



A Family Life Science Unit for Early Adolescents: Ages Eleven Through Thirteen

Curriculum Unit 80.05.09

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The Period

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

Charles Dickens *A Tale of Two Cities* Adolescence then, adolescence—today while much has remained the same, the uncertainty, the excitement, the fears, the joys have been intensified by the lengthening of this developmental stage. As evidenced by the following dialogue, the preadolescent of late has become increasingly similar in life style to that of the older boy and girl. Everything that is typical for middle, or even late, adolescence seems to be happening at a younger and younger age.

Jeff: I'm going to get my girl friend pregnant so that we can have a baby. I want me a boy so that I can teach him how to play basketball and ride a bike when he gets bigger.

Lisa: Jeff, why do you really want a baby?

Jeff: Because you and Debra and Gail have a baby and now James is getting ready to have one and me and Darryl is the only ones that don't have any kids.

Lisa: Jeff, there is a lot to do to have a baby. Do you know what to do?

Jeff: No

Lisa: Jeff, do you know what sex is?

Jeff: Yes. It's doing p-u-s-s-y.

Lisa: (Then he started laugh.)

This dialogue between a seventeen year old student-mother and her eleven year old brother clearly demonstrates the necessity for providing family life education for eleven to thirteen year olds. The lack of information, the misinformation, the lack of awareness about and the inability to comprehend responsible sexuality and parenthood, the impact of the media and the immediate environment, and the possibility that adults (parents and teachers) may not see through the facade and pseudo-sophistication often evidenced by the language and the behavior of our children are all contributing factors to the dilemma of approaching sex education in early adolescence.

A fourteen year old student-mother to teacher:

I'm late again and my housemaster won't give me a pass to homeroom. I need a note for yesterday for when I was the emergency room with Tyrese. They said nothing was wrong with him, but he was crying all night. Last night me and Darryl had a fight and I don't want his mother to take care of the baby anymore. My aunt wasn't home this morning when I left and she won't sit unless I pay her. My cousin has the baby today and now I can't get my lunch card 'cause I missed homeroom again.

Can successful family life education either prevent the early and inappropriate pregnancy or can it enhance the young person's adolescence, her sexuality, and/or her role as a parent? It is my belief that a properly designed and implemented program can contribute to the adolescent's optimal growth and development.

The purpose of this unit is to provide a cohesive framework for teachers of science to allow optimal presentation and processing of family life information to early adolescents, ages 11 through 13. The successful teaching of sex education requires that the teacher: understand the developmental period of Early Adolescence; know thoroughly the material to be presented (and has processed personal feelings, values, mores, etc.); is able to create and maintain an atmosphere of trust, confidence, and support; is prepared to provide children with a knowledge base to insure healthy decision making and is sensitive to the family life issues. A review of the developmental stage, Early Adolescence, requires a close examination of the following: physiological maturation, psychological functioning, and emotional tasks.

Physiological maturation or the onset of puberty

In this stage of growth we find that girls arrive first, on the average of about twelve years old, while boys reach the onset of puberty at about thirteen or fourteen years old on the average. The initial outward or external signs of puberty are breast development in girls and an increase in penis and testis size in boys. These changes are caused by the production of sex hormones in larger quantities, estrogen in females and testosterone in males. These hormones are produced in the gonads, male testes and female ovaries. Perhaps to both sexes the most significant events are the menarche (first menstruation) in girls and nocturnal emissions (wet dreams) in boys. The initial menstrual period is not usually accompanied by ovulation; ovulation occurs about a year or two later. It is not rare to witness the menarche in girls as young as nine years old; the average age for menarche is twelve years, four months. Similarly, boys' first nocturnal emissions only contain seminal fluid and not mature sperm.

Psychological maturation

In young people of this age we witness the beginnings of their struggles with entering the first stages of adolescence ("Don't call me kid"). Psychoanalytically, the stage is referred to as latency; the Oedipal complex is gradually resolved and they begin to identify with the parent of the same sex, their primary role model. One thing that must be kept in mind, however, is that not all children are from two parent families. The projection for 1981 is that 52% of all children in the United States will come from single parent homes. We also know

that during this period of development, libidinal growth is stable and most energies are spent on the tasks outlined in Erikson's model, the youngster is trying to become a good learner, worker and group member. Erikson labels this stage as "industry versus inferiority". Children in this phase of development show us their orientation to cognitive tasks and peer activities, not only in the intensity of their work, but also quite dramatically in their play as their pattern gradually shifts from the personal fantasy to organized games.

Emotional maturation

The child during this stage deals with three sex specific tasks: learning to deal with their changing bodies ("Am I normal?"), coping with the opposite sex differently than before; and the establishment of a solid gender identification.

Other tasks have to do with making value decisions, morality, failure and disappointment, parental pressure to conform and achieve, developing a wholesome self image, becoming an individual (first steps towards independence), group membership and dealing with one's own family.

You may find it helpful at this time to examine the chart depicting the stages in cognitive and personality development; the work of Piaget, Kohlberg, Havinghurst, Erikson and Freud are summarized.

