Chapter 4, Prenatal Development and Birth

Chapter Summary

This chapter examines the dual themes of development. Every topic—prenatal development, possible toxins, birthweight, medical assistance, parent-infant bonding—is directly relevant to the 150 million babies born on earth each year. Universal patterns are described. Yet each pregnancy and birth is unique. Learn all you can—and if you have a baby, expect to be awed by your personal miracle.

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A. Section 4.1: Prenatal Development

“On Your Own” Activity: Developmental Fact or Myth?

Before students read about prenatal development and birth, have them respond to the true-false statements in Handout 1.

The correct answers are provided below. Class discussion can focus on the origins of any developmental misconceptions that are demonstrated in the students’ incorrect answers.

1. T  6. T
2. T  7. F
3. F  8. F
4. T  9. T
5. F  10. F

“On Your Own” Activity: Folk Wisdom and Pregnancy

To help students appreciate the continuing strength of fallacious folk wisdom about pregnancy and to help them apply knowledge gained in the text discussion, have them answer the questions in Handout 2, drawing on the folk tales of family and friends.

This exercise should reveal a range of beliefs, depending on the ages and backgrounds of your students. Relevant to the discussion may be such factors as age (Do the older and younger members of the class have different varieties of folk wisdom to relate?), culture, and
gender (some of the men may be less familiar with “accepted wisdom” than the women). If students have difficulty with these questions, you might ask them to interpret the following examples.

“Don’t stretch your arms above your head or the umbilical cord will get tangled around the fetus’s neck.” (Not true; the umbilicus stays taut like a high-pressure hose.)

“Intercourse during pregnancy will cause miscarriage.” (Not true, although during the last months of pregnancy vigorous intercourse can sometimes trigger premature labor. This myth may have arisen because the normal rate of miscarriage is high during the early months of pregnancy. In addition, the need to lay blame made it convenient for people to point the finger at the husband’s sexual appetite, especially when the double standard made the male the usual initiator of intercourse.)

“You can tell whether a woman is carrying a boy because her face glows more, because the fetus is more active, or because she is carrying ‘low’.” (All myths.)

“Every baby costs a tooth.” (When calcium in the woman’s diet was in short supply and dental care was poor, pregnancy may have weakened the tooth and gum structure, causing loss of teeth in women who bore many children.)

“Eat for two.” (If this is interpreted as eating twice as much, it’s not only false but potentially harmful. If it means that the mother must be better nourished in order to carry and deliver a healthy baby, it’s true.)

Teaching Tip: Stages of Prenatal Development

Covering this topic generally works best when instructors closely follow the material in the textbook. Start by describing the germinal stage, defining and explaining the significance of blastocyst, the process of implantation, the umbilical cord, and placenta. Many instructors find it useful to display a diagram of the female reproductive system during their lecture on the germinal stage to illustrate where and how development occurs at this early stage.

As you move into your description of development of the embryo, follow the same sequence by defining and explain the significance of the proliferation of cells that form the endoderm, mesoderm, and ectoderm. At this point, the class will benefit by seeing sonograms (ultrasound photographs) of developing embryos. As is almost always the case throughout the life-span course, a good pedagogical tip is to tap into any relevant personal experiences your students might have had, and be willing to share with the class. If there are any mothers among your students, ask them to describe what it is like to have a sonogram. Some may be willing to share their own sonograms, or even videos, with the class.

If there are women who have given birth in the class, the moment when you explain sonography, amniocentesis, and other common procedures performed during pregnancy is an excellent time to move from describing physical development to discussing some of the social and personality aspects of pregnancy. For example, parents often report rising levels
of anxiety as they await the results of amniocentesis, and this is certainly the case for those who learn their unborn child has an illness or genetic problem. On a more positive note, parents often describe their reactions to seeing a sonogram of their unborn child as a moment of incredible bonding. Discussing such feelings will help bring the material to life for the class.

