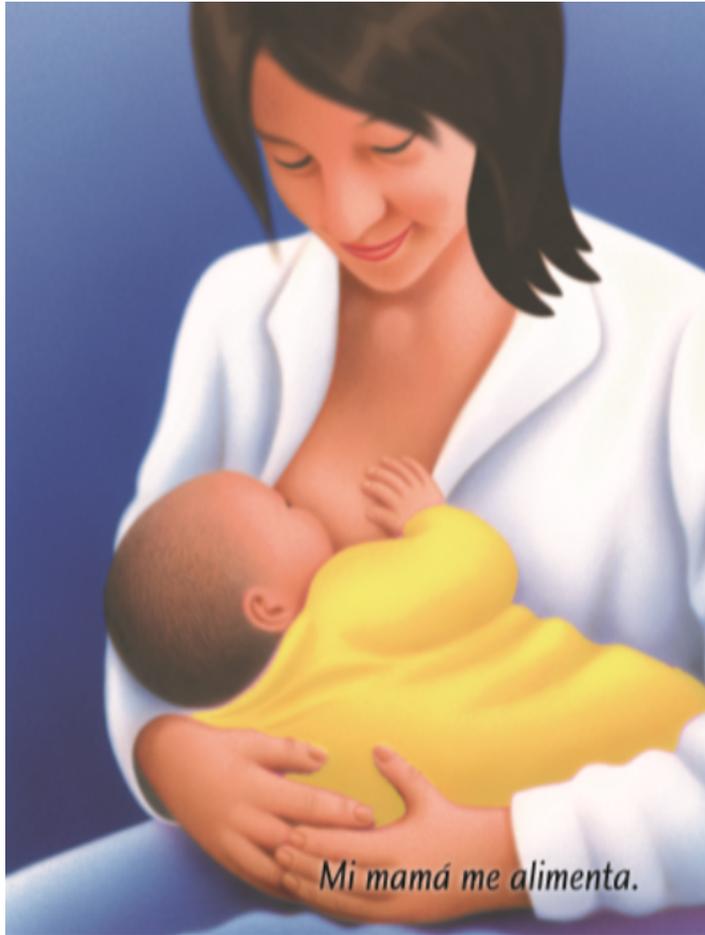


Breastfeeding Education for Children



Picture (above) from page 21 of *Cuddled and Carried / Consentido y cargado* by illustrator Mike Speiser

Picture (R) from page 19 of *Babies Nurse / Así se alimentan los bebés* by illustrator Jim Fox



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Table of Contents:

Introduction:	
Why is Breastfeeding Education Important?	1
Background Information:	
Lactation.....	2
Activity 1:	
Milk Delivery	3
Activity 2:	
Lactation Among Mammals	4
A. Mammal Classifications.....	5
B. Mammal Groups.....	6
Activity 3:	
Where Are My Nipples?.....	7
Mammal Nursing Trivia.....	11
Bibliography of Children's Books that Depict Breastfeeding.....	12
Breastfeeding Bingo.....	13
Breastfeeding Play.....	14
Breastfeeding Education and Boys....	15
Breastfeeding Education for Older Children.....	16

This module is adapted from Teachers' Guides for: *Cuddled and Carried*, *Babies Nurse*, and *If My Mom Were A Platypus*.

This module and full Teachers' Guides can be downloaded free of charge at PlatypusMedia.com

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Introduction: Why is Breastfeeding Education Important?

“There persists an attitude in much of society that you can ‘spoil’ a child with too much love. However, scientific study, particularly on premature babies, but also on all babies, has shown that physical closeness, often called ‘skin to skin’ care, has lasting, positive effects on the relationship between parents and babies.

“I like how Platypus Media books include breastfeeding as one of the many ways a child is cuddled, carried, and given security.”

—Jack Newman, M.D., FRCPC,
The Ultimate Breastfeeding Book of Answers

Breastfeeding has long-reaching benefits for babies, mothers, families, communities, and the environment. However, the stigma surrounding breastfeeding, the fact that the majority of breastfeeding mothers wean within a few months, and the prevalence of baby bottles as the normative method of feeding a baby do not provide children with adequate exposure to this normal and natural act of parenting.