It is apparent that with all of these events or tasks beginning to surface during a single growth stage, there may be internal conflict. Keeping in mind that an optimal environment can facilitate positive resolution of these dilemmas, we find that many of our children are in environments which compound the struggle. Adolescence does not have to be a period of turmoil and in fact the majority of youngsters emerge from this period healthily. So, you are probably asking, why is it necessary to go through a unit such as this, what goals and objectives can be set that the adolescent won't attain on his/her own?

In justifying the institution of this unit, it is necessary to first define family life and sex education in the broadest sense. I believe that it should be a dialogue with youngsters about who they are and how they relate to others. Our objectives will be: to provide adolescents with knowledge of their own physical, mental and emotional maturational processes as they relate to their becoming a sexual being; to reduce fears and anxieties relative to one's own development and adjustment; to develop objective and understanding attitudes toward sex in its many manifestations in the individual and in others; to assist youngsters in obtaining insights about their relationships to individuals of both sexes, and to help them understand their obligations and responsibilities to others; to give them an appreciation of the positive satisfaction that healthy human relationships can bring in both individuals and family living; to create an understanding of the need for moral values that are needed to provide rational bases for making decisions.

In a high school class that a colleague of mine taught, the students themselves set the objectives, and as you read through them you will notice that they are not so different as those set down by a more experienced adult. They are:

1. to provide whatever factual information the individual desires on all aspects of sex
2. to increase self-understanding so that individuals may become self-confident members of their own sex
3. to increase understanding of the opposite sex in order to promote positive relationships between the sexes
4. to understand better other patterns of sex behavior among peers, among the adult generation

- and other cultures, so as to prepare individuals to live with others who believe differently
5. to open up communication and promote understanding between adults and youth
 6. to develop an appreciation of sex as an important part of life and see it in the perspective of ones whole life
 7. to allow and enable each individual to develop a personal standard based on understanding of and concern for others
 8. to see sex education as a continuous process to prepare individuals mentally and emotionally for their biological development through maturity

Stages in Cognitive and Personality Development—Early Adolescence Through Adolescence

(figure available in print form)

It would be a mistake for us to feel that this unit can just be taken and inserted into a given program. What I intend to do is to provide guidelines by which you may tailor such a program for your population. We have found that, even in the same city, children from different schools needed different information. However, you must operate on the premise that there are more similarities than dissimilarities from neighborhood to neighborhood.

It cannot be over-emphasized that a good family life and sex education program supports the concept of sexuality as a function of the total personality. Therefore, effective programs are developed around the biological, sociological and psychological variables and how they effect personality development and interpersonal relations. A program, therefore, needs to be based on three interrelated components:

Cognitive : in this component we deal with factual information, research findings, and other authoritative materials which will provide a sound and comprehensive base.

Affective : here we have students go through activities that will lead to the development of insights and understanding of their own sexuality and the implications of this knowledge for personal relationships

Skills : students will learn to make decisions, determine values and define behaviors dealing with issues of sexuality.

The program should begin by presenting a core of sexual facts, i.e. physiological changes that occur during adolescence and bridge the gap between childhood and adulthood. This provides a basis for discussion of anatomy and physiology. Other facts about sexuality and life styles will bring about discussions of attitudes, values and feelings related to the topic. There is no doubt that increased understanding of self, others and relationships can occur with sound information, discussion and appraisal. Sexuality is then viewed in its totality and in relation to each individual's needs and potential life style.

Suggestions for scheduling

I believe that a family life and sex education program should be carried out over an entire marking period using smaller units. It is beneficial to teach it every day to ensure continuity and in-depth understanding and interest. The units can be used separately or as a course. For several reasons it is best to initiate this course mid-year. It is about the time in the school year that one has developed a rapport with students and has a handle on the individual personalities.

As you begin this unit you may also wish to incorporate some of the following suggestions: a question box for students to submit anonymous questions; a resource area with books, cassettes, film strips and materials to be used within the room during study time or to be loaned for use at home (a list of books and materials for eleven to thirteen year olds will be included in this unit); a family life-sex education book and resource fair (ideally planned in conjunction with local pediatricians and appropriate community persons, and parents).

Considerations for developing personal teaching style

Often in helping others construct family life-sex education courses or units, we become concerned with the self-confidence of the instructor to teach such a course successfully. If you feel a bit anxious, particularly around the concern of self disclosure, "What will I do if a student begins to tell personal experience or about another family member...what are my values and how do I remain nonjudgemental", the following dos and don'ts may help:

Do

- develop a level of comfort that is not too formal nor too restrictive
- develop an honest and trusting relationship with your students
- accept the values and beliefs of your students' cultural backgrounds
- make sure that the correct terms are used in the class as soon as possible

Don't

- let students use their vernacular for shock purposes
- delve too deeply into your students' lives; listen, but don't probe
- do any in depth counseling; refer suspected problems to the appropriate person
- tell about personal experiences

Reference Sources of Information

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Course Outline

I. Social Growth and Development

A. Adolescence

1. Sex Roles—Male

- a. How it develops
- b. How it is learned
- c. How they are changing

2. Sex Roles—Female

- a. How it develops
- b. How it is learned
- c. How they are changing

B. Family

1. Define family (extended, two parent, one parent, foster, etc.)
2. Discuss role of family
3. Discuss roles of family members

C. Peers

1. Define friendships
 - a. Discussion or writing assignments

What a friend means to me . . .

