

Alabama Department of Public Health
Mother's Milk Education Activity Package for Grades K-12
Level: 5
Adapted from New York Department of Health

NATURE TAKES ITS COURSE

LEARNING OBJECTIVE FOR LEVEL 5

Students will describe the benefits of mother's milk over formula feeding as it relates to nutrition, health, economics, ecology, and time management.

SCIENCE CONTENT STANDARD:

8. Identify major body systems and their functions, including the circulatory system, respiratory system, excretory system and reproductive system.

HEALTH CONTENT STANDARD:

3. Explain how messages from media and other sources influence health behaviors.

SOCIAL STUDIES CONTENT STANDARD:

13. Identify social, political, and economic changes that occurred during the Reconstruction

Using NATURE TAKES ITS COURSE

Four lessons related to breastfeeding are included in Level 5. These lessons include broader content areas such as ecology, nutrition, puberty, economics, time management, and the impact of the mass media. While studying the broader content areas, the teacher can use each lesson in its entirety or choose to use certain activities within the lessons.

Lesson 1 examines puberty including the study of the mammary glands. Lesson 2 may be used when the class is studying ecological issues as it involves the comparison of formula (and the cans it is packed in) to mother's milk. Time management is the focus of Lesson 3 and activities are provided for students to compare the amount of time and energy used in breastfeeding versus formula feeding. The media has a great impact on the choices we make and Lesson 4 examines how our beliefs are impacted by the advertising industry.

Resources for NATURE TAKES ITS COURSE

Books

The What's Happening To My Body Book for Girls. L. Madaras, New Market Press, New York, 1988.

The What's Happening To My Body Book for Boys. L. Madaras. New Market Press. New York, 1988.

Before You Start:

Each of the lessons included in this level contain learning activities that promote breastfeeding. It is recommended that each lesson be taught at various times throughout the year. One lesson does not need to be used in sequence with another. Rather, these lessons should be incorporated into various subject areas. The activities listed can supplement your lessons on ecology, nutrition, decision-making, time management, and puberty education. The lessons on puberty only incorporate information relative to mother's milk and are to supplement primary units on puberty.

Lesson 1 WHAT IS MY BODY DOING?

Concept: Human milk is produced by the mammary glands.

Vocabulary Words

reproductive System: system of the body that has the ability to produce offspring.

puberty: the period of growth from childhood to adulthood.

mammary Gland: glands located in the breasts, which secrete milk.

lactation: process of producing milk. (Other words will be introduced but the students should not be required to memorize all of them.)

Advance Preparation

- Photocopy pre- and post-test and vocabulary word list.
- Obtain and/ or photocopy any materials already used for puberty lessons.
- Gather audio-visual equipment needed for a program on puberty.

ACTIVITIES

- Ask students if they can ever remember a time when they felt embarrassed to ask a question or to answer one.
- What rules could a class follow that could help everyone feel comfortable?
- Develop a list of ground rules to be used during class and post on a wall where they can be seen. Rules might include listen to others, do not laugh at anyone's answer, no put-downs, do not talk while others are speaking, be able to pass (not answer a question) if it makes one uncomfortable, use scientific terminology rather than slang, be respectful, accept that others will think differently or have different values, etc. Stress that a safe comfortable atmosphere is needed, as sensitive material will be discussed.
- Pass out the puberty quiz and use it as a pre-test. Teacher should collect papers and grade or have students correct their own. Save pre-tests to compare to post-tests.
- Pass out the vocabulary word list for students to keep as a reference sheet. Students should not be required to memorize all these terms. Rather, they should become familiar with the terminology.

Additional Activities

- Pass out blank index cards to each student. Have them write questions anonymously regarding puberty. Every student should write something -- either a question or No Question. This makes everyone feel comfortable about asking questions because they will not feel like they are the only ones writing. Everyone will be busy writing something and the pressure is off those who really want to ask a question. Teacher answers questions. (Read question so that students can ask follow-up questions comfortably.)

Evaluation

Give post-test to determine if students learned new material. Check for questions that several students may still not understand and re-teach any problem areas. (Students could be embarrassed to admit they had incorrect answers in front of their peers. Do not have students switch papers to correct.)