Studies have shown that many women make the decision to breastfeed well before they are pregnant, and that girls exposed to breastfeeding are more likely to see breastfeeding as beneficial to both the mother and the infant. Teaching children about breastfeeding familiarizes them with how important breastmilk is to infant development, promotes a better understanding of how mothers provide for their babies, and encourages healthy choices.

This packet identifies strategies that parents, librarians, educators, health care providers, and community members can use to educate children about this important form of sustenance. Parents have long been taught that ‘breast is best,’ but it’s time for children to be taught that ‘breast is normal’.

Background Information: Lactation

Lactation is a normal biological process in which female mammals use their mammary glands to secrete milk for their young after giving birth. Mammals provide this first food to their babies in different ways; some do so through exposed nipples or teats, others have nipples in hidden pockets, others simply secrete it onto their skin for their young to lick off, and others eject their milk into the water for their young to snatch. Each newborn mammal is anatomically ready to feed from their mother at birth and the milk produced is tailor-made to help the young achieve optimal growth physically, emotionally, and intellectually.

Female mammary tissue grows during pregnancy and hormones from the ovaries and placenta start milk production. However, only after birth does the milk flow freely. The milk supply is established by supply and demand. The more a youngster nurses, the more milk the mother produces. Too much milk is undesirable and can cause problems, so baby mammals are designed to breastfeed on demand to maintain that equilibrium. (Tigers and pandas do not have watches or follow a calendar, after all) In nature, each baby mammal breastfeeds when and for as long as their body tells them it is needed.

For humans, the World Health Organization (WHO) recommends that babies exclusively breastfeed for six months “to achieve optimal growth, development, and health. Thereafter, they should continue breastfeeding while adding in nutritious complementary foods. Breastfeeding should continue for at least two years and as long as both mother and child desire.”

This packet is designed to help children realize how normal the lactation process is and how each mammal is designed to breastfeed based on their physical characteristics and habitats.

Activity 1: Milk Delivery

Materials: Plush or plastic toy platypus.

Background: All mammals have milk glands, but not all mammals necessarily have breasts or nipples as the source of delivering milk to their babies. Likewise, all baby mammals consume milk, but not all baby mammals have lips to suckle. Platypuses are unique in the sense that they have no breasts, or nipples, and no lips to latch on with. So, how does the mother feed her baby?

Activity:

1. How does the mom do it? Using the plush platypus, demonstrate that there are no breasts or nipples on the chest. Explain that, like a human mother, the platypus does have glandular tissue that produces breastmilk. Her glandular tissue lines her whole chest wall. The milk is excreted through the pores in her skin. It simply oozes out of her chest and onto her fur, in the same way that we excrete sweat onto our skin.
2. How does the baby do it? In order to breastfeed, a human baby must make a vacuum seal around the nipple and then suckle, extracting the milk with movements in the lower lip and jaw. Platypus babies have no lips and therefore can't form a vacuum seal, so they cannot breastfeed like us. Instead, they use their bill to push against the chest of the mother, causing the milk to eject onto her chest. When the milk comes out, the baby simply licks it off the mother's chest.
3. Discuss: The breastmilk production system for a platypus is sterile, but the breastmilk delivery system is not. This is true for all mammals. Exposure to small amounts of microbes is part of building a strong immune system. The platypus is a good way to observe this.
4. Extra credit: Ask, what other mammals have no lips, and therefore need an adaptation for drinking breastmilk? (Answer: dolphins and whales)

Activity 2: Lactation Among Mammals

Materials: *Babies Nurse*, Mammal Classification handout, Mammal Groups handout, paper, colored pencils, construction paper, scissors, popsicle sticks, and glue.

Background: All mammals have mammary glands, though not all mammals have breasts, and some don't even have nipples. The mammary glands are in charge of producing the milk for sustenance of the mammal's young. This milk is tailor-made to nourish the young and it is often fed through nipples. Some mammals have exposed nipples (such as monkeys, giraffes, and humans), while others have them hidden in a pocket (such as whales), and some don't have nipples at all but secrete milk onto their skin, which their young then licks off the chest wall (such as the platypus).