- b. Why I like my friend
- 2. Same sex friends
- 3. Opposite sex friends

II. Human Growth and Development

A. Puberty—explain briefly endocrine system

- 1. Boy to Man
 - a. average age of onset
 - b. genital changes
 - c. appearance of facial and body hair
 - d. voice change (larynx enlargement)
 - e. acne
 - f. sweat glands
 - g. nocturnal emissions
- 2. Girl to Woman
 - a. breast development
 - b. hip development
 - c. sweat glands
 - d. menstruation
 - e. appearance of body hair

B. Reproductive System

1. Male

- a. testicles (scrotom)
- b. sperm
- c. vas deferens
- d. urethra
- e. seminal vesicle
- f. prostate gland
- g. Cowper' s gland
- h. penis

2. Female

- a. ovaries
- b. fallopian tubes
- c. uterus
- d. cervix
- e. vagina
- f. menstrual cycle

C. Conception

1. sexual intercourse
2. sperm
3. egg

D. Pregnancy and birth

1. ammiotic sac and fluid
2. fetal development
3. genetics
4. birth process

III. Sexual health Issues

A. Hygiene

B. Sexually transmitted diseases

C. Health Care

1. pediatrician and pediatric nurse practitioner

2. obstetrician/gynecologist

3. health care settings—clinic, private doctor, etc. 4. other health professionals in the health care setting

Sample Lessons:

I have chosen to include one lesson on social development, one on physiological changes, and one on pregnancy and childbirth.

I. *Sex Roles* (Gender Identity)

The rapid physical and emotional changes during early adolescence cause confusion about sexual identity. The current societal reappraisal of sex roles and sexual stereotypes provides neither a solid base for building a sexual identity, nor a means of resolving the confusion.

Lesson Objective:

To give students opportunities to understand how sex roles develop, broadly defined as how boys become masculine and girls become feminine and what is happening to “traditional” roles

Suggested Activities:

A. *Debate —“ A Woman’s Place Is In The Home ”*

Introduction: The pros and cons regarding the maintenance of traditional sex roles woman as mother, nurse, teacher secretary; man as doctor, lawyer, truck driver will be debated.

Procedure: A student moderator and teams of three students are formed. Each of the three students on the two teams will present a two to three minute statement on their position. (Time should be allotted before the debate for an additional six students to coach and brainstorm with each of the presenters.) Each presenter will have two minutes to refute. Class will vote to determine results.

Questions raised may include: who should be in charge of taking care of the baby? who should cook the meals? who should pay the bills? who should be drafted? can a woman be president?

B. Collage — *Media Influences*

Introduction: The effect of the advertising media on today's youth as it pertains to stereotyping, life styles and role models will be considered.

Procedure: Find five magazine and newspaper advertisements which show traditional sex roles and five which show non-traditional sex roles. Girls will do male, boys will do female. Each student will make a collage with his/her advertisements. Writing assignment to accompany collage: Why did the advertiser choose the traditional roles to sell the product; why the non-traditional?

C. Filmstrip — "*Jobs and Gender*"

Introduction: Sexual barriers and stereotypes have influenced men's and women's vocational choices.

Procedure: Introduce possible new vocabulary feminine, masculine, stereotype, traditional, non-traditional, feminist, chauvinist, liberated, macho.

The film is available from Guidance Associates. The film depicts changing concepts of "masculine" and "feminine" work roles through interviews with a male kindergarten teacher, a male nurse, a female carpenter, and a female newspaper reporter.

Questions for discussion might include: ERA what is it? Is it necessary? How does it effect government influence on jobs and hiring? Which states have not passed it, and why? Take a poll should it be passed?

D. Guest Speakers — *Comparative Cultures*

Introduction: Different cultures and ethnic groups have different expectations of men and women in "traditional" roles.

Procedure: Invite speakers from diversified life styles as well as different cultural backgrounds to talk to the students. The students should spend one class period preparing appropriate questions to ask the speakers.

II. *Puberty*

When discussing physiological changes which may be occurring for your students while you are teaching, it may be advisable to divide into same sex groups. In a class of thirty sixth graders, fifteen may be menstruating, the rest may not. The youngsters may be vulnerable to having these matters discussed openly, even within the same sex group. However, all the information contained in the lessons should be presented to all students.

Suggested Sequence of Activities :

A. *Menstruation* —to identify the sequence of events in the female body preceding menarche and during the menstrual cycle

Activity 1. Discussion of myths and facts

- a. Introduce and explain the word, myth.
- b. Cite an example of a myth about menstruation
- c. Distribute mimeo of myths and facts about menstruation with instructions to label each appropriately:
 1. Girls shouldn't bathe during menstruation.
 2. Girls shouldn't wash their hair during menstruation.
 3. Conception cannot take place during menstruation.
 4. All girls begin their period at the same time.
 5. Girls may play sports during their period.
 6. Menstrual flow lasts three days.
 7. Only married women can use tampons.
 8. Girls can't swim during their menstrual period.
 9. Boys can tell when girls are having their period.
 10. The menstrual cycle is always 28 days.

