

**Alabama Department of Public Health
Mother's Milk Education Activity Package for Grades K-12**

Level: 7-8

Adapted from New York State Department of Health

REPRODUCTIVE HEALTH AND THE BENEFITS OF MOTHER'S MILK

LEARNING OBJECTIVE FOR LEVEL 7-8

Students will explain the relationship of mother's milk to the reproduction process.

SCIENCE CONTENT STANDARDS:

3. Relate major tissues and organs of the skeletal, circulatory, reproductive, muscular, respiratory, nervous and digestive systems to their functions.
4. Describe organisms in the six-kingdom classification system by their characteristics.

HEALTH CONTENT STANDARDS:

Grade 7; 1. Analyze how health-related decisions are influenced by individuals, families and community values.

- Grade 8; 1.** Apply health advocacy strategies
2. Locate accurate health information for personal use.

SOCIAL STUDIES CONTENT STANDARD:

10. Describe changes in social and economic condition in the U.S. during the twentieth and twenty-first centuries.

Examples: social—family values, peer pressures, educational opportunities
Describe the impact of print and electronic media and the Internet on the American way of life.

FAMILY AND CONSUMER SCIENCE CONTENT STANDARDS:

TEEN DYNAMICS

5. Compare the stages of child development
6. Analyze ways to guide the behavior of children.
7. Analyze how nutrition, weight, exercise and rest influence teen health and wellness.

TEEN LIVING

9. Compare characteristics of healthy families.
26. Demonstrate the processes of making decisions and solving problems.
32. Demonstrate skills of a responsible babysitter.

Using REPRODUCTIVE HEALTH and THE BENEFITS OF MOTHER'S MILK

Reproductive Health and the Benefits of Mother's Milk is designed to enable students to understand that breastfeeding, or lactation, is the physiological conclusion to conception and birth.

Lesson 1 helps students recognize the connection between healthful behaviors and positive outcomes in pregnancy and lactation. Advantages to the mother, father, and infant are examined. Lesson 2 studies the anatomy of the breast. These lessons will help students realize that lactation is a psychological completion of the reproductive cycle. Lesson 3 relates to the babysitting experience and examines procedures used in breast or bottlefeeding. The conclusion from this set of lessons would be that mother's milk is designed to meet a baby's needs better than formula or cow's milk.

Resources for REPRODUCTIVE HEALTH and BENEFITS OF MOTHER'S MILK

Books:

An Easy Guide to Breastfeeding. US HHS, Office of Women's Health. (available for African American also) (800-994 9662, www.4woman.gov)

BREASTFEEDING: Your guide to a healthy, happy baby. Third Edition. Amy Spangler (770-913-9332, www.daddymommyandme.com)

So That's What They're For! Breastfeeding Basics. La Leche League, 2004 (847-519-9585; www.lalecheleague.org).

CD-ROM

Healthy You, Healthy Baby. March of Dimes, Atlanta, GA. 800-367-6630, www.marchofdimes.com

Pamphlets:

Breastfeeding Makes a Difference. La Leche League, 2004 (see above contact information).

The Importance of Breastfeeding. La Leche League, 2004

Working Together to Promote Breastfeeding. Medela, Inc. (888-644-4528; www.medela.com)

Before You Start:

This unit is designed to help students develop an appreciation for the reproductive cycle which includes lactation. Another integral part is to provide useful information to students regarding babysitting practices. It is generally around this age that students begin to show responsibility by watching and caring for other people's children.

Sometimes babysitters of this age are nervous about feeding infants. If the child who is babysitting has never experienced having a younger brother or sister, they may be very insecure regarding feeding - especially breastfeeding. Through this unit, one can understand that breastfeeding is natural and optimal (in most cases) for a baby.

Lesson 1 BREASTS: A NATURAL PART OF REPRODUCTION

Concept: There is a correlation between healthful behaviors and positive outcomes in pregnancy and lactation.

Vocabulary Words

lactation: process of producing milk, breastfeeding.

mammary Gland: glands responsible for producing milk in mammals.

aerola: darkened circular area surrounding nipple.

nipple: elevation in the center of the areola which contains milk ducts, sensory nerve endings, and sweat glands.

ducts: carry milk from mammary glands to the milk reservoirs.

Advance Preparation

- Collect and photocopy diagrams of the male and female reproductive organs including breasts.
- Obtain

ACTIVITIES

- Review diagrams of male and female reproductive organs. Using a breast model (available through Childbirth Graphics), name breast parts.
- Use *That's What They're For* as a reference to develop discussion topics, information sheets or presentation for students to complete the following:
 - (a) List at least three advantages to mother's milk (human breastmilk is made for human babies, it changes to meet growing infant needs, breastfed babies develop fewer allergies and get less constipation or diarrhea, antibodies protect infants from infection).
 - (b) List some advantages to mother (helps her uterus return to normal size, special bonding for mother and baby, helps mother lose weight, convenient and costs less than formula, helps mother relax and feel good about herself).
 - (c) List some advantages to father (assurance that infant is receiving the best nutrition, healthier baby, healthier partner, costs less than formula).