B. Section 4.2: Birth

Classroom Activity: Birth and Prenatal Development Resources on the Internet

The Internet is full of empirically and medically sound information and advice for prospective parents. If your classroom has direct access to the Internet, you might devote one class session to checking out a couple of these large sites. There, you and your students will find extensive information on every imaginable issue related to childbirth. Several of the sites also provide good photographs, graphs, tables, and charts that are helpful teaching aids. Following are several such sites.

www.ivf.com

The website of Georgia Reproductive Specialists is an extensive Internet resource that includes information on twins, a discussion of various types of birthing, and a pregnancy primer.

www.ivillage.com/my-pregnancy-week-by-week

The Interactive Pregnancy Calendar will build a day-by-day customized calendar detailing the development of a baby from conception to birth. The pregnancy calendar should be seen as a general guide: Every pregnancy is unique, and some babies are faster or slower developers than others.

www.efn.org/~djz/birth/birthnew.html

The Online Birth Center is an expansive site that discusses a host of topics related to pregnancy with an emphasis on natural childbirth. It features sections on pregnancy, birth stories, fetal monitoring, and midwifery, for example, in addition to book reviews and a resource area. This site also provides a link for downloading The Baby Calculator, which is designed to help parents-to-be keep track of special dates such as each trimester, their conception date, and the due date. Pictures show the different stages of the baby’s development with a written description of what is taking place during each period.

Classroom Activity: Preparing for Birth

To give your students an idea of what it is like to prepare for the birth of a baby, you might acquire (or ask a few interested students to acquire) examples of the information packets obstetricians and family planning clinics hand out to their pregnant patients. In addition to providing information on prenatal health, these packets describe the birth process and tell
couples what to expect at the hospital or in case of emergency. Information may also be included on how (and when) to check in at the hospital, the advantages of taking a tour of the delivery or birthing room, and related matters. For the most part, the material is written in simple and appealing language and includes helpful illustrations. And, of course, the tone is usually reassuring and positive.

“On Your Own” Activity: Reading About Birth

The last 15 or so years have seen a growing media interest in pregnancy and birth. First-person accounts of births, as well as news features on all aspects of the birth process, regularly appear in newspapers, in magazines, and on television. In 1998, for the first time the birth of a baby was “broadcast” on the Internet. Since then, a number of mothers have shared their birth experiences on the Internet. As a class project, ask students to bring in examples of recent articles on these subjects. For those students who do not bring in an article, distribute a few of the most interesting articles you have seen.

When each student has an article, use Handout 3 to help your students relate lecture and text material to their outside reading.

The articles supplied will probably touch upon a wide variety of topics, including the father’s role in birth; the role of midwives and birth attendants; the presence of siblings at birth; home birthing; the patient’s role in decision making about obstetrical procedures; the use or abuse of cesarean section; nontraditional birth methods (birthing chairs, etc.); malpractice suits in obstetrics; and medical responses to preterm birth. There may also be first-person accounts of birth and its psychological impact on the parents. The main role of the instructor will be to show students how their learning experience in the text can help them interpret and understand information from all kinds of sources. Focusing on articles that have an obvious relationship to material in the text and lectures will be especially valuable.

Classroom Activity: Are Vaginal Births Best?

Based on the best judgments of a large group of health experts, the government report Healthy People 2010 (www.healthypeople.gov) set a number of specific health objectives to be achieved by the year 2010. One of these was to reduce the rate of C-sections, the most common major operation performed in the United States.

This objective seemed appropriate because vaginal deliveries generally are associated with lower maternal and neonatal illness, and therefore cost substantially less than cesarean deliveries. However, there is mounting concern that the objective of reducing the rate of cesarean delivery may be backfiring, leading to more complications for mothers and their babies, as well as higher medical costs.

To bring this issue to life, assign groups of students to research the question, “Are vaginal births best?” and report back to class. Ask different students to tackle specific aspects of the question, much the way a team of investigative journalists would. One student, for instance, could examine the question from the perspective of public health policy, focusing on cost and other large social issues. Another student could tackle the question of how the government set the 2010 target that no more than 15 percent of all deliveries in this country should be by
C-section. It is now 2014. Ask students if the objective has been achieved. If so, has it made a difference in the health of mothers and newborns?