Students answer myth or fact. Discussion follows on each statement.

Activity 2. Film : " Naturally A Girl " Booklets : " Menstruation "

The film is available from the local Planned Parenthood Center. The booklets are available from the Kimberly Clark Corporation, Life Cycle Center, Neeah, Wisconsin.

a. Introduce new vocabulary:

1. men o pause
the time that a woman's ovaries stop producing eggs, and she stops menstruating, usually between the ages of 45 and 50
2. men strual cycle

a process that takes about a month and includes the menstrual flow, growth of a new egg, ovulation, and, if the egg is not fertilized, breakdown of the lining of the uterus, returning to the menstrual flow again

3. menstrual flow

the flow that includes pieces of the lining of the uterus and blood (period)

4. menstruation

the process in which the thickened lining of the uterus breaks down and passes out of the woman's body

5. ova

female sex cells

6. ovaries

the two organs in the female where the eggs are formed

7. ovulation

the release of a mature egg from an ovary

8. uterus

the female organ in which a fertilized egg can develop into a baby

9. urethra

the tube in both males and females that carries urine out of the body, and also carries semen during a male's ejaculation

10. vagina

the passageway from the uterus through which the menstrual flow leaves the woman's body, through which sperm can enter the uterus, and also through which the baby leaves the uterus during birth

- b. View and discuss "Naturally a Girl".
- c. Read and discuss "Menstruation" booklets.
- d. Complete Matching Terms Worksheet:

Fill in the blank with the correct term:.

- a. menstruation f. menopause
- b. ova g. ovulation
- c. ovaries h. menstrual cycle
- d. menstrual flow i. uterus
- e. urethra j. vagina

- ___ The flow that includes pieces of the lining of the uterus.
- ___ The time that a woman's ovaries stop producing eggs and she stops menstruating.
- ___ The tube in both males and females that carries urine out of the body
- ___ The process that takes about a month and includes the menstrual flow, growth of a new egg, ovulation and, if the egg is not fertilized, breakdown of the lining of the uterus, returning to the menstrual flow again Female sex cells
- ___ The female organ in which a fertilized egg can develop into a baby.
- ___ The two organs in the female where the eggs are formed.
- ___ The passage way from the uterus through which the menstrual flow leaves the woman's body.
- ___ The process in which the thickened lining of the uterus breaks down and passes out of the woman's body.
- ___ The release of a mature egg from an ovary.

B. Physical Changes During Puberty

Activity 1. Film : " Then One Year "

- a. Introduce Vocabulary Male and Female

ad o les cence

the psychological process of growing out of the dependency of childhood and into the independence of adulthood puberty

the series of physical changes that turn a boy into a man or a girl into a woman

1. clitoris—the female organ that, when stimulated, may become erect and may bring about an orgasm
2. ejaculation—the release of semen from the erect penis
3. erection the process in which the penis becomes enlarged, firm and upright when its spaces fill with blood
4. hormones—chemicals that are produced in one part of the body, travel through the bloodstream, and control changes in another part of the body
5. masturbation—the rubbing or handling of the sensitive skin of one’s sexual parts to produce pleasurable feelings
6. menstruation—the process in which the thickened lining of the uterus breaks down and passes out of the woman’s body

MALE SECONDARY SEX CHARACTERISTICS

(figure available in print form)

FEMALE SECONDARY SEX CHARACTERISTICS

(figure available in print form)

MALE REPRODUCTIVE SYSTEM

(figure available in print form)

MALE REPRODUCTIVE SYSTEM

(figure available in print form)

7. nocturnal emission—the release of semen during sleep, also called a “wet dream”
8. orgasm—the series of physical and emotional spasms that climaxes intercourse
9. ova—female sex cells
10. ovaries—the two organs in the female where the eggs are formed
11. ovulation—the release of a mature egg from an ovary
12. penis—the male organ that becomes erect when its tissues fill with blood and then may ejaculate semen
13. prostate—gland—a gland that produces some of the liquid that combines with sperm cells to become semen
14. semen—the mixture of sperm cells and liquid that is ejaculated from the penis
15. sexual intercourse—the physical act in which the man’s penis enters the woman’s vagina, as well as an emotional act in which the partners share their sexual feelings with each other.
16. sperm cells—male sex cells
17. sperm ducts—the two tubes through which sperm cells travel from the testicles to the urethra
18. testicles—the two organs in the male, also called testes, that produce sperm cells
19. urethra—the tube in both males and females that carries semen during a male’s ejaculation
20. uterus—the female organ in which a fertilized egg can develop into a baby
21. vagina—the passageway from the uterus through which the menstrual flow leaves the woman’s body, through which sperm can enter the uterus, and also through which the baby leaves the uterus during birth

b. Have students complete labeling of diagrams

i. male and female secondary sex characteristics

ii. male and female reproductive systems

c. View film, "Then One Year", available from local Planned Parenthood Center.

