Cross-Check

As you learned in the Prologue, reviewing and overlearning of material are important to the learning process. After you have written the definitions of the key terms in this chapter, you should complete the crossword puzzle to ensure that you can reverse the process—recognize the term, given the definition.

ACROSS
1. In Piaget’s theory, changing an existing schema to incorporate new information.
5. Type of intelligence that relates to reasoning speedily and abstractly.
7. Process by which certain animals form attachments during a critical period.
10. The developing person from 2 weeks through 2 months after conception.
12. Mental concepts or frameworks that organize information.
14. The first menstrual period.
15. A study in which the same people are retested over a period of years.

DOWN
2. Type of intelligence that reflects accumulated learning.
3. A childhood disorder marked by deficiencies in communication and social interaction.
4. In Piaget’s theory, interpreting a new experience in terms of an existing schema.
5. The developing person from 9 weeks after conception until birth.
6. Principle that properties such as number or volume remain constant despite changes in appearance.
8. A study in which people of different ages are compared with one another.
11. Any drug, virus, or other toxic substance that crosses the mother’s placenta.
13. Decreasing responsiveness to a stimulus that is repeatedly presented.

ANSWERS

Chapter Review

Introduction
1. developmental psychologists
2. nature/nurture
3. continuity/stages
4. stability

Prenatal Development and the Newborn
1. ovary; egg
2. sperm; enzymes; blocks
3. nuclei
4. zygotes; differentiate; uterine
5. embryo; fetus
6. placenta; nutrients; oxygen; teratogens
7. can affect; fetal alcohol syndrome
8. root; sucking; swallowing; tonguing; breathing
9. William James; incorrect

Newborns reflexively turn their heads in the direction of human voices. They gaze longer at a drawing of a facelike image than at a bull’s-eye pattern. They focus best on objects about 8 to 12 inches away, which is about the distance between a nursing infant’s eyes and the mother’s. Within days, they recognize their mother’s smell and voice.

10. habituation; decrease; novelty-preference; social
Infancy and Childhood

1. over; is not
2. frontal; rational planning; association areas; thinking; memory; language
3. pruning
4. maturation
5. motor; sequence; crawl; run
6. major
7. cerebellum; small
8. 3
9. infantile amnesia
10. thinking; knowing; remembering; communicating
11. Piaget
12. schemas
13. assimilation; accommodation
14. sensorimotor; 2
15. object permanence; 8
16. underestimated; physics; numbers
17. 6 or 7; preoperational
18. conservation; have not
19. egocentrism
20. theory of mind; false beliefs
21. communication; social; theory of mind; autism; viewpoint; Asperger syndrome
22. male; empathizers; systemizers
23. operations; symbolically; perspective; gradually
24. Lev Vygotsky; 7; inner speech; behavior; emotions
25. 6 or 7; concrete operational
26. formal operational; abstract; 12

Contemporary researchers see development as more continuous than did Piaget. By detecting the beginnings of each type of thinking at earlier ages, they have revealed conceptual abilities that Piaget missed. They also see formal logic as a smaller part of cognition than Piaget did. Despite these revisions to Piaget’s theory, studies support the basic idea that cognitive development unfolds in the sequence Piaget described.

27. physical; social; scaffold
28. object permanence; stranger anxiety
29. 8 months
30. attachment
31. body contact; familiarity
32. safe haven; secure base
33. critical period; imprinting
34. do not; mere exposure
35. strange situation; secure; insecure

Placed in a strange situation, securely attached infants play comfortably, happily exploring their new environment. In contrast, insecurely attached infants are less likely to explore their surroundings and may even cling to their mothers. When separated from their mothers, insecurely attached infants are much more distressed than securely attached infants. When reunited with their mothers, insecurely attached infants may be indifferent.

Research studies conducted by Mary Ainsworth have revealed that sensitive, responsive mothers tend to have securely attached infants, whereas insensitive, unresponsive mothers often have insecurely attached infants. Other studies have found that temperamentally difficult infants whose mothers receive training in responsive parenting are more likely to become securely attached than are control infants. This points to the importance of considering the infant’s temperament in studying attachment.