Classroom Activity: Classroom Debate: “Resolved: The Increasing Medicalization of Birth Is Harmful to Both Mothers and Their Babies”

To help your students develop informed opinions about the medical procedures used during the birth process, follow the guidelines in the General Resources section of this manual for scheduling a debate on the advantages and disadvantages of these procedures. You may wish to introduce the debate topic by preparing a brief lecture that summarizes both sides of the argument. The following information should be helpful.

Critics of the medical establishment argue that most procedures are for the convenience and wealth of doctors and hospitals. The administration of drugs to start and speed up contractions, which in turn necessitate anesthesia to lessen pain, is a prime example. Other examples include the practice of having the woman lie on the delivery room table with her legs in stirrups (making it easier for the doctor to see but harder for her to push); predelivery “prepping” (shaving the pubic hair and administering an enema), which is done, say the critics, so things will be neat for the hospital rather than convenient for the woman; and the general atmosphere, which makes the woman feel that birth is a dangerous rather than a natural event. After the birth the newborn is wheeled away, and the mother can usually see her infant and other members of her family only at scheduled times—again for the convenience of the hospital rather than the health and happiness of the baby. Advocates of home births cite the many birth complications that are brought on by overuse of drugs, surgery, and staphylococcal and other infections that are more common in hospitals than in homes. The (over)use of cesareans has come under attack as the rate of surgical deliveries has risen beyond what many believe to be a safe or necessary level.

On the other hand, the fact that the number of perinatal deaths has steadily decreased in recent years is directly tied to new medical procedures. Many women with diabetes or sickle-cell anemia, for instance, are much more likely to give birth to a viable infant today than they were even 10 years ago, because fetal monitoring and other techniques are saving infant lives. The incidence of cerebral palsy is down, partly because the incidence of cesareans is up. Doctors believe that they are being attacked for the overuse of drugs that occurred a generation ago, when not as much was known about the effects of medication on the fetus. Many obstetricians say they are much more cautious today.

An interesting related issue is the increase in malpractice suits, which some say is making doctors more reluctant to intervene unnecessarily; others claim that the increase in suits actually forces doctors to undertake needless procedures “just in case.”

Although about 90 percent of all births could occur just as safely at home as at a hospital without any medical intervention at all, about 10 percent of all births require medical assistance to avoid or treat complications. The problem, doctors argue, is that one cannot be sure which births will be part of that 10 percent. While one can prepare for complications due to some risk factors—such as the age and the health of the mother—sometimes a healthy woman in her prime childbearing years suddenly develops complications during the last moments of birth, complications that necessitate immediate medical help. Without the ready
availability of that help, the baby or the woman could suffer permanent injury or even death.

**Critical Thinking Activity: Medical Attention**

Most chapters of this resource contain a critical thinking exercise designed specifically to test students’ critical thinking about a topic covered in the text. Handout 4 briefly outlines the opposing positions on medical intervention followed by a series of questions. If you have not used the Classroom Debate regarding the medicalization of birth, you might want to make this critical thinking activity an outside assignment.

Answers to this chapter’s critical thinking activity are as follows:

**Pro-Protective Custody Laws Position:**

Those who believe that “protective custody” laws should be extended to allow doctors to protect endangered fetuses assume that a developing fetus has some (or all) of the rights and needs previously reserved for a fully formed, independently breathing newborn.

**Anti-Protective Custody Laws Position:**

Critics of protective custody laws caution that it is easy to imagine the frightening scenario in which pregnant women lose their personal freedom in the face of overzealous doctors, courts, or societal values regarding childbearing.

**Classroom Activity: Midwifery and Doulas**

As noted in the text, many expectant mothers are considering options other than medicated hospital births, especially the use of trained assistants (*doulas*) and midwives. Following is some basic information about these alternatives, which might be of interest to your students. The dictionary defines *doula* as a Greek word meaning “a woman experienced in childbirth who provides continuous physical, emotional, and informational support to the mother before, during, and just after childbirth.” There is some evidence that the presence of a labor doula

- decreases labor length.
- decreases the use of labor-inducing drugs.
- decreases the mother’s request for pain medication.
- reduces the rate of cesarean birth.
- lessens postpartum depression.
- reduces the need for epidural anesthesia.
- increases the father’s participation level.