Evaluation

Have students list three advantages of mother's milk in writing. Lead a class discussion on the advantages of mother's milk.

Lesson 2 ANATOMY OF THE BREAST

Concept: Lactation is the physiologic completion of the reproductive cycle in humans.

Vocabulary Words

reproduction: the process by which animals and plants reproduce new individuals.

offspring: refers to the babies of humans and animals.

adult: a fully grown organism

parent: a mother or father

Advance Preparation:

- Order resource materials listed in this unit.
- Photocopy diagrams of breasts.
- Order a breast model (optional).
- Make arrangements to invite a nursing mom to visit class.

ACTIVITIES:

- Use the Anatomy of the Breast lesson from Lactation Education As Part of Human Growth and Development. Use various teaching methods to explain the function of breasts.
- Invite a nursing mom to visit the class. Have students prepare a variety of questions to ask the mom.
- Assign library work for students to complete a short research project studying whether infants are usually breastfed or bottlefed in countries around the world.

Lesson 3 YOU'RE IN CHARGE

Concept: Lactation is the optimal form of nutrition for human babies.

Advance Preparation:

Arrange to visit the library and learn how to use the Reader's Guide to Periodical Literature.

ACTIVITIES:

1. Have students sit in a circle and brainstorm various responsibilities a teenage babysitter might need to do: change diapers, prepare a meal, read to children, keep the children safe, etc.

Ask students if they have ever had to give a young infant a bottle. Was it formula, mother's milk, or cow's milk? (Cow's milk should not be given to infants under six months.) What did the mother's milk look like? How did the mother get her milk in the bottle? Did you ever watch a mother or father prepare formula? What procedures are done to bottlefeed an infant versus breastfeeding an infant?

2. Give the assignment for students (this activity may be completed by small groups of students and then share as a large group) to design an information sheet that parents could fill out prior to leaving their child(ren) with a baby sitter. It should contain questions regarding phone numbers, who to call in case of emergency, eating and sleeping habits, when and if a diaper change might be necessary, bedtime routines, special directions regarding food for baby, etc.

Evaluation

Have students go to the library and use the Reader's Guide to Periodical Literature to study advertisements that could impact whether a mother decides to breastfeed or not. Collect ads that would have positive impact and other that would have negative impact. Have each student write a summary to include the following:

Name of magazine

Date

Type of advertisement

Describe the impact, negative or positive and how it could affect a mother's decision

Lead a class discussion on ways to counter the negative impact.

Print the following page of information and assignments:

ASSIGNMENT SHEET

Steps of Breastfeeding:

- Mother should wash hands before feeding as a finger may need to be used to break the baby's grasp on the breast.
- Put baby to breast and feed.

Steps of Bottlefeeding:

- Mix powder with boiled water poured from can.
- Use prepackaged plastic inserts for bottles or Use sterilized bottles for young infant. Boil bottles, nipples for 10 minutes.
- Heat to correct temperature.
- Hold baby with head above his/her stomach.
- Refrigerate any mixed formula as germs will grow at room temperature.

In writing, describe:

- Which method is most convenient?
- Which method is least expensive?
- Which method is most nutritious?
- What conclusions might you draw regarding breastfeeding versus bottlefeeding?

Using the comparison of Human Milk, Cow's Milk and Infant Formula provided, calculate:

Nutrient	Human Milk	Whole Cows' Milk	Infant Formula
% of Calories from Protein	6	21	9
% of Calories from Fat	56	50	50
% of Calories as Carbohydrates	38	29	41
Sodium (mg/liter)	161	506	230

a. If there are ___ g. of protein in 1 cup of cow's milk, how many grams of protein are in the same amount of human milk? Infant formula?

b. If there are ___ g. of fat in 1 cup of cow's milk, how many grams of fat are in human milk? Infant formula?

c. If there are ___ g. of carbohydrates in 1 cup of cow's milk, how many grams of carbohydrates are there in human milk? Infant formula?

d. There is 161 mg/liter of sodium in human milk. What percentage does cow's milk have? Infant formula?

e. Normally lower fat foods are desirable for humans. Why would human milk be more desirable for infants?

f. Whole cow's milk is much higher in protein than formula or human milk. Why is that undesirable?

ANATOMY OF FEMALE BREAST