36. comparable to
37. 13; gradually declines; throughout the world
38. basic trust
39. do; motivation
40. aggression
41. do not
42. resilient; stress hormones; serotonin
43. recover
44. does not; safe; healthy; stimulating; the mother’s sensitivity, the child’s temperament, and the family’s economic and educational level
45. self-concept; 12
46. 8; 10; traits

Children who have formed a positive self-concept tend to be more confident, independent, optimistic, assertive, and sociable.

47. authoritarian
48. permissive
49. authoritative
50. authoritative

There are at least three possible explanations for the correlation between authoritative parenting and social competence in children. (1) Parenting may foster children’s competence. (2) Children’s competence may promote authoritative parenting. (3) A third factor, such as heredity, may foster both authoritative parenting and child competence.
Adolescence
1. childhood; adulthood
2. G. Stanley Hall
3. puberty; 11; 13; primary sex; secondary sex
4. menarche; spermarche
5. sequence; timing
6. early; alcohol use, delinquency, and premature sexual activity; early; emotional maturity; heredity; environment
7. pruning; frontal lobe; limbic system
8. ideally; compare
9. self-focused
10. formal operations; abstract; inconsistencies
11. Lawrence Kohlberg; preconventional; conventional; postconventional
12. punishment; rewards
13. adolescence; approval; order
14. postconventional
Critics of Kohlberg's theory argue that the perception of postconventional moral reasoning as the highest level of moral development reflects a European and North American educated middle-class bias. Others have argued that people's thinking about real-world issues also engages their emotions, and moral feeling doesn't fit neatly into Kohlberg's stages.
15. social intuitionist; moral paradoxes
16. social; character education programs; empathy
17. gratification; service; academically
18. stronger

Erikson's stages of psychosocial development

<table>
<thead>
<tr>
<th>Group Age</th>
<th>Psychosocial Stage</th>
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</thead>
<tbody>
<tr>
<td>Infancy</td>
<td>Trust vs. mistrust</td>
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<tr>
<td>Toddlerhood</td>
<td>Autonomy vs. shame and doubt</td>
</tr>
<tr>
<td>Preschooler</td>
<td>Initiative vs. guilt</td>
</tr>
<tr>
<td>Elementary school</td>
<td>Competence vs. inferiority</td>
</tr>
<tr>
<td>Adolescence</td>
<td>Identity vs. role confusion</td>
</tr>
<tr>
<td>Young adulthood</td>
<td>Intimacy vs. isolation</td>
</tr>
<tr>
<td>Middle adulthood</td>
<td>Generativity vs. stagnation</td>
</tr>
<tr>
<td>Late adulthood</td>
<td>Integrity vs. despair</td>
</tr>
</tbody>
</table>

19. selves; confusion; identity
20. adopting; opposing
21. falls; rises; personalized
22. intimacy
23. peers; parents
24. do; religious faith
25. loneliness; self-esteem; depression
26. body fat; parent-child; earlier
27. emerging adulthood

Adulthood
1. is not
2. muscular strength, reaction time, sensory keenness, cardiac output; women
3. age; health; exercise
4. menopause; 50; estrogen; expectations; attitude
5. sperm; testosterone
6. 80; 4; 5 to 6; telomeres
7. gene-reproducing; natural selection
8. death-deferral
9. shrinks; less; reduced
10. more; less
11. slows; brain cells
12. brain cell; neural; oxygen
13. dementia
14. Alzheimer's; acetylcholine
15. recall; recognize; meaningfulness
16. prospective
17. more
18. cross-sectional; decline
19. longitudinal; stability

Because cross-sectional studies compare people not only of different ages but also of different eras, education levels, family size, and affluence, it is not surprising that such studies reveal cognitive decline with age. In contrast, longitudinal studies test one group over a span of years. However, because those who survive to the end of longitudinal studies may be the brightest and healthiest, these studies may underestimate the average decline in intelligence. Research is also complicated by the fact that certain tests measure only one type of intelligence. Tests that measure fluid intelligence reveal decline with age; tests that measure crystallized intelligence reveal just the opposite.
20. crystallized; increase
21. fluid; decrease
22. transition (crisis)
23. social clock; less; life events
24. intimacy; generativity; love; work
25. monogamous; 20; well educated
26. twice; higher
27. happiness; sexual satisfaction; health; income; greater
28. decreases; employed
29. increase
30. cannot; do
31. identity; confidence; self-esteem
32. do; do
33. amygdala; decreased
34. biopsychosocial
35. suddenly and before its expected time on the social clock
36. do; do not
37. do not
38. integrity

