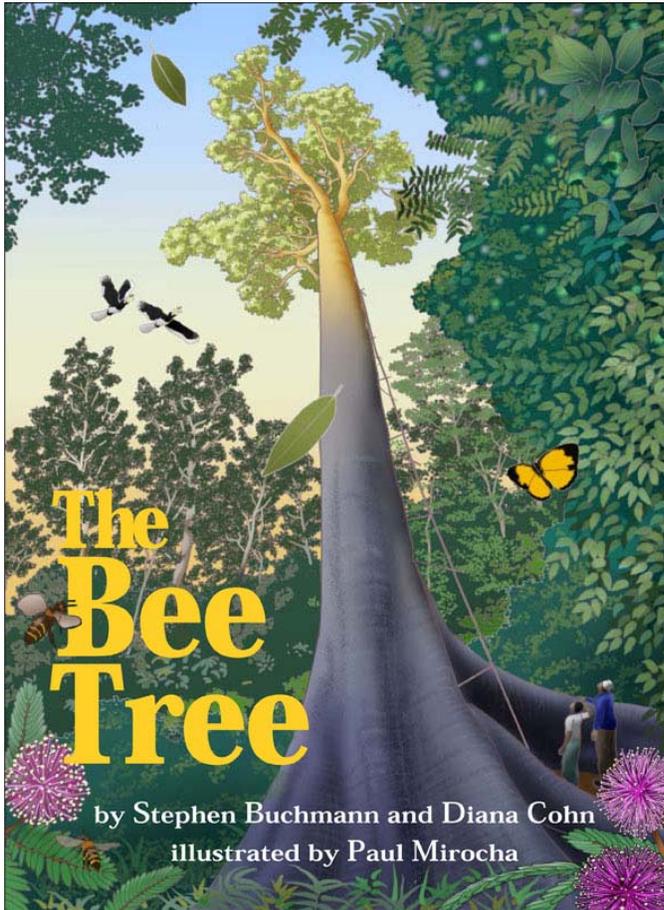


Teacher's Guide to

The Bee Tree

by Stephen Buchmann and Diana Cohn
illustrated by Paul Mirocha



THEMES

- Honey bees and honey harvesting
- Cultural and family traditions
- Malaysia
- Grandparent-grandchild relationship
- Storytelling
- Growing up (taking on new responsibilities)
- Community building

BOOK SUMMARY

The Bee Tree tells the story of a honey hunt in the dense rainforest of peninsular Malaysia. It is told from the perspective of the young boy Nizam, whose Grandfather Pak Teh leads the honey hunting clan. Pak Teh holds the place of honor as the climber of the gigantic Tualang tree (the bee tree) in the annual village honey hunt. Pak Teh trains Nizam to become the next tree climber by encouraging him to practice climbing and by training him to respect the ancient religious and cultural traditions of the honey hunting clan. On

a moonless night, the honey hunters enter the rainforest. At the foot of the bee tree, Grandfather recounts the traditional story of the bees, a prince and a servant girl. Nizam and his grandfather climb the giant tree and use the honey hunters' secrets to keep from being stung, while their clansmen soothe the bees with chanting below. After a week of gathering honey each night, the clan returns home to celebrate their honey harvest.

TEACHING OVERVIEW

The appealing storyline and beautiful art work of *The Bee Tree* expand students' awareness of the world geographically, culturally and scientifically. The story text and back matter provide a rich source of writing assignments and research activities using computer technology and library research in the fields of art, ecology, geography, science, and math. The author's use of sensory detail not only gives readers a vivid impression of Nizam's life in Malaysia, it also makes the book an effective tool for teaching good writing skills through the use of sensory impressions. The story also has potential for increasing students'



awareness of their own family, religious, and cultural traditions and for enhancing community relationships through family storytelling during multi-generational, after-school activities.