d. Following film and discussion, students should complete Matching Quiz:

Write the correct term next to the correct definition.

ejaculation ovulation menstruation
hormones semen sperm cell
egg sperm duct uterus
urethra testicles vagina
penis ovaries Fallopian tube

1. where sperm are produced
2. the release of an egg from an ovary
3. tube that carries sperm from testicles
4. mixture of sperm and liquid that is ejaculated
5. where eggs are formed
6. chemicals in the bloodstream that influence sexual development
7. flow of blood and tissue from the uterus
8. the release of semen from the penis
9. passage through which menstrual flow leaves the body
10. tube through which the egg passes from the ovary
11. female sex cell
12. male sex cell
13. where the fertilized egg becomes a baby
14. organ that becomes erect when its tissues fill with blood
15. tube through which semen or urine passes out of the male body

Activity 2. To identify the sequence of events in the male body from the production of sperm to

ejaculation

- a. Review diagram of male anatomy
- b. List in chronological order the sequential steps that the sperm passes through during ejaculation.
- c. Discussion—emotional aspects

- why do males mature later than females
- dealing with voice change
- dealing with nocturnal emissions
- body odor-development of sebaceous glands
- concern about genital size

Activity 3. Film: “ Am I Normal ?”

The film, “Am I Normal?”, is available from the Planned Parenthood center. The following questions could be used for discussion:

- a. Did you think that the characters in the film were realistic?
- b. Have you ever known a person who has acted like they had all the answers? How did you deal with that person?
- c. Have you ever tried to get an answer to a question, and felt that people were avoiding the issue?
- d. One male myth in the film had to do with penis size. Are you aware of any other male myths?
- e. List some of the male myths and fears presented in the film.
- f. Jimmy decides that he is not ready for a date. Why not?
What do you think of his decision?
- g. Where do most boys (or girls) get their information about sex (peers, siblings, books, television, teachers)?
- h. Should libraries have information about sex where young people can look up information? Does your library?
- i. Do you have any questions about the physiological developments nocturnal emissions? ejaculation? sexual response?
- j. Who else do you think should see this film? Why?

III. *Pregnancy and Birth*

Lesson Objective:

To offer students factual information and the opportunity to discuss their personal concerns

A. *Genetics*

Activity 1. Study genetic charts showing dominant and recessive traits eye color, height, ear lobes, tongue, left/right handedness

Activity 2. Create personal genetic charts showing grandparents and parents' inherited characteristics

B. *Pethl Development*

Activity 1. Students create a chart showing development—actual size at 8, 12, 20 and 36 weeks

Activity 2. Research writing assignment on the effects of smoking, drinking, drugs, nutrition on fetal growth

Activity 3. Plan a proper diet, exercise and pre-natal care plan for an expectant mother

C. *Birth Process*

Activity 1. Have students prepare a self birth history.

note: be especially sensitive to adopted child, child with a deceased parent, etc.

Students should ask parents about the length of labor, birth weight, complications, birth method, hospital procedures.

Activity 2. Introduce Conception, Pregnancy and Birth

Vocabulary

Have students complete scrambled word game.

Activity 3. Film: “ A Baby is Born ”—Planned Parenthood

Discuss birth methods with students. If possible, invite a nurse-midwife or an obstetrician to view and discuss film with students.

Conception, Pregnancy and Birth Vocabulary

1. after birth
the placenta and the fetal sac
2. an es the si a
being unconscious or partly or completely insensitive to pain because of special medical treatment for that purpose
3. an es thet ic
a drug that can make a person temporarily unconscious or insensitive to pain in that part of the body
4. birth ca nal
the passageway through which the baby moves from the uterus to the outside of the mother’s body (see vagina)
5. breech birth
a less common birth position in which the baby’s feet or buttocks come out first
6. Caesarean section
a surgical method for delivering a baby in which the doctor cuts through the mother’s abdomen into the uterus and removes the baby
7. cer vix
the narrow lower end of the uterus which opens into the vagina
8. con cep tion
the fertilization of the egg by a sperm cell
9. e jac u la tion
the release of semen from the erect penis
10. em bry o
a developing human up to the third month of pregnancy
11. Fal lo pi an tube
a tube through which a mature egg travels, leading from one ovary to the uterus
12. fer ti li za tion
the joining together of a sperm cell and an egg
13. fe tal de vel op ment
the changes and growth of a human individual from conception until birth
14. fe tus
a developing human from the third month of pregnancy until birth
15. i den ti cal twins
twins formed when one egg fertilized by one sperm cell splits in half and develops into two babies with the same heredity
16. in her it ed
received genetically from the parents