Reflections on the Two Major Developmental Issues
1. Piaget; Kohlberg; Erikson
2. stages; brain; Piaget
3. do not
4. temperament

Progress Test 1

Multiple-Choice Questions

1. c. is the answer. Developmental psychologists study physical, cognitive (memory, in this example), and social change throughout the life span. (p. 173)
   a. Social psychologists study how people influence and are influenced by others.
   b. Cognitive psychologists do study memory; because Dr. Goodman is interested in life-span changes in memory, she is more likely a developmental psychologist.
   d. Experimental psychologists study physiology, sensation, perception, learning, and other aspects of behavior. Only developmental psychologists focus on developmental changes in behavior and mental processes.
2. a. is the answer. (p. 185)
   b. Deduction, or deductive reasoning, is a formal operational ability.
   c. Piaget’s theory is not concerned with attachment.
   d. Attaining object permanence is the hallmark of sensorimotor thought.
3. b. is the answer. The preoperational child sees the world from his or her own vantage point. (p. 183)
   a. As immature as egocentrism is, it represents a significant cognitive advance over the sensorimotor child, who knows the world only through senses and actions. Even simple self-awareness takes a while to develop.
   c. & d. As children attain the operational stages, they become more able to see the world through the eyes of others.
4. a. is the answer. Before object permanence is attained, “out of sight” is truly “out of mind.” (p. 181)
   b., c. & d. Developments during the preoperational, concrete operational, and formal operational stages include the use of language, conservation, and abstract reasoning, respectively.
5. b. is the answer. The infant turns its head and begins sucking when its cheek is stroked. (p. 175)
   a., c. & d. These stimuli produce other reflexes in the newborn.
6. b. is the answer. (p. 189)
   a. When given the choice between a wire mother with a bottle and a cloth mother without, the monkeys preferred the cloth mother.
   c. The presence of other infants made no difference.
   d. Imprinting plays no role in the attachment of higher primates.
7. c. is the answer. Through maturation—an orderly sequence of biological growth processes that are relatively unaffected by experience—all humans develop. (p. 177)
   a. Conservation is the cognitive awareness that objects do not change with changes in shape.
   b. The forces of nature are those that direct maturation.
   d. The continuity/stages debate has to do with whether development is a gradual and continuous process or a discontinuous, stage-like process. Those who emphasize maturation see development as occurring in stages, not continuously.
8. d. is the answer. Erikson proposed that development occurs in a series of stages, in the first of which the child develops an attitude of either basic trust or mistrust. (p. 191)
   a. Piaget’s theory is concerned with cognitive development.
   b. Harlow conducted research on attachment and deprivation.
   c. Vygotsky focused on the influence of social factors on cognitive development.
9. b. is the answer. (p. 178)
10. a. is the answer. (p. 202)
11. d. is the answer. At the preconventional level, moral reasoning centers on self-interest, whether this means obtaining rewards or avoiding punishment. (p. 200)
   a. & b. Moral reasoning based on a sense of social duty or a desire to gain social approval is associated with the conventional level of moral development.
   c. Reasoning based on ethical principles is characteristic of the postconventional level of moral development.

12. d. is the answer. Boys who show early physical maturation are generally stronger and more athletic than boys who mature late; these qualities may lead to greater popularity and self-assurance. (p. 198)
   a. & c. Early maturation tends to be socially advantageous for boys but not for girls.
   b. Early maturing girls often suffer embarrassment and are objects of teasing.

13. b. is the answer. (p. 215)
   a. Fluid intelligence tends to decrease with age.
   c. & d. Crystallized intelligence refers to the accumulation of facts and general knowledge that takes place during a person's life. Crystallized intelligence generally increases with age.

14. c. is the answer. (p. 198)
   a. Puberty refers to the early adolescent period during which accelerated growth and sexual maturation occur, not to the first menstrual period.
   b. Menopause is the cessation of menstruation, which typically occurs in the early fifties.
   d. In Erikson's theory, generativity, or the sense of contributing and being productive, is the task of middle adulthood.

15. d. is the answer. (p. 222)
   a. Generativity is associated with middle adulthood.
   b. & c. Intimacy and isolation are associated with young adulthood.