A *Certified Nurse Midwife (CNM)* is a board-certified nurse with advanced training and education to deliver babies and care for pregnant women. Many CNMs also provide well-woman care such as Pap tests. These midwives are certified and registered by the ACNM (American College of Nurse Midwives), which now owns the additional titles of DEM (Direct Entry Midwife) and CM (Certified Midwife). However, this is an area of confusion
because many traditional midwives refer to themselves as DEM or CM. Because CNMs must work under the direction, license, and/or supervision of a board-certified and licensed physician they do not deliver babies at home in southern Nevada, for example. Many CNMs in other areas of the United States are also Certified Professional Midwives (CPMs).

A CPM is a board-certified independent care provider with advanced training and education to deliver babies and care for pregnant women. CPMs may also provide well-woman care, well-baby care, counseling, and other services throughout life. They have additional training and certification in nutrition, naturopathy, and emergency care. These midwives are certified and registered by NARM (North America Registry of Midwives). Because CPMs are not required to work under the direction, license, and/or supervision of a physician, they do not ordinarily deliver babies in the hospital in southern Nevada, for example. Many CPMs in other areas of the United States are also CNMs. Of the total 4,138,349 births in the United States in 2005, 7.4 percent (306,377) were attended by CNMs. Considering vaginal births only, the percentage of CNM-attended births is even higher (10.6 percent).

In comparison to the cost of a physician-assisted birth in a hospital, a midwife birth can be considerably less expensive. For instance, a CNM-assisted birth at a hospital birthing center may cost $1,800 to $3,000, while a CPM-assisted birth at home may be only $1,200 to $1,800.

In September 2000, the governor of California approved State Bill 1479, which declared that

- Every woman has a right to choose her birth setting from the full range of safe options available in her community.

- The midwifery model of care emphasizes a commitment to informed choice, continuity of individualized care, and sensitivity to the emotional and spiritual aspects of childbearing. It includes monitoring the physical, psychological, and social well-being of the mother throughout the childbearing cycle; providing the mother with individualized education, counseling, prenatal care, continuous hands-on assistance during labor and delivery, and postpartum support; minimizing technological interventions; and identifying and referring women who require obstetrical attention.

- Numerous studies have associated professional midwifery care with safety, good outcomes, and cost-effectiveness in the United States and in other countries. California studies suggest that low-risk women who choose a natural childbirth approach in an out-of-hospital setting will experience as low a perinatal mortality as low-risk women who choose a hospital birth under management of an obstetrician, including unfavorable results for transfer from the home to the hospital.

- The midwifery model of care is an important option within comprehensive health care for women and their families and should be a choice made available to all women who are appropriate for and interested in home birth.

For more information on doulas and midwives, direct students to one of the following organizations, which are happy to provide a wealth of information on these birth options. The Journal of Midwifery and Women’s Health (www.jmwh.com) is another excellent source of information.
Another excellent resource is [www.mymidwife.org](http://www.mymidwife.org). Sponsored by the American College of Nurse-Midwives, this consumer-oriented website provides parents-to-be with a wealth of information regarding pregnancy, planning, and women’s health.

Teaching Tip: Birth in Fiction and Film

Your students may have noticed that many biographies and novels begin at the beginning—with birth. A remarkable example is *David Copperfield*, by Charles Dickens, in which the first chapter is titled simply “In Which I Am Born.” This chapter sets the stage for much of what happens in the novel. The reader learns about the time of birth, the physical and emotional health of the mother, and the expectations of an important relative (especially regarding sex—David was supposed to be a girl). Also mentioned are a minor birth abnormality (the presence of a caul, or membrane, partially covering the head) and the absence of the father (who was dead). Virtually all the facts and events of “In Which I Am Born” influence the shape of the narrative that follows.

To help your students think about the ways in which the birth experience can “set the stage” for the life that follows, you might ask them to look at the ways in which birth is treated in fiction and other literary forms (examples include Somerset Maugham’s *Of Human Bondage*, Günter Grass’s *The Tin Drum*, Laurence Sterne’s *Tristram Shandy*, and William Shakespeare’s *Richard III*). Then, have them try the exercise in Handout 5.