17. la bor
a series of contractions of the uterus that push the baby out of the mother's body
18. nat u ral child birth
childbirth without anesthesia or drugs
19. non-i den ti cal twins
twins formed by two eggs ovulated at the same time, fertilized by different sperm cells, and developing into two babies with different heredities
20. o va
female sex cells (eggs)
21. o var ies
the two organs in the female where the eggs are formed
22. o vu la tion
the release of a mature egg from an ovary
23. pla cen ta
an organ through which the embryo or fetus receives nourishment and oxygen and gets rid of wastes
24. preg nan cy
carrying a developing baby in the uterus
25. um bil i cal cord
the cord that connects and transports material between the embryo or fetus and the placenta
26. va gi na
the passageway from the uterus through which the menstrual flow leaves the woman's body, through which sperm can enter the uterus and also through which the baby leaves the uterus during birth
27. u ter us
the fe male orgsn in which a fertilized egg can develop into a baby (womb)
28. sperm cells
male sex cells
29. tes ti cles
the two organs in the male, also called testes, that produce sperm cells

Scrambled Words : Unscramble the words and use each word in a sentence which shows the meaning of the word. You may use your vocabulary worksheets.

CONCEPTION	PREGNANCY	BIRTH
a. prems sclcl	a. lcailibum droc	a. xivcre
b. vao	b. sturue	b. atcnepal
c. slexua retinserouc	c. tesuf	c. aanessthei
d. pneis	d. yobrem	d. blora
e. ginvaa	e. tefal tnempoleved	e. thirb lanac
f. inotcpceon		f. thirbfrtea
g. itilzanotiref		g. nearaseac
h. srieaov		notisec
i. sletictes		h. dlichthirb

trunaal

D. Parenting and Responsibility

Activity 1. Egg Experiment

Students pretend that they are pregnant for one week. As expectant parents, students keep a record of what they eat. (Encourage students to examine what they eat; alcoholic beverages should be reported.)

Each student is given a raw egg for which the student is responsible for one week. (It may be allowed to sleep in the refrigerator at night.)

Discussions during the week concerning the care of the egg might include: differences and similarities among the eggs; accidents—causes, responses; babysitting problems; peer pressures; family dynamics.

Students may wish to make special environments for their eggs (decorated boxes, cradles, baskets).

Final discussion should encourage each student to share what he or she has learned about parenting and responsibility.

A List of Materials for Classroom Use

A Baby is Born —23 minutes—color—16mm—Planned Parenthood

A literal photographic record of an actual hospital delivery. The film follows the final stages of the birth of a young San Francisco area couple's first child. Problems common in first births are met here: extended pregnancy (two weeks late); a lengthy labor; the necessity for an episiotomy. The mixture of emotions that accompany birth—joy, fear, pain is shown. The husband takes a meaningful supportive role throughout the birth process.

Am I Normal? —24 minutes—color—16mm—Planned Parenthood

A situation comedy about the experiences boys go through during puberty. Using fictional characters and a humorous story line, it presents the facts about male sexual development, while

raising important issues about masculinity, identity and peer pressure.

Becoming a Woman / Becoming a Man —2 filmstrips—2 records—Guidance Associates

These filmstrips describe the female and male reproductive and endocrine systems and mention the variations in growth patterns. The psychological, social, and sexual aspects of adolescence and the changing roles of women and men are discussed.

Can A Parent Be Human ?—12 minutes—color—Distributor: Churchill Films

In this film adolescents discuss their problems in communicating with parents. Two of the boys role-play a father-son scene. It provokes discussion and thought.

Free to Be . . . You and Me —Book and Record by Marlo Thomas—McGraw Hill, 1974

A collection of stories, songs, and poems which stress individual growth and the potential of all human beings to do, be and feel freely. The book attempts to dispel myths which have kept both boys and girls in stereotyped, sex-defined roles.

Girl to Woman —17 minutes—color—Distributor: Churchill Films

This film presents the changes of puberty in girls, e.g., the growth spurt, skin changes, feminine physique, endocrine glands, and secondary sex characteristics. The male reproductive system is also explained. Personal health, hygiene, and emotional aspects of adolescence are also discussed.

Growing into Manhood : A Middle School Approach —12 min—color filmstrips

Inter-racial film strips describing changes at puberty and growth and development patterns of the teen years. Emphasis on varying rates of changes from one individual to another.

Growing into Womanhood : A Middle School Approach —two ten minutes color film strips—available from the Health Department

Human and Animal Beginning —13 minutes—color—16mm—Planned Parenthood

This film presents basic information about human reproduction, birth and growth. It includes natural science scenes of a baby monkey, baby mice, newborn guinea pigs, and rabbits, ducklings and fish. Simplified language.

Human Development Transparencies —Set of 13 Transparencies in binder—Producer/distributor: Nystrom

This accurate, attractive, high quality set includes:

1. Endocrine System
2. Female Reproductive Organs
3. Female Pelvis
4. Male Reproductive Organs
5. Early Cell Division
6. Childbirth
7. Identical Twins
8. Menstruation, Fertilization
9. Ovum and Sperm
10. Fetus Development
11. The Placenta
12. Full Term Fetus
13. Fraternal twins

Human Growth III —20 minutes—color—16 mm—Planned Parenthood

Adolescent sexual development is presented as part of an overall normal physical, emotional and social process. Biological facts of puberty changes and reproduction in animation are alternated with live comments, questions, and interviews with fifth graders, juniors and seniors in high school and young married couples concerning their own feelings and decisions. A brief live birth scene is also included.