In humans, breastfeeding is the normal way of providing infants with the nutrients they need for healthy growth and development. Virtually all mothers can breastfeed, provided they have accurate information, and the support of their family, health care providers, and the people around them.

Activity:

1. Read *Babies Nurse* aloud, emphasizing the position in which each animal pictured is nursing. Explain to the children that the babies are drinking their mother's milk, and that this is a tailor-made substance that has all the nutrients and fats necessary for their young to grow.
2. The students will then draw an animal and its young. Cut them out, paste them separately onto construction paper, and glue on popsicle sticks to create little puppets.
3. Once their puppets project is done, students will use their puppets to act out how their particular animal nurses, according to the book, and other possibilities given their maturity level at birth (see Mammal Classification handout).
4. Introduce older or more advanced students to the three main groups of living mammals: monotremes, marsupials, and placentals, presented in the Mammal Groups handout. Divide the class into small groups and have them do presentations on an animal in each of these three mammal groups. Discuss how the mammal feeds its young.

Mammal Classification

Mammals lead very different lives, depending on their habitat, whether they are predator or prey, and the nutrient density of their food. Below is a classification system developed by Dr. Nils Bergman that divides mammals by their maturity level at birth and the composition of their mother's milk.

Cache mammals: These animals are mature at birth. Their mothers hide their young in a safe place and return to them every twelve hours or so. Consistent with this behavior, their milk is high in protein and fat. It sustains the young animals for a long time because the babies are fed infrequently.

ex. deer, rabbits

Follow mammals: These animals are also mature at birth but can follow their mothers wherever they go. Since the baby can be near the mother throughout the day and feed often, the milk of the follow mammal is lower in protein and fat than that of a cache mammal.

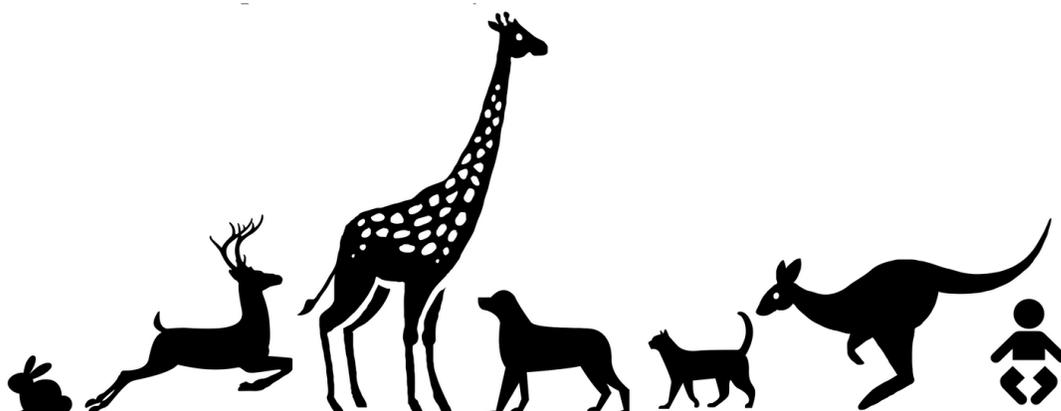
ex. giraffes, cows

Nest mammals: These animals are less mature than cache or follow mammals at birth. They need the nest for warmth and remain with other young from the litter. The mother returns to feed her young several times a day. The milk of nest mammals has less protein and fat than cache mammals, but it has more than follow mammals, who feed more frequently.

ex. dogs, cats

Carry mammals: These animals are the most immature at birth, need the warmth of their mother's body, are carried constantly, and are fed around the clock. Their milk has low levels of fat and protein.

ex. kangaroos, humans



Mammal Groups

All mammals can be broken down into three different categories. Here are the three different mammal groups. Can you think of examples of each?

Placentals: Placental mammals all bear live young, which are nourished before birth in the mother's uterus through a specialized embryonic organ attached to the uterus wall, the *placenta*. The placenta is derived from the same membranes that surround the embryos in the amniote eggs of reptiles, birds, and monotreme mammals. The overwhelming majority of mammals are placental.