Students should come to see that each of us uses facts and fictions about our births to set the stage for or “explain” developments that come later, much as an effective novelist does.

C. Section 4.3: Problems and Solutions

“On Your Own” Activity: Avoiding Teratogens in Your Life
To emphasize the variety of specific teratogens to which students may be exposed every day and to help them understand how a person could continue to be exposed to them despite being aware of their dangers, have students complete the exercise in Handout 6, a checklist of possible teratogens to which they have been exposed during the last month. (Let students know that their answers are for discussion only and will not be handed in.)

From students’ scores, construct means, medians, and ranges for the class on the measures in question. A comparison of the scores should form the basis of an interesting discussion, because our society makes it difficult to avoid both exposure to pollutants and the use of social drugs (especially alcohol). NOTE: You may notice a gender-based difference: Men in the class may say that avoiding teratogens is not so important for expectant fathers. Such an opinion could well trigger heated debate and discussion.

**Internet Activity: Clinical Teratology**

To help students learn more about the effects of teratogens on the developing person and the Internet resources available to prospective parents, pick a teratogen from among those mentioned in the text and surf the net to find brief answers to the questions in Handout 7. For example: What are the potential short-and long-term effects of this teratogen on the developing person? Has this teratogen become more of a problem in recent years as a result of technological advances? Explain. What steps can prospective parents take to minimize the effects of this teratogen?

**Classroom Activity: Frequent Drinking Among Pregnant Women**

No one took him seriously when, 40 years ago, French pediatrician Paul Lemoine first reported facial deformities in babies of mothers with alcoholism. At the time, many suspected Lemoine’s findings were denied because France is Europe’s biggest consumer of alcohol. Soon enough, however, the link between alcohol and birth defects was confirmed by others and named “fetal alcohol syndrome.” By 1989, alcoholic beverage labels began carrying warnings to pregnant women. According to the American College of Obstetricians and Gynecologists, women who are heavy drinkers before, during, or after pregnancy, face a slew of serious health problems:

- Vitamin and mineral deficiency
- Damage to their internal organs, including the brain, liver, and digestive system
- Depression
- Increased risk of certain types of cancer

For their babies, the effects of heavy alcohol use during pregnancy include

- Miscarriage
- Fetal alcohol syndrome, the most common cause of mental retardation in children
- Physical defects
- Low birthweight
Hyperactivity

Decreased attention span

Even so, approximately 10 percent of pregnant women use alcohol, and approximately 2 percent engage in binge drinking (defined for women in 2006 as four or more drinks on any one occasion) or frequent use of alcohol.

To help students gain insight into this complex issue, and their own behavior, project the following Web page, which presents data on alcohol consumption and binge drinking among women of childbearing age: [www.cdc.gov/mmwr/preview/mmwrhtml/mm5350a4.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5350a4.htm).

Then ask the class the following: Knowing the dangers alcohol poses for the developing organism, why do so many pregnant women continue to drink? Although no one knows for sure, some researchers speculate that reports of health benefits of moderate wine drinking could be one factor. Another is that because most women don’t know they are pregnant until eight weeks or so after conception, when many have had a few drinks. Other possible reasons tap into the issue of why adolescents and young adults engage in any risk-taking behaviors, including illusions of invulnerability, gradients of reinforcement, and so forth.

Classroom Activity: Classroom Debate: “Resolved: A Fetus Has the Same Moral and Legal Rights as Its Mother”

South Carolina is the only state in which, by law, a fetus able to live outside its mother’s body is considered a person with legal rights. Abortion advocates see it as a particularly egregious attempt by anti-abortionists to establish fetal rights in any area of law they can. Their purpose, says the pro-abortion camp, is ultimately to overturn *Roe v. Wade*, the 1973 Supreme Court ruling that made abortion legal in America.

The legal system continues to struggle with the issue of fetal rights. In Racine, Wisconsin, Deborah Zimmerman was charged with trying to kill her 6-month-old daughter, Megan, *before her birth*. The night of the birth, her blood alcohol level was 0.30, three times the legal level in Wisconsin. When she was delivered, Megan had a blood alcohol level of 0.199, nearly twice the level considered to make an adult legally drunk. Like many victims of fetal alcohol syndrome, Megan was born with facial abnormalities and, in all likelihood, severe cognitive impairment.