There is also an important environmental aspect to *The Bee Tree*. The giant honey bees of the Asian rainforests are one of a number of insects and animals who are called pollinators. Without bees and other pollinators like them, most plants, animals and humans would not survive. Here's why:

Bees have four wings and hairy bodies. Pollen grains from the anthers of flowers stick to the bees' furry bodies. As the hungry bees go about collecting sugary nectar and protein-rich pollen to feed their brood, they carry a tiny fraction of this pollen from one flower to another. Pollination occurs when pollen is moved within flowers or carried from one flower to another of the same species by these bees, or by birds, bats and other animals, or by the wind. This transfer of pollen in and among flowers of the same species leads to fertilization and successful seed and fruit production for the plant. Pollination ensures that a plant will produce full-bodied fruit and a full set of fertile seeds, capable of germinating.

Eighty percent of the food plant species worldwide depend on pollination by animals, almost all of which are insects. One out of every three mouthfuls of food we eat, and of the beverages we drink, is delivered to us by pollinators.

More than half of the world's diet of fats and oils comes from oilseed crops, many of which are pollinated by animals, including cotton, oil palm, canola and sunflowers. Worldwide, approximately 1,000 of the estimated 1,330 crop plants grown for food, beverages, fibers, condiments, spices and medicines are pollinated by animals. Products of pollination by honey bees and other insects are worth \$40 billion annually in the U.S.

In the rainforests of Malaysia, the world's largest honey bees (*Apis dorsata*)—the bees featured in *The Bee Tree*—are the main pollinators of the tallest trees in the rainforest.

Today, however, possible declines in the health and population of pollinators pose a significant threat to the integrity of biodiversity, to global food webs, and to human health. Factors which might be contributing to declines include the improper use of pesticides and herbicides; habitat fragmentation, loss, and degradation (when too much logging occurs in an area, for instance) causing a reduction of food sources and sites for mating, nesting, roosting, and migration; aggressive competition from non-native species; disease, predators, and parasites; climate change; and lack of floral diversity.

For more information about pollinators and what you can do to bring this issue to your students, go to www.nappc.org. North American Pollinator Protection Campaign.

You might also want to talk about the release of eight pollinator stamps during National Pollinator Week (June 24 – 30, 2007).

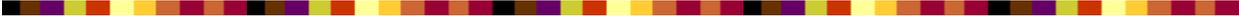
http://www.pollinator.org/Resources/USPSsr06_048.pdf

COMPREHENSION STRATEGIES

BEFORE READING

Ask students to look at the front and back covers of the book. Ask, what do you notice? Then, what else do you notice? Acknowledge each student's observation by repeating it back in some way: paraphrase or repeat their responses using correct English and adding in more extensive vocabulary to model and build language skills. Encourage children to predict what the story will be about. When they make interpretive observations, ask them "What do you see in the picture that makes you say that?" Again, respond to their explanations by repeating or paraphrasing them.

Show students where Malaysia is located on the globe in relation to their city and state. If possible, bring a honeycomb to class to show students. Then connect the story to students' own experiences. What do they know about honey bees? Has anyone been stung by a bee or wasp? How do people keep from getting stung when they are collecting the



bees' honey? What do the students know about a rainforest? Have they ever been in one or seen one on TV or in the movies?

AS READING PROGRESSES

Read and/or assign reading times for independent readers into two segments, the text of the story and the back matter.

SEGMENT ONE: TEXT

Read the book to the class (or make independent reading assignments to individuals).

- 1) Explain unfamiliar words as you meet them in the text and list them on the board. Possibilities: comb (honeycomb), rice paddies, mosque, cicada, cascade, monsoon, swarming.
- 2) Occasionally ask students to describe what they see in the pictures, as they did with the cover. How does the picture add meaning to the text?
- 3) At the story's end ask what did Nizam want? What did his grandfather want? Did each one get what he wanted? Discuss their motives, behaviors, and feelings as students review the basic storyline.

SEGMENT TWO: BACK MATTER

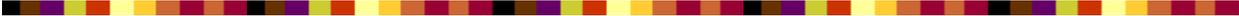
Use map, globe and photographs to give mini-lessons on the science of bees and the geography of Malaysia.