Human Growth and Development —10 Filmstrips—10 tapes—Distributor: International Teaching Tapes, Inc.

These tapes and filmstrips present an overview of heredity. They include:

1. Whom Do You Look Like
2. Changing From Girl to Woman
3. Changing from Boy to Man
4. How are Traits Inherited
5. How Living Cells Divide
6. How Sex is Inherited
7. How Environment Influences Our Inherited Traits
8. Endocrine Gland and Hormones
9. Menstruation and Pregnancy
10. Gestation and birth of a Baby

Jobs and Gender —2 nine minute filmstrips—Guidance Associates

The filmstrips explore how sexual barriers and stereotypes have influenced men and women's vocational choices; discusses changing concepts of masculine and feminine work roles through interviews with a male kindergarten teacher, a male nurse, a female carpenter and a female newspaper reporter.

Linda's Film Menstruation —10 minutes—color—16mm

Menstruation and the myths and problems that accompany it are explained in this informative satirical film about a 15 year old girl and her boyfriend the week of her first menstrual period.

Masculinity and Femininity —two part filmstrip and recor— Guidance Associates

Students can examine physical, social, and emotional factors contributing to sexual role definition through the use of this filmstrip. Students learn that traditional stereotypes of male and female roles are changing.

Menstrual Cycle Visual Chart —Producer/Distributor: Tampax, inc.

These charts show the uterus and its lining during various stages of the menstrual cycle and include excellent line drawings of the female pelvic organs.

My Dad Lives in a Downtown Hotel —34 minutes—color—Distributor: Doubleday Multimedia

This film describes the feelings and efforts of a ten year old boy whose parents have separated. In the film he has conflicting feelings, expresses anger, guilt, and pain, and finally realizes that his parents still love him even though they're separated.

My Mom's Having A Baby —47 minutes—color—16mm

This film sets to rest childhood myths about pregnancy and birth by relating the facts of life in a simple and sensitive, realistic and accurate fashion.

Naturally a Girl —13 1/2 minutes—color—Planned Parenthood

This film explains why menstruation happens and how it relates to womanhood.

Then One Year —19 minutes—color—16mm—Planned Parenthood

This film gently explains the changes that boys and girls experience in adolescence. Included are discussions of wet dreams, masturbation, fertilization, growth rate and hygiene; emphasis is also placed on the many emotional changes that occur during puberty.

Reading List for Students

Duvall, Evelyn, *About Sex and Growing Up* , New York, Associated Press, 1968.

This text explores issues such as feelings about growing up, self image, reproduction, relationships with adults and friends, and self development. A glossary and an index are included.

Fassler, Joan, *One Little Girl* , New York, Behavioral Publications Inc., 1969

This book discusses Laurie, who did some things quickly and other things slowly. Because her mother and teacher called her a "slow child", Laurie's feelings were hurt. After receiving a letter from a doctor, Laurie's mother and teacher began emphasizing Laurie's positive qualities and her feelings improved.

Gruenberg, Sidonie M., *The Wonderful Story of How You Were Born* , New York, Doubleday and Company, 1973.

This book describes in an elementary manner how life begins and how a baby develops from the union of an egg and a sperm. A

variety of parents (animal and human) are compared and contrasted and the growth and maturation of humans are described.

Hamilton, Eleanor, *Sex , With Love* , Boston, Beacon Press, 1978

This book presents information about the emotional and physical responses re: dating and relationships in a frank, open and accurate style. It is quite explicit and may only be appropriate for more mature students.

Johnson, Corrine B. and Eric W. Johnson, *Love and Sex and Growing Up* , Philadelphia, J. B. Lippincott Company, 1977

This book is valuable because it helps the youngster understand the physical, emotional and social aspects of growing up. It discusses anatomy, conception, birth, Heredity, the learning of sex roles, marriage, and various types of love.

Lerrigo, Marion O. and Michael Cassidy, *A Doctor Talks to 9-12 Year Olds* , Chicago, Budlong Press, 1974

This is a nicely illustrated book which includes the story of a typical family. The story includes biological heritage, the first days of life, the first nine months, the arrival of a new baby, childhood, and the pre-teen years. It describes the changes in feelings during those periods.

May, Julian, *How We Are Born* , Chicago, Follett Publishing Company, 1969.

This book explains human reproduction from conception to birth. It includes a description of the development of the fetus and the care of the baby by the parents.

May, Julian, *Living Things and Their Young*, Chicago, Follett Publishing, Company, 1969.

This book describes different methods of reproduction and development of family life from one-celled animals through hydra, fish, frogs, birds, reptiles, and manuals (including humans).

May, Julian, *Man and Woman* , Chicago, Follett Publishing Company, 1969

This book discusses the differences sexes in humans and animals, the reproductive organs, marriage, families, and birth. It is well illustrated.