And this was not the first time Megan’s mother had run afoul of the law due to her problems with alcohol. She had been convicted of the 1983 drunken driving death of a Milwaukee man, for which she served one year in prison.

Perhaps the most significant factor in the case was that the night Zimmerman gave birth to Megan, hospital workers overheard her threatening to kill her unborn child by drinking. It was their testimony, showing Zimmerman’s intent to do harm, that led prosecutors to file charges of both attempted homicide and reckless injury.

The implications of the developing fetus’s emerging identity as a person pose a number of legal, medical, and ethical questions. For example, the medical community’s ever-increasing technology and understanding of prenatal hazards raise important questions regarding the balance between the mother’s rights as an individual and those of the developing fetus she is carrying. Increasingly, doctors are able to treat the fetus itself as a
patient with distinct medical needs. As technology advances, should women be expected, and even legally required, to submit to medical intervention—including surgery—that might save a fetus but risk their own lives? Similarly, what about mothers-to-be who knowingly endanger their unborn offspring by continuing to use addictive drugs or by engaging in other potentially harmful behaviors?

To encourage your students to think about some of these issues and their complexity, follow the guidelines in the General Resources section of this manual for scheduling a classroom debate on this resolution. You might prefer to select the reference material yourself and place the relevant journals and textbooks on reserve in the college library, or you might want students to find their own.

*Teaching Tip: Introducing the Hazards of Teratogens*

A good tip for introducing the potential hazards of common teratogens on prenatal development is to first define “teratogen,” and then ask the class to list as many as they can think of. As new items are added to the list, you can then explain how a particular teratogen can harm the fetus. For example, nicotine is a common teratogen that can adversely affect development by restricting intrauterine growth. Heavy maternal smoking is also associated with increased risk of pre-term delivery, as well as decreased uterine blood supply of oxygen to the developing person, which may be hazardous to cognitive development.

Your students are likely to think of nicotine, alcohol, and other well-documented teratogens. However, they may be surprised to learn about the wide array of teratogenic agents to which many pregnant women are exposed. You might project such a list, or distribute a handout to the class. This can then lead naturally into a discussion of the science of *teratology*, the concept of sensitive periods in development, and steps expectant mothers can take to minimize their exposure to environmental hazards.

D. **Section 4.4: The New Family**

*Classroom Activity: Cultural Differences in How Newborns Are Welcomed*

Throughout the world, newborns are greeted with a variety of wonderful traditions. In Israel, for example, proud Jewish parents plant a tree—cedar for a boy, pine for a girl. The branches can be used later in the baby’s wedding canopy. Here are some other examples to share with your class. See if they can add to the list.

- Napping in a cardboard box given to the newborn by the government (FINLAND)
- Flying a kite (JAPAN)
• Giving the parents an odd (never even) number of fresh flowers (RUSSIA)
• Tossing colored confetti (MEXICO)
• Playing drums (BRAZIL)
• Placing money in the newborn’s hand to ensure prosperity (TRINIDAD and TOBAGO)
• Planting a tree: apple for a girl, nut for a boy (SWITZERLAND)
• Planting the placenta and the afterbirth in a special location (JAMAICA)
• Serving red-dyed eggs (CHINA)
• A first bath given by a grandmother (NIGERIA)
• Sprinkling the infant with water to protect him or her from future danger (NIGERIA)
• Giving souvenirs, like baked goods or small trinkets, to each of the baby’s first visitors (BRAZIL)