Marsupials: Marsupials are the group of mammals with pouches for their young. Unlike placental mammals, marsupials do not have long gestation times. Instead, they give birth very early and the newborn, essentially a helpless embryo, climbs from the mother's birth canal into the pouch, and latches on to a nipple. It continues to develop in the pouch, nourished by breastmilk for weeks or months, depending on the species. There are about 334 species of marsupials, most of which are native to Australia. In South and Central America there are about 113 marsupials. The Virginia opossum is the only marsupial species native to North America.

Monotremes: Monotremes, like reptiles and birds, lay eggs rather than having a live birth. There are only five living monotreme species: the duck-billed platypus and four species of echidna (also known as spiny anteaters). All of them are found only in Australia and New Guinea. Neither platypuses nor echidnas can breastfeed in the usual manner. They do not have lips, so they cannot create a vacuum seal around a nipple in order to suckle. Instead, platypus moms secrete breastmilk onto their chest wall where the babies can lap it up. Echidnas secrete breastmilk specifically from hairy patches attached to mammary glands, known as areola patches.

Activity 3: Where Are My Nipples?

Materials: *If My Mom Were A Platypus* worksheet on page 8, and mammal cards on page 9.

Background: All female mammals feed their milk to their infants, but they do it in different ways. Human breasts are located on their chests, but this is not true of all mammals.

Activity:

1. First, read *If My Mom Were A Platypus* together, paying special attention to how each animal feeds.
2. After reading, cut out the mammal cards on page 9. Give each student a copy of the worksheet on page 8 and their own stack of mammal cards.
3. Have students place each mammal card in the appropriate box based on their nipple placement.

Where Are My Nipples?

Below my belly button!

On my chest!

Hidden in a pouch!

Under my arms!

I have none!

Hidden under my skin!



African elephant



Koala



Human



Hippo



Least shrew



Mexican free tailed bat



Hooded seal



Lion



Golden lion tamarin monkey



Pacific grey whale



Platypus



Polar bear



Orangutan



Giraffe

Answer key

On my chest:
 -Human
 -African elephant
 -Golden lion tamarin
 -Orangutan
 -Polar bear

Many other mammals have nipples on their chests, including gorillas, pigs, cats, and dogs.

Below my belly button:
 -Giraffe
 -Hooded seal
 -Lion
 -Hippopotamus
 -Least shrew
 Other mammals with nipples below their belly buttons include horses, goats, cows, and cougars.

Hidden in a pouch:
 -Koala
 Other marsupials with nipples in their pouches include kangaroos and opossums.

Hidden somewhere else:
 -Pacific grey whale
 Dolphins and many other whales also have nipples that must be nudged in order to be visible.

I have none:
 -Platypus

Mammal Nursing Trivia

Here's how some different mammals breastfeed...

- Whales need to preserve their sleek, hydrodynamically efficient shape, so the mother's milk glands are below her thick blubber layer. This interior location also protects the milk from the cold. The baby nudges the area and milk—thick as toothpaste—spurts out. A baby Pacific gray whale drinks 50 gallons of breastmilk a day!
- Hippos are born underwater—and nurse underwater, too. Immediately after the birth, the mother and other female hippos push the newborn to the surface to breathe. Then the baby goes under again, finds a nipple, and suckles, instinctively folding down his ears and closing his nostrils. Every 20-40 seconds, he bobs to the surface to breathe and swallow.
- One adult male and a group of females and young lions live together in a *pride*. In one pride, all the lionesses take care of all the cubs. Unlike almost all other mammals, any lioness will wet-nurse (breastfeed a baby who is not her own) any cub. A napping lioness who has been hunting all night doesn't pay much attention to who is suckling on her. And because they are all so closely related, a lioness helps the family, no matter whose baby she nurses.
- The hooded seal lives about thirty years but spends only four days breastfeeding and being a child, the shortest nursing period of any mammal. They live at sea but must give birth and nurse out of the water. The only surface available is floating ice. Pups are born in the spring, when the ice is beginning to melt and break up. A sudden storm might send pieces crashing together, crushing moms and pups. Or an ice floe might split, and moms and pups could be separated. A short childhood helps avoid these perils.
- The female duck-billed platypus breastfeeds without the benefit of a breast or a nipple. The mammary glands rest underneath the mother's chest. The youngster pushes against the chest wall with his soft, pliable bill, then licks the oozing milk off his mother's skin and hair.
- Baby orangutans breastfeed, ride on their mother's body, and sleep on her chest for seven years—among the longest nursing periods of any mammal. Young stay with their mothers at least until a new baby arrives; males begin to wander off then, but females may stay around for a while observing how babies are cared for. They are accomplished acrobats, often nursing upside down—hanging from a branch by only one hand and foot.
- Baby mammals are weaned when the mother is newly pregnant or preparing for another pregnancy. In western culture, today, the most common reason cited for human weaning is in preparation to return to a job outside the home.