AFTER READING

LANGUAGE ARTS ACTIVITIES

- 1) It is important to give children opportunities for narration – for retelling and reinterpreting the story in their own words – soon after they read or hear the story. Use drama and art activities (see art suggestions below) or tell them to pretend they went on the expedition with Nizam and write a letter home telling about it.
- 2) Research a specific topic as individuals or in small groups. Brainstorm possibilities. Require use of a variety of resources (Internet, library, magazines, periodicals, newspapers, guest speakers, etc.) Ask students to write a paragraph or a page or to give a mini oral presentation on their discoveries. Examples:
 - a) Find out about one of the animals, insects, or unusual plants in the Malaysian forest. Describe it so somebody who has never seen it can imagine it. The Malaysian sun bear with its long tongue might be a good animal for someone to choose.
 - b) Research and describe the houses or clothing of the Malaysian people.
 - c) Explain: how bees make honey from the sugary nectar inside flowers , how bees sting, how honey is used for first aid and medicine, how honey is gathered in another culture. (.) NO- this is wrong, flies do not make honey. I removed that statement. What was the honey hunters secret that allowed them to harvest the honey from the giant honeycombs without being stung (a torch struck against the branch produced a shower of sparks “the falling stars” which the bees followed to the ground. The disoriented bees remain on the ground until sunrise, thus leaving the honey hunters alone high overhead in the tree branches).
- 3) Post three large blank outlines of Malaysia in the classroom. As students research the animals, plants, and people of Malaysia, have them paste pictures of the animals on one outline, plants on another, and Malaysian scenes and people on the third.

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- 4) Discuss Nizam's relationship with his grandfather. Ask students to write memories of or poems about one of their grandparents or other older relatives.
 - 5) Discuss daily life in Nizam's village and his trip through the jungle. Ask children to write a persuasive essay about
 - a) What they would like/dislike about gathering honey in the jungle
 - b) What they would like/dislike about living in Nizam's village
 - 6) Explain what traditions are. Then re-read the story and ask students to raise their hands when they notice a tradition. (Examples: Grandfather leading in prayer, "Peace be upon you" greeting, lesson on how to enter the forest, telling the traditional story of the bees, giving honeycomb back to the forest, the honey feast) Discuss Nizam's relationship with his grandfather and the religious and cultural traditions they shared. Ask students to share examples of their family's religious and other cultural traditions. Have students draw a picture and write a paragraph or more about a family tradition. This activity also makes a good Family Night activity if you invite students' parents, grandparents, and other relatives to the classroom, read the story, and ask the relatives to describe to their student a memory of a family tradition. Prime the pump with a SHORT example of one of your own family traditions. Ask students to draw a picture of their relative's story and then encourage the student and the relative to show the picture and share the story with the group. These drawings and stories can be laminated and used as family gifts.
 - 7) Re-read the Hitam Manis myth. Ask children to write their own myth to explain: Why Bees Sting, Why Honey is Sweet, or Why American Bees Make Honey. Or let children choose their own myth topic such as Why the Sky is Blue.
 - 8) Give foundational lessons on using the five senses in writing.
 - a) Preparation: becoming aware of the five senses
Teach children a chant about writing with the five senses and the emotions: "Hearing (as they touch an ear), Seeing (touch an eye) Smelling (touch their nose) Tasting (touch their lips), Feeling with Touch (as they scratch their chin) and Feeling with the Heart (as they place their hand over their heart)." Pass out apple or orange slices, but tell students not to eat them yet. Squirt sanitizer in each student's hands and ask them to describe how it looks, what it smells like, and what it feels like being rubbed in. List their responses (adjectives) on the board. Then have them pick up the apple slice. What does it look like? Feel like? Smell like? Now have them place it in their mouths and describe how it feels before and after biting down. What does biting it sound like? What does it taste like? Again, list their responses on the board. If you have time, you can add another snack with contrasting texture and taste, like nuts or crackers. If you have a honeycomb, you can give each child a small piece to explore. Explain that there are two ways of feeling, the physical and the emotional.
 - b) Tell students to notice how Nizam uses each of all the five senses and his emotions in his story. Then re-read the story, discussing what Nizam sees, hears, smells, tastes, feels physically and feels emotionally. Also note his use of comparisons (similes).
 - c) Later, use the chant to remind students about the five senses just before a school activity that uses multiple senses (examples: lunch, P.E., field trip). Tell them to try to be aware of their five senses during the activity.
 - d) As soon as possible after they return from the activity, put five headings on the board: seeing, hearing, etc., and start collecting their sensory impressions. What did they hear? Smell?