Lesson 2 WASTE NOT, WANT NOT

Concept: Breastfeeding is better for the environment than formula feeding.

Vocabulary Words

environment: the world around us, our surroundings.

ecology: the study of the relationships between organisms and their environment.

recycling: to use again.

waste Management: the act of controlling or supervising trash removal.

Advance Preparation

- Obtain books, pamphlets or videos on protecting the earth
- Gather markers and newsprint for brainstorming activity.
- Ask a parent of a newborn or call a local hospital or pediatrician/family physician to determine an average amount of cans used per day to formula feed a baby.
- Contact and arrange for a guest speaker regarding waste removal and recycling.
- Make arrangements for a field trip to a recycling plant.

ACTIVITIES

- When studying about ecology and methods of protecting the environment through recycling and waste management, ask what are some things your family could do to reduce trash? Give reading assignments on protecting the earth.
- Have students break into groups of 4-5 and brainstorm ideas for reducing trash. One student should be a recorder to write answers down and another can be the reporter to share the group's answers with the class. NOTE: Teacher will include mother's milk vs. formula if students don't have the topic included.
- Using formula feeding an infant as an example, try to calculate how many bottles, cans, etc. are used each day, week, month, and year using formula instead of breastfeeding.
- In front of class, calculate together:
 - (a) How many cans/bottles are used per day for a two-month-old infant?
 - (b) How many cans/bottles are used per week?
 - (c) How many cans/bottles are used in a month?
 - (d) How many cans/bottles are used in a year?
 - (e) What is one way to reduce the amount of cans/bottles used to feed an infant?
Students will need to be guided with this question. We do not necessarily choose something a baby needs strictly on an environmental basis. However, in combination with the fact that mother's milk is better nutritionally and helps the infant remain healthy against colds and diarrhea as well as other medical problems, breastfeeding is a choice parents could make to reduce waste.

Additional Activities

- Using a resource on protecting the earth, have students calculate other items they use in a day, week, month, and year. Have them identify ways to reduce the amount of waste they produce.
- Invite a guest speaker to come in from an environmental agency. Prepare questions ahead of time for the speaker. Have the speaker address concerns for the future regarding waste removal and recycling.
- If possible, visit a recycling plant. Ask to have a tour guide to explain what is being done. If field trips are not possible, invite a person from the recycling plant to visit your class.

Evaluation

Students write a report on some aspect of recycling/waste management. Included in the report should be ways that they can contribute to help deal with waste management and/or recycling.

Lesson 3 NOT ENOUGH HOURS IN THE DAY

Concept: Decisions are based on values.

Vocabulary Words

values: ideas or beliefs we hold dear.

conflict: sharp disagreement in ideas or interests.

Advance Preparation

- Photocopy “Ten Things I Like to Do”.
- Prepare a Worksheet with blocks of time measured in half hour intervals; photocopy.

ACTIVITIES

- Complete worksheet “Ten Things I Like To Do.” Be sure students complete the open-ended sentences on the bottom of the worksheet. What are some things the class valued?
- Keep a record of how they spend their time by giving them worksheet “How I Spend My Time” to record what they do using half-hour intervals. Examples: 7:00 - get up and shower; 7:30 - eat breakfast; 8:00 - ride bus; 8:30 - begin school

Discussion Questions

- (1) Was there any time that you could have used to get something else done?
 - (2) Do you think you use your time wisely?
 - (3) What did you spend the most time on other than school?
 - (4) What is one change you could make to improve on how you spend time?
 - (5) Why do you think people care about spending time wisely?
- Explain to students that values affect our decisions about what we do and what we buy, what we say, etc. Once values are clarified, it can lead to more satisfying choices and decisions. Values can change over time. Conflicting values can also make decisions difficult to choose. A person may be unsure about what is valued most. People often say they value certain things, but it is their actions that really show us what they value. A person might say that good health is valued yet never exercises. Does this person really value good health? Is something else valued more than exercise, i.e. sleeping, watching television, etc.
 - Explain that the class will be taking a look at what people value. Choose seven things that fifth grade children might value, teenagers might value, and that an adult about to have a child might value. List these items on the board, separating them by age group. Some examples are listed below:

Fifth Grader

sports
television
food
friends
good grades
family
reading

Teen-ager

friends
television
sports
talking on phone
family
getting a license
reading

Adult about to have a baby

good health
safe home
money to adequately provide for family
family
friends
breastfeeding

- Compare what each group values. What are some things that are the same? different? Do you think values change over time? Using breastfeeding a baby as an example, why might a person make a choice to breastfeed a baby? What might they value? Give examples of why a mother chooses breastfeeding:

1. **good health for baby:** mother's milk is the most nutritious food for infants and it can help protect infants from getting illnesses like the flu, diarrhea, and may prevent some allergies.
2. **convenience:** mother's milk is always the right temperature and you do not need to sterilize bottles. You also do not have to carry bottles whenever you go somewhere. To better understand the value of convenience, estimate how much time it takes each day to wash and sterilize bottles. Multiply for a week, month, and year.
3. **good health for mom:** breastfeeding helps the mom's uterus and body weight return to its normal size.

Evaluation

Have students write a paragraph describing something that he/she is able to have control over your choice. Students are to include an explanation of what it is that he/she has chosen to do and identify what is valued.

Lesson 4 ADVERTISING AFFECTS ME

Concept: The media has an important impact on what we value.

Advance Preparation

- Keep a running list of slogans/jingles you hear often on television.
- Gather popular magazines with advertisements for children who may not have any at home.
- Gather magazines like "Parent" where babies would be featured.
- Gather art supplies to make collages.

ACTIVITIES

- Ask the students if they know any jingles or slogans from advertisements. Count how many they can remember; i.e. Coke-- it's the real thing, Pepsi -- Uh Huh... etc.
- Have students cut out five advertisements from magazines or watch television for 30 minutes, paying attention to the commercials. What messages are given in the commercials/advertisements? (You need this product to be beautiful or handsome, to be successful, to be popular, etc.)
- Explain that advertising is a multi-million dollar industry. Companies are interested in ways to advertise so a consumer will buy their product. They realize people want to look young, attractive, have wealth, or status. It is important for us to realize what advertisers are doing so we can make satisfying, informed decisions.
- Using magazines that show babies, calculate how many times babies are shown breastfeeding versus formula feeding. What message do you think is being sent? Why do you think advertisers want people to believe their message?
- Identify "pressures" that advertisers place on us like you've got to be thin, cool, young, sexy, etc. Discuss whether the products being advertised can actually make us thin, cool, young, sexy, etc. What can we do to be more aware of this pressure and resist it? (Just being aware of this fact helps. Ask yourself can it really do what the ad says?)

Evaluation Have students work together in small groups to make a collage showing ads that pressure the consumer to buy a product that really will not do what it promises.

PUBERTY QUIZ

Directions: Read the statements related to changes that occur during puberty listed below. Write in T for a true statement and F for a false statement.

- 1. Menstruation begins for both males and females.
- 2. Breasts grow larger for girls only.
- 3. Erections may occur more frequently.
- 4. Body hair increases for males only.
- 5. The reproductive organs begin to stop functioning.
- 6. Egg cells are capable of being fertilized after menstruation occurs.
- 7. Changes in moods are less common.
- 8. Males and females find themselves more interested in the opposite sex.
- 9. Families may experience more conflict due to a teen wanting more freedom.
- 10. Females are capable of producing breastmilk once puberty begins.
- 11. Males may begin to have ejaculations during puberty.