You might extend this activity by assigning individual students (or small groups of students) to report on cultural variations in the birth experience. For instance, kangaroo care, which is described in the text, was first initiated by two South American neonatologists to involve parents in the care of their preterm children and to decrease some of the stress associated with an infant needing neonatal intensive care. Parents who have experienced kangaroo care express excitement and joy with the practice. In Guatemala, traditional midwives provide the majority of maternity care and are responsible for 60 to 75 percent of all births. Government-run midwifery training programs are grounded in a holistic model, which views childbirth as a normal process having powerful emotional, physical, cultural, and spiritual dimensions. As a third example, many cultures have dances that have roots in childbirth preparation. These dances often center around pelvic movements and exercises that help women’s bodies to relax, stretch, and open naturally during birth. These include cultures in Hawaii, Seneca (Native American), Tunisia, and several other areas throughout the Middle East, North Africa, and parts of Asia. In certain parts of Asia, for instance, the practice of “dancing baby down” includes the techniques of “belly roll” and “flutter.” These movements are virtually identical to two of the exercises commonly taught in Lamaze classes to help prepare women for the stresses of labor: “pelvic rocking” and “deep breathing.”


“On Your Own” Activity: What Are Your Attitudes Toward Birth?

As the text notes, prospective first-time parents may approach birth with a host of fears and negative feelings. At least this was the case in the past. However, attitudes toward birth are changing. It is not unusual to read first-person accounts celebrating the birth experience.
Today, pregnant women (and their husbands) are increasingly well informed and highly positive as they prepare for the birth of their babies.

To help your students uncover their own attitudes toward the subject of birth, have them complete Handout 8, which asks them to respond to such questions as: What was your reaction to the photos of the birth process in the text? Did these photos interest you? engross you? or put you off?

Students will quickly see that the first response choices to questions 3–6 reflect a positive attitude toward the subject of birth; subsequent responses reflect less positive feelings. Some responses (“maybe” or “interested and uneasy”) reflect ambivalent attitudes. Many students can be expected to choose these responses.

“On Your Own” Activity: Saying When

Throughout, the text emphasizes the interaction of the biological, social, and psychological domains. For each domain there is a developmental clock that suggests the “proper timing” of each event. In several lessons, students are asked to consider the settings of these clocks in their own lives. In Handout 9, students are asked to do so regarding the timing of births by responding to such questions as: If you (or your subject) are (is) not a parent but contemplate(s) having a child or children, at what developmental “time” do you foresee your birth(s)—according to your own biological clock? Your social clock? Your psychological clock?

Because there are no correct or incorrect answers for this exercise, the most appropriate feedback might be a summary of the class’s answers. The summary need not be exhaustive but should note any age cohort effects in the timing of births. Regarding the actual (or anticipated) timing of their children’s births, are there generational differences in the settings of the students’ developmental clocks?

Teaching Tip: The Impact of Birth on the Family

To help your students understand the psychological significance of birth for family members, you might ask the members of your class (or other students who are parents) to describe their firsthand experiences of the birth process. If possible, select as discussants some who had their babies recently and others whose babies were born some time ago. This will give the class the opportunity to compare childbirth methods over the years. Ask the participants to be sure to discuss the following:

• whether any medication was used, and if so, what kind and why (more than 90 percent of hospital births involve medication)

• whether any other medical intervention was used and why (the increase in cesareans nationwide may be evident from the number of cesareans among your students)

• whether the birth process happened in the way they had anticipated it would

• their reactions to first seeing their baby

To prevent this exercise from becoming simply an exchange of stories, ask all class
members to try to think of a general statement that will summarize the experiences described. For instance, the father’s role or early mother–newborn contact may show interesting trends.

If the student body at your college contains very few parents, here are several alternatives:

(a) Invite an articulate new parent (for instance, a faculty colleague) to talk to the class about his or her experience of the birth process. In this case, it would be interesting to find out what choices the person made (for example, home versus hospital, childbirth classes, natural childbirth) and why.

(b) Contact a local organization concerned with birth and arrange for a speaker. For instance, a Lamaze-method teacher or a nurse-midwife might be invited to speak to the class about new trends in delivery procedures or a similar topic.

(c) Ask your students to recount what they know about their own birth and/or the births of their siblings. Misunderstandings and ignorance on these topics should be just as interesting as accurate accounts.

(d) Ask your students to discuss their own birth with their parents. If they are firstborns, they will probably find that their mothers were medicated, didn’t know what to expect, and were frightened by the experience. Their fathers may not have been present at the delivery and may have had only a glimpse of them as newborns. Have students compare their parents’ experiences with those they hope to have as future parents or have had as recent parents.