16. c. is the answer. Once formal operational thought has been attained, thinking is no longer limited to concrete propositions. (p. 185)
   a. & b. Preoperational thought and concrete operational thought emerge before, and do not include, the ability to think logically about abstract propositions.
   d. Fluid intelligence refers to abstract reasoning abilities; however, it is unrelated to Piaget's theory and stages.

17. a. is the answer. (p. 213)
   b., c., & d. These cognitive abilities remain essentially unchanged as the person ages.

18. d. is the answer. "Use it or lose it" seems to be the rule: Often, changes in activity patterns contribute significantly to problems regarded as being part of usual aging. (p. 212)
   a. Most older people suffer some memory loss but remember some events very well.
   b. Although older people are more subject to long-term ailments than younger adults, they actually suffer fewer short-term ailments.
   c. People of all ages report equal happiness or satisfaction with life.

19. b. is the answer. (p. 214)
20. b. is the answer. (p. 197)
21. c. is the answer. Because the late teen years provide many new opportunities for trying out possible roles, adolescents' identities typically incorporate an increasingly positive self-concept. (p. 204)

22. d. is the answer. The physical changes of puberty mark the onset of adolescence. (p. 197)
   a. & b. An identity crisis or parent-child conflict may or may not occur during adolescence; neither of these formally marks its onset.
   c. Formal operational thought, rather than concrete reasoning, typically develops in adolescence.

23. d. is the answer. (pp. 211–212)
24. b. is the answer. (p. 207)
   a. Menarche refers to the onset of menstruation.
   c. When it does occur, the midlife crisis is a psychological, rather than biological, phenomenon.
   d. Generativity is Erikson's term for productivity during middle adulthood.

**True-False Items**

1. F (p. 192) 5. F (p. 222) 9. F (p. 216)

**Progress Test 2**

1. d. is the answer. With object permanence, a child develops schemas for familiar objects, including faces, and may become upset by a stranger who does not fit any of these schemas. (p. 188)
   a. The concept of conservation develops during the concrete operational stage, whereas stranger anxiety develops during the sensorimotor stage.
   b. & c. Egocentrism and a theory of mind both develop during the preoperational stage. This follows the sensorimotor stage, during which stranger anxiety develops.
2. a. is the answer. (p. 179)
   b., c., & d. Each of these is an understanding developed by Piaget.
3. a. is the answer. (p. 181)
4. a. is the answer. Any drug taken by the mother passes through the placenta and enters the child’s bloodstream. (p. 175)
   b. Addiction cannot be inherited; it requires exposure to an addictive drug.
   c. Drugs may disrupt the mechanisms of heredity, but there is no evidence that such changes promote addiction.
   d. This answer is incorrect because at no age does the blood “resist” drugs.
5. c. is the answer. (p. 175)
   a., b., & d. A child’s emotional temperament, attachment, and addiction have not been linked to the mother’s drinking while pregnant.
6. b. is the answer. (p. 174)
7. d. is the answer. A critical period is a restricted time during which an organism must be exposed to certain influences or experiences for a particular kind of learning to occur. (p. 189)
   a. Critical periods refer to developmental periods after birth.
   b. Critical periods vary from behavior to behavior, but they are not confined to the hours following birth.
   c. Critical periods are not specifically associated with the preoperational period.
8. c. is the answer. Deprived monkeys were impaired in their social behaviors but not in their physical development. (p. 192)
   a., b., & c. Each of these was found in socially deprived monkeys.
9. d. is the answer. This is because of a lack of neural connections before that age. (p. 178)
10. c. is the answer. (p. 190)
    a. Insecurely attached infants often cling to their mothers when placed in a new situation; yet, when the mother returns after an absence, the infant’s reaction tends to be one of indifference.
    b. These behaviors are characteristic of securely attached infants.
    d. Insecurely attached infants in unfamiliar surroundings will often exhibit a range of emotional behaviors.
11. d. is the answer. (p. 200)
    a. Erikson is known for his theory of psychosocial development.
    b. Piaget is known for his theory of cognitive development.
    c. Harlow is known for his studies of attachment in infant monkeys.
12. a. is the answer. (p. 214)
    b. This answer describes the longitudinal research method.
    c. & d. Cross-sectional studies have tended to exaggerate the negative effects of aging on intellectual functioning; for this reason they may not be the most appropriate method for studying lifespan development.
13. c. is the answer. Different societies and eras have somewhat different ideas about the age at which major life events should ideally occur. (p. 217)
14. c. is the answer. (p. 200)
    a. Preconventional morality is based on avoiding punishment and obtaining rewards.
    b. Conventional morality is based on gaining the approval of others and/or on following the law and social convention.
    d. There is no such thing as generative morality.
15. a. is the answer. (pp. 202, 204)
    b. According to Erikson, identity develops before intimacy.
    c. & d. The formation of basic trust is the task of infancy.
16. c. is the answer. (p. 175)
    a. & b. Physical and cognitive abnormalities usually result from teratogens, but that’s not a definition of a teratogen.
    d. A fertilized egg is a zygote.
17. a. is the answer. A mathematician’s skills are likely to reflect abstract reasoning, or fluid intelligence, which declines with age. (p. 216)
    b. & d. Philosophy and literature are fields in which individuals often do their most notable work later in life, after more experiential knowledge (crystallized intelligence) has accumulated.
18. d. is the answer. (p. 219)
    a., b., & c. Most couples do not feel a loss of purpose or marital strain following the departure of grown children.
19. d. is the answer. Significantly, drugs that block the activity of the neurotransmitter acetylcholine produce Alzheimer’s-like symptoms. (p. 212)
    a. & b. Epinephrine and norepinephrine are hormones produced by the adrenal glands of the endocrine system.
    c. Serotonin is a neurotransmitter and hence is produced by neurons, but it has not been implicated in Alzheimer’s disease.
20. d. is the answer. (p. 215)
   a. & b. Fluid intelligence, which decreases with age, refers to the ability to reason abstractly.
   c. Crystallized intelligence increases with age.
21. a. is the answer. (p. 210)
22. d. is the answer. (p. 218)
23. d. is the answer. (p. 222)

