THAD Therapeutic Horticulture Activity Database

Activity: Nature Goal: Sensory Populations: Specialized Populations

TH Activity Plan – Honey Bee-Havior

Text by L. Fleming, HTR & Maureen Bethel, DEC, BA, BEd, CAE Photo by PerfectBee

Adapted from Philadelphia Orchard Project. (n.d.). Honey Bees.



Materials

Educational materials on honey bees (i.e. features, life cycle, habitat), audio device

Straws, juice, honey

Stiff bristled hairbrush, baby powder

Variety of fruits & vegetables with varying sizes, shapes

Bees wax, honeycomb, hexagonal blocks/shapes

Models (i.e. clay, plastic) of honey bee queen, drone, worker

Scent infused cotton balls or spray (lemon or banana scented) **ACTIVITY DESCRIPTION:** Participants will engage in hands-on sensory activities focused on the nature of honey bees.

THERAPEUTIC GOALS:

Cognitive/Intellectual: Strengthen cognitive function, executive function &/or decision-making; engage sense of curiosity

Physical: Strengthen hand-eye coordination; practice "risky" behavior for developing sense of independence

Psychological/Emotional: Modulate behavior, thoughts & emotions; practice self-regulation (i.e. coping with apprehension, fear of being stung)

Sensory: Identify deficits in senses (if any); be mindful of other senses addressing sensory deficits; use sensory stimulation

Social: Practice pro-social behavior; practice sharing materials with others in group setting

STEP-BY-STEP PROCESS:

- 1. **Pre-Session Preparation:** Gather materials.
- Facilitator begins session by suggesting participants learn about honey bees & try being honey bees. Facilitator uses guided imagery, educational materials & sensory activities. Select several aspects of bees to focus on & use prompts and props to engage participants.
- 3. Suggested facilitator verbal prompts: Let's walk outside listening for honey bees & the buzzing sound they make (actual walk or guided imagery). Facilitator plays a track of honey bees.
- 4. Facilitator describes how honey bees collect sweet nectar from flowers using straw-like tongues called proboscis; then distributes straws, juice & honey & encourages participants to try "collecting their nectar", simulating bees' proboscis.
- 5. Honey bees pollinate plants by flying in nature, having powdery pollen stick to their hairs, taking it back to their hives. Facilitator shares course hairbrush/bristles & baby powder simulating how pollen sticks to their hairs, taking it back to their hives.
- 6. Honey bees (& other insects) pollinate fruit & vegetables worldwide. Facilitator distributes fruits & vegetables to be touched, smelled, heard (tapping fruit for ripeness (& if possible tasted).
- 7. Honey bee hives, their homes, are built from their beeswax & are made from 6-sided hexagons. Facilitator shares bees wax granules, hexagonal blocks & honeycomb.

- 8. There are 3 main types of honeybees in a hive, each has a different job. Queen (usually only one) who lays the eggs, drones who mate with the queen, & workers who collect pollen & care for the hive. Facilitator distributes clay models of the 3 types of honey bees.
- 9. Honey bees communicate, like other insects, using pheromones which are odors they emit; lemon scent helps locate hive; banana scent is an alarm for potential intruders. Facilitator distributes scent infused cotton balls or uses lemon or banana scented sprays.

APPLICATIONS FOR POPULATIONS: This TH activity is adapted from a booklet created for students with visual impairments. This THAD can be adapted for all populations using the sensory activities related to honey bee habits. Infusing humor and exaggerated actions can be effective for engaging participants, pun intended.

Sensory activities involving the eight senses can address deficits, challenges or interest in senses that may be compromised such as visual impairment or hearing loss. Hands-on sensory activities offer experiential opportunities to explore areas that may be considered challenging by participants. Such is the case with the activities identified in this TH activity. Most often discussed as benefits of sensory play for children, similar benefits can be evidenced in other populations. These include developing cognitive, language and motor skills, fostering social interactions, and experimentation (Cleveland Clinic, 2025). Sensory activities can involve all senses, particularly the vestibular and proprioception sensory systems.

When considering sensory play or sensory activities for adults, the literature cites engaging multiple senses simultaneously, which is particularly important for enhancing cognitive function, building and strengthening neural connections positively impacting learning, memory and emotional regulation. Many populations have challenges in these areas including adults on the autism spectrum, intellectually disadvantaged individuals, seniors, and people living with dementia among others. Also noted benefits include stress relief, relaxation and mindfulness that sensory activities can provide.

SAFETY CONSIDERATIONS: Facilitators are responsible for knowing poisonous and toxic plants and plant parts. If tasting will be a part of the session, prior approval and identification of swallowing, allergy or medicine contraindications should be done.

NOTES OR OTHER CONSIDERATIONS: Facts on bees are plentiful online. Note that honey bees are just one type of bee worldwide. Information on hive maintenance, seasonality, swarming, <u>waggle dance</u>, and complex social structures are relevant to this session.

REFERENCES/ RESOURCES:

Cleveland Clinic. (2025). What is sensory play? The benefits for your child and sensory play ideas. Health.clevelandclinic.org.

Columbian College of Arts & Sciences. (2012). The habits of honey bees. Columbian.gwu.edu.

National Geographic Kids. (2025). Honeybee. Kids.nationalgeographic.com.

University of California. (2025). Bee biology and behavior. University of California.

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