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- e) Write a class poem using phrases from the board or assign students to write a paragraph describing their experience. They can borrow each other's ideas from the board to write the paragraph.

ART ACTIVITIES

- 1) As individuals or in small groups, assign students to create a model of the rainforest and the bee tree. Let them use pipe cleaner figures to retell the story.
- 2) Have students create dioramas of various scenes in the book and use their dioramas to retell the story.
- 3) Have an artist come into the class to show students how to draw plants or insects from photographs and real life, like the drawings in the book.
- 4) Recreate a Malaysian rainforest scene on a long roll of butcher paper. Draw the plants as a background and paste in students' drawings or printouts of Internet or other pictures of Malaysian insects and animals. Hang the rainforest scene in the hallway.
- 5) Have students make costumes using Malaysian dress and give their presentations wearing their costumes.

SOCIAL STUDIES ACTIVITIES:

- 1) Find your state and/or city on a globe. Then find peninsular Malaysia. Locate
- 2) Peninsular Malaysia (where our story takes place) vs. Sabah and Sarawak (on the giant island of Kalimantan, formerly known as Borneo). Find other countries the class has studied during the year. List and find the different places where students have relatives.
- 3) Make salt dough relief maps of Malaysia in small groups.
- 4) Brainstorm a project where the class can perform a service for the school just as the honey hunters performed a service for their village.

MATH ACTIVITIES:

- 1) How much water is the average Malaysian rainforest rainfall? To demonstrate, have students measure 80 inches from the floor to a point on the wall of the classroom. Make a chart or table comparing rainfall amounts in Malaysia to the place where students live and to the different parts of the country (or the world) where students have relatives.
- 2) What currency is used in Malaysia? What is its value in relation to the U.S. dollar? Have students research these questions and create math story problems using exchange rates and amounts for Malaysians and Americans traveling in each other's countries. Photocopy the story problems for a homework handout.

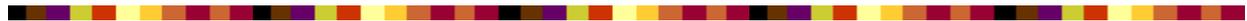
MUSIC ACTIVITY

Listen to music (or noisy animals sounds from animals that live in these rainforests) from the Malaysian culture while doing art projects.

CURRICULUM COVERAGE AND EXTENSIONS

1) LANGUAGE ARTS

- a) **Writing Skills:** Response to text/others; description skills, writing for a variety of purposes – to express, to discover, to reflect, to inform, to entertain; narrative writing; creative writing, poetry; journal writing; letter writing; inquiry/research; writing processes
- b) **Speaking Skills:** Response to text/others; description skills, individual/group discussion skills, presentation skills.
- c) **Reading Skills:** Setting purposes for reading; prior knowledge; prediction skills, word identification; vocabulary development; story elements – main ideas,



- character development, plot development; connection to person experience; understand literary forms: myths; cultural characteristics; cross cultural connections; inquiry/research.
- d) **Listening Skills:** Enjoy and appreciate input of others; connection to personal experience; connection of own experiences with the experiences of others; compare oral traditions across regions and cultures.
 - e) **Viewing skills:** Interpretation skills; evaluation of author's choice; illustrations as extension of text meaning
 - f) **Cognitive development skills:** Critical thinking; comprehension skills; compare/contrast skills; vocabulary development – constructing meaning, key words, identification of main topics, cultural characteristics; emotional intelligence; empathetic reasoning skills.
- 2) **SCIENCE:** Learning about the natural world, science concepts: describing systems; life cycles of plants and animals.
- 3) **SOCIAL STUDIES:** Map skills; geography; establishing a sense of time and place; concept of regions; group cooperation skills; giving and sharing for the common good.
- 4) **MATH:** Data collection/organization; graphs/charts/tables; problem-solving skills; measurement; computation skills; understanding the meaning of mathematical operations; identifying mathematics in everyday situations
- 5) **ART:** Art appreciation; creative expression; artist techniques – drawing, painting
- 6) **MUSIC:** Reflection on musical styles; relating music to culture
- 7) **TECHNOLOGY APPLICATIONS:** Demonstrating knowledge and appropriate use of computer technology; using appropriate data input skills; information acquisition; use of search strategies, on-line help and documentation; solving problems: use of communication tools to participate in group projects; publishing information in a variety of media