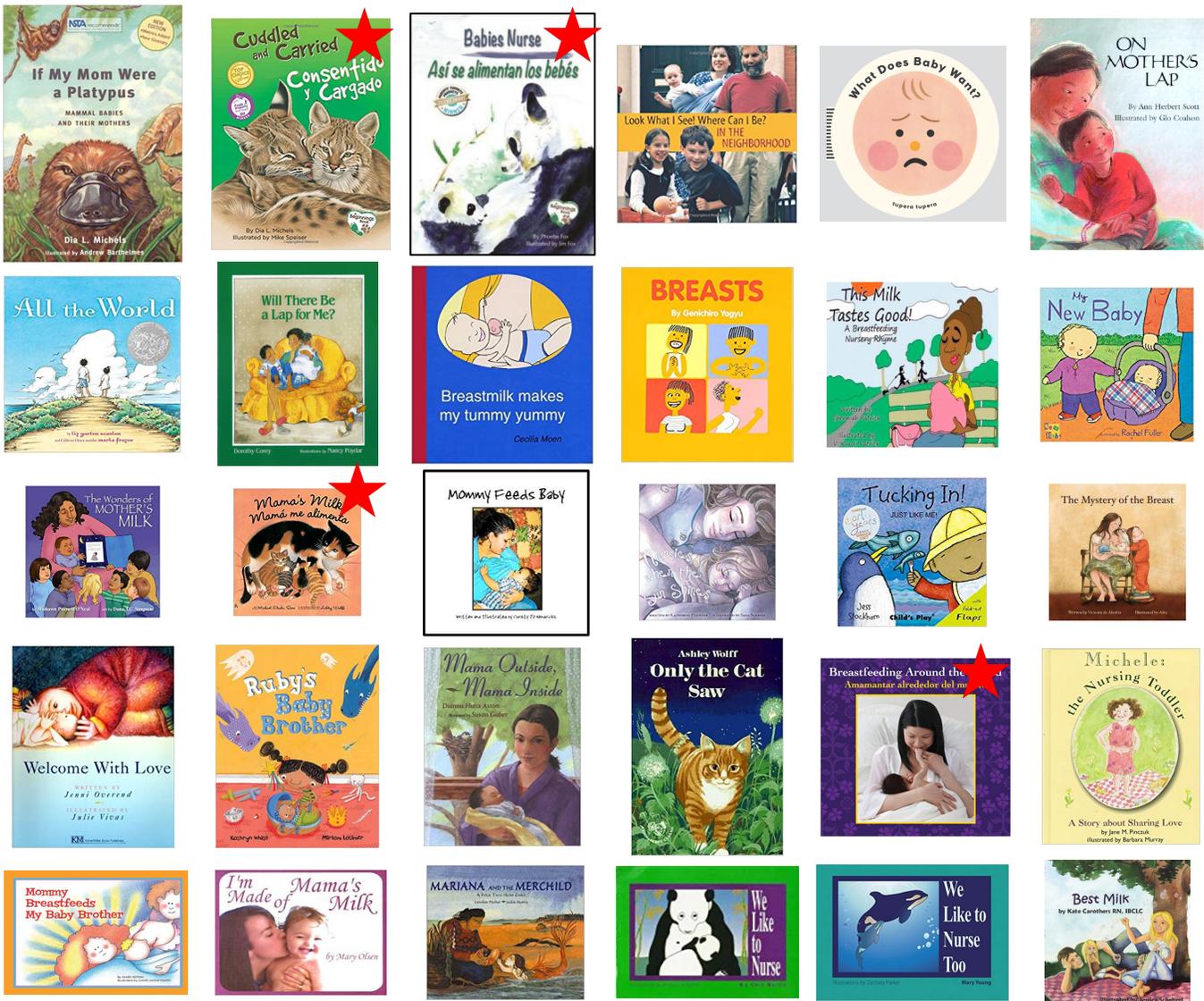
These and other facts are drawn from the talk “Are You Smarter than A Mammologist?” presented by Dia L. Michels. To learn more about this fun-filled presentation or to book Dia as a speaker, visit PlatypusMedia.com/speaking.