Mayle, Peter, *Where Did I Come From?*, New Jersey, Lyle Stuart, Inc., 1973

Animated illustrations depict conception, pre natal development and birth in a fun, yet serious, respectful and accurate manner. Children and adults of all ages can learn from this book.

Mayle, Peter, *What' s Happening to Me ?*, New Jersey, Lyle Stuart, Inc., 1975

The emotional and physiological changes which accompany puberty are presented. The illustrations are entertaining. Excellent reading for all levels.

Nilsson, Lennart, *How Was I Born? A Photographic Story of Reproduction and Birth for Children* , New York, Delacorte Press, 1975.

Through incredible photography of fetal development and warm family scenes, the author tells the story of reproduction and birth. This is an excellent book to be read by parents to their children.

Nilsson, Lennart, *A Child Is Born* New York, Delacorte Press, 1966.

Detailed presentation of information and photographs of fetal development. Excellent classroom reference for teacher and students.

Power, Jules, *How Life Begins* , New York, Simon & Schuster, Inc., 1968

This is an exciting story of human and animal birth. It inspired the ABC-TV program.

Voelckers, Ellen, *Girl's Guide to Menstruation* , New York, Rosen Press, 1975.

This book contains an honest presentation of menstruation. It also includes a frank discussion of female sexuality.

Strain, Frances B., *Being Born* , New York, Hawthorne Books, Inc., 1970.

This book covers the creation of eggs and sperm, the union of cells, embryonic changes, birth, dating and marriage; it also includes a work list and excellent photographs.

NOTE: The teacher should make a point of being aware of the books and novels the students are choosing to read independently (Judy Blume!) and attempt to integrate their reading into the unit when appropriate.

Teacher's Bibliography

Canfield Jack and H. C. Wells, *100 Ways to Enhance Self Concept in the Classroom*. New Jersey: Prentice Hall.

A collection of tested techniques for heightening the self-image of students of all ages. Combines practical classroom strategies with a catalog of resources to better equip students to cope with the world.

Comfort, Alex M.D. and Jane Comfort. *Facts of Love , Living , Loving and Growing Up* . New York: Crown Publishers, Inc.

Presents factual sex instruction and the authors advice for conduct based on concern for others. The book contains some explicit drawings tastefully presented.

Elkind, David, Ed. *Children and Adolescents , Interpretive Essays on Jean Piaget* . New York: Oxford University Press, 1974.

A presentation of basic Piagetian concepts assimilation, accommodation, equilibration, cognitive structures, mental operations and schema. The main ideas of Piaget's work are interpreted for a general audience.

Galbraith, Ronald E. and T.M. Jones, *Moral Reasoning : Teaching Strategies for Adapting Kohlberg to the Classroom* . New York: Greenhaven, 1967

Authors present a teaching process of stimulating elementary and secondary classroom discussion on social and moral problems. Contents includes how to write and present sample moral dilemma stories for the classroom and how to have students confront problems and develop supporting reasons for their positions.

Grahan, Douglas. *Moral Learning and Development* . New York: Wiley-Interscience, 1972.

Separate chapters examine main psychological theories of moral learning and development based on the writing of Freud, Melanie Kline, Kohlberg, Piaget and Skinner.

Kagan, Jerome and Robert Coles, eds. *12 to 16 Early Adolescence* . New York: W.W. Norton & Company, Inc., 1972.

A collection of essays by Tanner, Gordon, Blos, Bakan, Kagan, Adelson, Kohlberg, Gilligan, Martin, Conger, Gagnon, Coles, LaFarge,

Cottle and de Varon. Social scientists pool their observations about the child passing through the critical stage of physical and emotional development, Early Adolescence.

Katchadourian, Herant and D.T. Lunde. *Fundamentals of Human Sexuality* . New York: Holt, Rinehart & Winston, 1975.

A text book, excellent as reference and general reading in preparation for any teaching in the area of sexuality.

McCary James L. *Human Sexuality : A Brief Edition* . New York: Nostrand, 1973.

A basic human sexuality text useful as reference.

Morrison, Eleanor S. and Mila U. Price. *Values in Sexuality. A New Approach to Sex Education* . New York: Hart Publishers, 1974.

An excellent book for teachers containing values clarification exercises and group activities for the classroom. It also contains a knowledge and attitude survey and anatomy and physiology worksheets. Very usable.

Simon, Sidney B., L. Howe and H. Kirschenbaum, *Values Clarification : A Handbook of Practical Strategies for Teachers and Students*. New York: Hart, 1972.

A collection of practical strategies and hundreds of specific suggestions to help students become aware of their own feelings, ideas and beliefs.

Saxon, Burt and Peter Kelman. *Modern Human Sexuality -Teacher's Manual*. Boston: Houghton Mifflin Company.

This text designed for teaching sex education to ninth graders could be a good reference for teachers working with younger students.

Zacharias, L. and R.J. Wurtman. "Age of Menarche", *New Journal of Medicine* , 280:868, 1969.

An article documenting the research findings on the early onset of menstruation.

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