



# **AMAZING BEES!** **AMAZING EDUCATION!**

## **BEE-COLOGY!**

### **Honeybee Centre's New Integrated Tour and Classroom Experience for grades K-12**

Explore the new Honeybee Centre and Bee-cology! We offer giant-sized observation hives, honey processing facility, greenhouse tour, safe viewing of a beekeeper handling live colonies, experienced tour guide, complimentary teacher information package and lesson plan companion. An unforgettable tour experience for your Kindergarten and Grade 1 class!

#### **Objectives:**

- **To enhance curiosity about the natural world**
- **To encourage students to be observant and ask questions**
- **To encourage students to become stewards of their local and global environments**
- **To inspire students through fun, educational and memorable activities**

All Students will enjoy the following activities while on tour at Honeybee Centre

- Peer into our observation hive and watch bees work and dance, view different castes of bees, identify eggs, larva and pupa (the lifecycle of bees)
- Learn about honeybees as social insects
- Use a microscope and magnifying glass to observe honeybee anatomy
- Identify and observe the different members of honeybee society
- Observe honeybee communication
- Explore the similarities and differences between our honeybees and Africanized bees, bumblebees, wasps and solitary bees using a magnifying glass and microscope
- Appreciate the intricate and symbiotic relationship of honeybees and flowering plants
- Learn how and why bees pollinate through models and visual aids
- Learn about the lifecycle of flowering plants using models and visual aids
- Observe the characteristics of flowers that are pollinated by bees
- Explain how and why bees collect pollen
- Describe how and why bees make honey, wax, propolis and royal jelly
- Taste pollen, honey, propolis
- Experience how bees navigate and sense their world using various scientific equipment
- Learn about the history of beekeeping
- Observe equipment and clothing used by beekeepers
- Learn how to build a beehive

- Watch as a beekeeper handles an active colony of honeybees
- Describe how a beekeeper harvests honey, pollen and propolis
- Appreciate the economic importance of the honeybee industry
- Understand the interdependence of humans and honeybees

In addition, Grades kindergarten and 1 Bee-cology contains lessons and activities to fulfill the following Prescribed Learning Outcomes in the context of honeybees.

### Science

- Describe the characteristics of a variety of plants
- describe the appearance and behaviour of a variety of animals
- determine the requirements of healthy plants and healthy animals
- identify similarities and differences among animal species
- identify the stages in the life cycle of a plant or animal
- compare the life cycle of an animal hatched from an egg with one born from the mother

### Math

- count orally by 1s, 2s, 5s, and 10s to 100
- estimate and count objects in a set and compare estimates with actual number
- recognize, build, compare, and order sets of objects using both comparative and numerical terms
- read number words up to 10
- explore, represent, and describe numbers up to 50 in a variety of ways
- demonstrate and explain orally an understanding of “half” as part of a whole
- demonstrate and orally describe the process of addition and subtraction to 18 using role-play, manipulatives, and diagrams
- identify, reproduce, extend, create and compare patterns using actions, manipulatives, diagrams, and spoken terms
- recognize patterns in the environment
- classify, describe, and arrange objects using comparative language to compare length, size, area, weight, and volume
- use comparative terms to describe time
- compare the relative sizes of non-standard units by measuring the same object using different units of measurement
- estimate the number of uniform objects and irregular shapes that will cover a given area and verify their estimates by covering and counting
- compare and sequence events according to the duration of time, time of day, days of the week, and the seasons
- collect first-hand information by counting objects, conducting surveys, measuring and performing simple experiments
- sort objects to one attribute
- construct a pictograph using one-to-one correspondence
- compare data using quantitative terms
- pose oral questions in relation to data gathered
- use directional terms to describe the relative position of objects
- match the size and shape of figures by superimposing one on top of another
- identify and fit pieces of puzzles or shapes that go together
- explore and describe real-world and three-dimensional objects using descriptive attributes
- construct three-dimensional objects
- identify and describe specific two-dimensional shapes such as circles, squares, triangles or rectangles
- construct and rearrange a design using a set of two dimensional shapes
- compare, sort, classify, and pattern two-dimensional shapes