calls all the shots!

EXPLORE: Students put on a crown to symbolize their queen-bee status!
WORKER bees are female and hatch in 21 days. They make up 80-90% of the hive.

They work different jobs throughout their life! Some collect pollen and nectar, feed broods of new bees, groom the queen, build new cells, and keep the hive heated or cooled to the right temperature.

EXPLORE: Students use paper folded fans to simulate fanning the queen and the new brood.
DRONE bees are male and hatch in 24 days. They only make up 10-20% of the hive. They are twice the size of WORKER bees and have LARGE EYES.

Their only role is to mate with QUEENS from other hives.

EXPLORE: Students put on large sunglasses to resemble large-eyed drone bees and act out flying.
Worker bees DANCE to COMMUNICATE where to find food!

A ROUND DANCE shows flowers close to the hive (10-80 yards). THE WAGGLE (side-to-side shaking of abdomen) shows food that’s further away.

EXPLORE: Teacher plays sounds of bees waggling and assists students with wheeling or assisting students in replicating patterns - whether full body, or with finger (drawing a circle for ROUND dance, or shaking finger side-to-side to showcase WAGGLE)
Honey bees also COMMUNICATE by odor cues called PHEROMONES.

To help LOCATE THE HIVE, honey bees release a scent that smells like lemons. To sound the ALARM to potential intruders, they release a scent that smells like bananas.

EXPLORE: Teacher can spray WELCOME HOME SPRAY (lemon-scented) and ON-GUARD spray (banana-scented) for students to experience simulated bee pheromones.
Honey bees are in decline but YOU can help honeybees THRIVE!

Support your local beekeeper.
Plant bee-friendly plants to provide flowers for food.
Bees get thirsty! Make a honey bee water feeder with a shallow dish and pebbles and wine corks.

EXPLORE: Students can fill a dish with marbles and water to make a bee-water dish. Students can plant seeds of wildflowers to provide food for honeybees.
MATERIALS PHOTO:

- Large sunglasses, queen crown
- Stress balls
- Baby powder (not pictured)
- Witch hazel, spray bottles, lemon essential oil, banana fragrance
- Wildflowers & wildflower seeds, cups with soil for planting (not pictured)
- Peppers, tomatoes, fresh produce
- Shallow dish with flat stones or cork
- Stiff, boar’s hairbrush
- Bee products: beeswax candle, bee pollen, honey, vial of bees
- Folding fan
- Straws, cups, apple juice
- Spoons for honey tasting
MATERIALS LIST FOR SENSORY COMPONENT:

- Audio track of honey bees buzzing https://www.youtube.com/watch?v=4QVmtvzSmnE
- Jar of honey with small spoons for sampling
- Straws (and small cups of apple juice)
- Boars’ hair hairbrush
- Baby powder
- Collection of small, spongey stress balls
- Sampling of fruits and vegetables pollinated by honeybees
- Honeycomb or beeswax
- Hexagonal blocks
- Beeswax grains
- Pollen grains
- Clay models of queen, worker, and drone bee
- Queen’s crown
- Folded paper fan
- Large sunglasses
- Lemon scented spray (or lemon), banana scented spray (or banana)
- Small paper cups and wildflower seeds & soil
- or small dish with marbles to fill with water