Children's Books that Depict Breastfeeding

For many years, there were few children's books that portrayed breastfeeding. In recent years, some wonderful breastfeeding-themed children's books have been published. Sharing these books with your kids can help show the beauty of this simple, natural, and normal act of mothering.

Some of these books discuss breastfeeding itself, but many simply show the act of nursing within the story. Sharing these books with your kids helps show them the beauty of this natural and completely normal act of mothering.

Red stars (★) denote a bilingual (English/Spanish) title.



More information and these and other children's books that depict breastfeeding can be found at PlatypusMedia.com/breastfeeding-resources

Breastfeeding Bingo Game

Cut out each individual word. Place them face down to choose the bingo words one by one.

Humans	Animals	Loving	Sheltering	Snuggling	Cuddling
Carrying	Guiding	Grooming	Nuzzling	Nurturing	Mother
Baby	Breastfeeding				

Cut out each bingo card and give one to each player.

Loving	Animals	Sheltering
Breastfeeding	Grooming	Mother
Humans	Carrying	Baby
Cuddling	Guiding	Nuzzling

Baby	Cuddling	Humans
Mother	Nurturing	Breastfeeding
Carrying	Animals	Loving
Nuzzling	Guiding	Grooming

Baby	Grooming	Animals
Humans	Loving	Breastfeeding
Cuddling	Sheltering	Nurturing
Carrying	Snuggling	Mother

Nurturing	Sheltering	Humans
Snuggling	Mother	Grooming
Carrying	Loving	Cuddling
Baby	Animals	Breastfeeding

Make your own cards at http://www.kiddiesgames.com/en/bingo_words.php

Breastfeeding Play: Dolls and Songs

Incorporating dolls and songs that feature breastfeeding can give your child fun ways to learn and model the behavior.

While many mainstream dolls come complete with a bottle, breastfeeding dolls such as The Breast Milk Baby or MamAmor's Birthing-Breastfeeding Classic can be great options for your child. Children often pretend to be the mom and "breastfeed" their dolls. Encouraging this behavior will send the message that breastfeeding is a normal part of a baby's life.

Here are some of the breastfeeding dolls that are available:

- Älskar Studio Dolls (etsy.com/shop/alskarstudio)
- Amamanta Family Dolls (amamantafamily.com)
- BerjuanToys: Breast Milk Baby (berjuan.com/bebe-gloton)
- Bidz Design Dolls (etsy.com/shop/Bidzdesign)
- Gledita: Breastfeeding Demo Doll (gleditadolls.com)
- MamAmor Birthing-Breastfeeding Classic (mamamordolls.com)



Songs are another fun, interactive way for children to gain exposure to breastfeeding. There is a wealth of music from all over the world that celebrates the benefits, hardships, and importance of breastfeeding.

Take, for instance, the album *Whip It Out* by Moorea Malatt, a collection of songs written to entertain mothers and babies while they nurse. Or perhaps, the song "Breastfeeding. It's Natural," produced by UNICEF for World Breastfeeding Week in 2013, a beautiful animated video filled with nursing babies and their mothers from all corners of the animal kingdom.

Here are some breastfeeding songs both parents and children will love:

- Whip It Out: Songs for Breastfeeding (store.cdbaby.com/cd/mooreamalatt)
- Nursed Me (All Night Long) (youtu.be/yKaaJuXppDE)
- Breast is Best (youtu.be/OY660qA8u3A)
- Mother's Super Power (youtu.be/8CXlvH82pdl)
- Nursing Queen (youtu.be/miPB9R5pdB4)
- All About That Breast (youtu.be/rBG1DI9hEY4)
- Life Givers - A Breastfeeding Anthem! (youtu.be/Rrk-KmfuKMY)
- Breastfeeding. It's natural (UNICEF) (youtu.be/2R5_Wdz9zgc)

These and other resources to normalize breastfeeding are included in the talk "Breastfeeding Education Starts at the Very Beginning," presented by Dia L. Michels. To learn more about this presentation or to book Dia as a speaker, visit PlatypusMedia.com/speaking.