Vocabulary Words for Puberty

1. **AREOLA:** dark area around the nipple of the breast.
2. **ANUS:** the opening through which bowel movements (feces) leave our bodies.
3. **BREAST:** either of two milk-secreting glands at the upper front part of a woman's body.
4. **CERVIX:** neck-like, narrow end of uterus which opens into the vagina; it stretches to allow a baby to be born.
5. **CIRCUMCISION:** an elective surgical operation that removes the foreskin from the penis; if done, it usually occurs when a boy is only a few days old.
6. **CLITORIS:** sensitive female genital organ located in front of urethra and vagina.
7. **EJACULATION:** release of semen from the penis during intercourse or sleep.
8. **ENDOCRINE SYSTEM:** a system of the body that works with the nervous system to regulate certain activities of the body.
9. **ERECTION:** the spongy tissue of the penis fills with blood causing the penis to become larger and firmer. Same happens to clitoris in females.
10. **FALLOPIAN TUBES:** Two tubes through which eggs travel on their way to the uterus after being released from the ovaries.
11. **HORMONE:** chemicals (produced by glands) that control the growth and activity of the body.
12. **LABIA:** folds of skin that cover the vaginal/urethral openings.
13. **MENSTRUATION (PERIOD):** the process of shedding the lining of the uterus.
14. **NOCTURNAL EMISSION (WET DREAM):** the release of semen from the penis during sleep.
15. **OVARIES:** two small organs on either side of the uterus where the eggs (ova) are produced and stored and where female hormones are produced.
16. **OVULATION:** release of a mature egg from the ovary; usually occurs monthly midway between menstrual period.
17. **PENIS:** male sex organ; also the male urinary organ.
18. **PITUITARY GLAND:** a gland in the brain that triggers the beginning of puberty.
19. **PUBERTY:** the period of transition from childhood to adulthood.
20. **REPRODUCTIVE SYSTEM:** the system of the body that has the ability to produce offspring.
21. **SCROTUM:** the sack of skin that holds the testicles, just underneath the penis.
22. **SEMEN:** fluid containing sperm that is ejaculated from the penis.
23. **SPERM:** male reproductive cells produced by the testes.
24. **TESTES/TESTICLES:** the two oval shaped organs contained in the scrotum which produce sperm and male hormones.
25. **URETHRA:** the duct through which urine is discharged and in males, through which semen is discharged.
26. **UTERUS:** pear-shaped female reproductive organ in which baby grows and develops until birth.
27. **VAGINA:** passage that leads from uterus to external genital organs (vulva).
28. **VAS DEFERENS:** tube that allows sperm to pass from the testicle.
29. **VULVA:** female external genital organs, including labia and clitoris.

PUBERTY QUIZ

Directions: Read the statements related to changes that occur during puberty listed below. Write in T for a true statement and F for a false statement.

- 1. Menstruation begins for both males and females.
- 2. Breasts grow larger for girls only.
- 3. Erections may occur more frequently.
- 4. Body hair increases for males only.
- 5. The reproductive organs begin to stop functioning.
- 6. Egg cells are capable of being fertilized after menstruation occurs.
- 7. Changes in moods are less common.
- 8. Males and females find themselves more interested in the opposite sex.
- 9. Families may experience more conflict due to a teen wanting more freedom.
- 10. Females are capable of producing breastmilk once puberty begins.
- 11. Males may begin to have ejaculations during puberty.

Ten Things I Like to Do

Name: _____

Directions: Students write a list of ten things they like to do. After this has been completed, students code their answers as follows:

Write D if you do this daily in the first column. Write W if you do this weekly in the second column. Write M if you do this monthly in the third column. Write Y if you do this yearly in the fourth column. Write a \$ if it involves spending money. Write an A if you like to do it alone. Write T if you like to do it together with someone. Write an H if it is something that is a healthy thing to do.

Things	D	W	M	Y	\$	A	T	H

1. What did you find out about yourself? I learned that _____

2. I was surprised (or pleased) that _____

3. Something I value or think is important is _____

How I spend My Time

Name: _____

Time	What I Did	Time	What I Did
6:00-6:30 am		2:00-2:30 pm	
6:30-7:00		2:30-3:00	
7:00-7:30		3:00-3:30	
7:30-8:00		3:30-4:00	
8:00-8:30		4:00-4:30	
8:30-9:00		4:30-5:00	
9:00-9:30		5:00-5:30	
9:30-10:00		5:30-6:00	
10:00-10:30		6:00-6:30	
10:30-11:00		6:30-7:00	
11:00-11:30		7:00-7:30	
11:30-12:00 pm		7:30-8:00	
12:00-12:30		8:00-8:30	
12:30-1:00		8:30-9:00	
1:00-1:30		9:00-9:30	
1:30-2:00		9:30-10:00	

Discussion Questions:

1. Was there any time that you could have used to get something else done?
2. Do you think you use your time wisely?
3. What did you spend the most time on other than school?
4. What is one change you can make to improve on how you spend time?
5. Why do you think people care about spending time wisely?