Breastfeeding Education and Boys

Boys are often excluded in considerations for breastfeeding education. However, teaching our boys about breastfeeding is just as important as teaching our girls. Including them in the discussion will encourage success and have long-lasting benefits.

A study of primary school children from the Brazilian Society of Pediatrics found that while a large number of boys were predisposed to encourage breastfeeding, 37.5% of them said that they would be embarrassed to see their wives breastfeeding in public and 30.6% of the female students reported the same sentiment.



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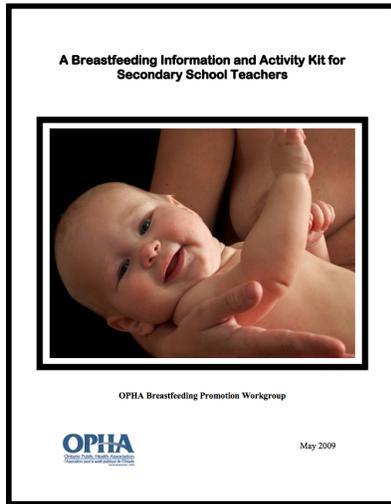
Boys more often see breasts as sexual organs, and don't consider the fact that their primary function is for nursing. Raising conscientious boys will help them later in life when they take on roles as partners and fathers. Experts agree that the father's support during breastfeeding has been shown to play an important role in the degree of maternal satisfaction towards breastfeeding, and can also have positive effects on breastfeeding duration.

Boys are often shamed for playing with dolls or playacting the role of mother. However, it is normal for children to explore what are seen as gender-atypical behaviors, and this curiosity should be encouraged. Mimicry is an important way that children learn, and a natural part of growing up.

Whereas pre- and post-natal instruction generally only reaches pregnant mothers and rarely fathers, including boys in breastfeeding education while they are young and encouraging their natural inclinations in care play will help to desexualize breasts and emphasize breastfeeding as a natural process.

This content is drawn from the talk "Breastfeeding Education Starts at the Very Beginning," presented by Dia L. Michels. To learn more about this presentation or to book Dia as a speaker, visit PlatypusMedia.com/speaking.

Recommendation: A Breastfeeding Information and Activity Kit for Secondary School Teachers



The Ontario Public Health Association (OPHA) Breastfeeding Promotion Workgroup has put together the following kit to assist teachers and parents in positively impacting the attitudes and improving the breastfeeding competencies of our society's future parents and professionals.

Most teens make unconscious decisions early about later infant feeding practices. This is why it is important to discuss the topic of breastfeeding early and in a variety of ways. In this way they will be empowered to make good decisions in later life.

Created in 1949, the Ontario Public Health Association (OPHA) is a non-partisan, non-profit organization that brings together a broad spectrum of groups and individuals concerned about people's health. OPHA's members come from various backgrounds and sectors - from the various disciplines in public health, health care, academic, non-profit to the private sector. They are united by OPHA's mission of providing leadership on issues affecting the public's health and strengthening the impact of people who are active in public and community health.

Their Breastfeeding Information and Activity Kit includes:

- Background Information
- The Amazing Act of Breastfeeding
- Oranges and Breasts Activity
- Family Feeding Tree Activity
- Hook'Em With Cookies Activity
- How Our Culture Influences Infant Feeding Choices
- Breastfeeding and You Activity
- Friend or Family Member Interview
- Breastfeeding Quiz
- Famous Mothers Who Breastfeed
- Thank You For Breastfeeding Activity
- Eating Patterns Game
- The "I Can" Activity

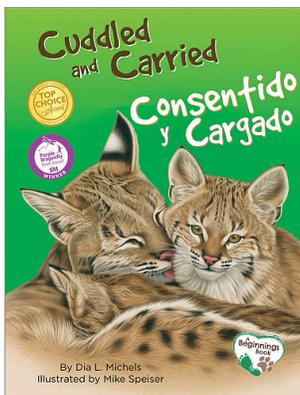
It can be found at goo.gl/CLJDAu.

Platypus Media Promotes Breastfeeding

Platypus Media was founded in 2000 by president and founder Dia L. Michels, an award-winning author of books in women’s health and early childhood education. Our goals are relatively simple: we promote families, celebrate secure attachment, and support breastfeeding.

We believe that exploring the parenting behavior of other mammals can help humans appreciate our bodies’ unique preparation for parenthood and accept that breastmilk is the route to optimizing emotional, intellectual, and physical growth, and, as such, is the essential first food for all mammals—including humans.

To this end, we offer a number of books that investigate parent-child relationships across the mammal class, and are designed to help normalize breastfeeding, attachment, and caretaking for children. Look for the “Beginnings” logo to identify these titles.

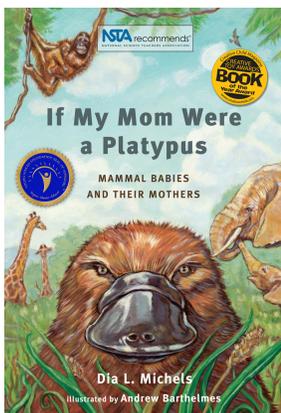
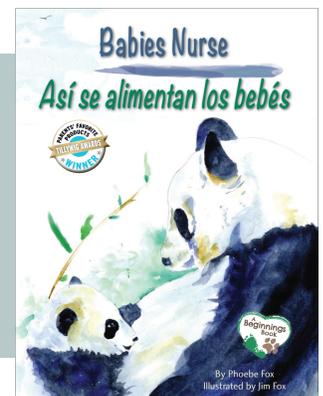


Cuddled and Carried / Consentido y cargado (also available in an English-only edition) introduces the reader to attachment in the natural world. Stunning images and gentle verse will capture the curiosity of even the youngest readers as they see how animal mothers tend to their cubs, pups, calves, and chicks.

Bilingual Hardback 978-1-930775-99-2 | Paperback 978-1-930775-98-5 | eBook 978-1-930775-43-5
English Hardback 978-7-930775-96-1 | Paperback 978-7-930775-95-4 | eBook 978-1-930775-97-8

Babies Nurse / Así se alimentan los bebés (also available in an English-only edition) introduces the most natural and loving act—mothers nursing their young. Luminous illustrations and lyrical text give children a glimpse into the worlds of 13 different mammal babies. An engaging choice for young children as well as elementary school readers.

Bilingual Hardback 978-1-930775-73-2 | Paperback 978-1-930775-72-5 | eBook 978-1-930775-40-4
English Hardback 978-1-930775-61-9 | Paperback 978-1-930775-71-8 | eBook 978-1-930775-47-3

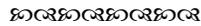


If My Mom Were A Platypus (also available in Spanish) is a fascinating look at 14 different mammal life cycles. A mammal baby’s journey to maturity varies dramatically depending on whether it is a bear or a bat, a shrew or a seal, a hippopotamus or a human. This book explores the way different mammal mothers help their young navigate the path from helpless infant to self-sufficient adult.

English Paperback 978-1-938492-11-2
Spanish Hardback 978-1-938492-03-7 | Paperback 978-1-938492-06-8 | eBook 978-1-938492-05-1

“Platypus Media’s books not only promote literacy,
they promote families!”

—Dr. William Sears, *The Attachment Parenting Book*



Platypus Media aims to educate grown-ups and children about the world around them. We bring products to the market that parents love, children enjoy, teachers appreciate, and parenting professionals value. We offer a selection of award-winning books, booklets, DVDs, videos, and other products. Our books foster warmth, closeness, literacy, curiosity, and an openness to other cultures.

Platypus Media is committed to the promotion and protection of breastfeeding. We donate six percent of our profits to breastfeeding organizations and abide by the rules of the WHO/UNICEF International Code of Marketing of Breastmilk Substitutes.

Company founder and president Dia L. Michels has authored or co-authored over a dozen books for children and adults, and regularly speaks at parenting, education, and healthcare conferences.



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