Psychology Applied

Multiple-Choice Questions

1. d. is the answer. (p. 184)
2. b. is the answer. (p. 178)
   a. & d. Although the rate of motor development varies from child to child, the basic sequence is universal and, therefore, predictable.
   c. Rolling over and head lifting are both learned.
3. a. is the answer. Mathematical and philosophical reasoning involve fluid and crystallized intelligence, respectively. Because fluid intelligence generally declines with age while crystallized intelligence increases, it is likely that significant mathematical accomplishments will occur at an earlier age than philosophical accomplishments. (p. 216)
4. c. is the answer. Early maturing boys tend to be more popular. (p. 198)
   a. Early maturing girls may temporarily suffer embarrassment and be the objects of teasing.
   b. & d. The social benefits of early or late maturation are based on physical development, not on cognitive skills.
5. c. is the answer. This test is designed to determine if the child understands that the quantity of liquid is conserved, despite the shift to a container that is different in shape. (p. 183)
   a. These are general processes related to concept building.
   b. Object permanence is the concept that an object continues to exist even when not perceived; in this case, the water is perceived throughout the experiment.
   d. This experiment does not require abstract reasoning, only the ability to reason logically about the concrete.
6. a. is the answer. This child’s age and stranger anxiety clearly place him within Piaget’s sensorimotor stage. (pp. 181, 188)
7. b. is the answer. This child’s age, ability to use language, and egocentrism clearly place her within Piaget’s preoperational stage. (p. 183)
8. d. is the answer. Conservation is a hallmark of the concrete operational stage; egocentrism is a hallmark of the preoperational stage. (pp. 183, 185)
9. c. is the answer. Being 4 years old, Jamail would be in Piaget’s preoperational stage. Preoperational thinking is egocentric, which means Jamail would find it difficult to “put himself in his sister’s shoes” and perceive that she has a brother. (p. 183)
10. b. is the answer. (p. 189)
   a. Conservation is the ability to realize that the amount of an object does not change even if its shape changes.
   c. Egocentrism is having difficulty perceiving things from another’s perspective.
   d. According to Erikson, basic trust is feeling that the world is safe as a result of sensitive, loving caregivers.
11. a. is the answer. Although loving parents will also produce securely attached children, Erikson’s theory deals with trust or mistrust. (p. 191)
   c. Control is not a factor in this stage of Erikson’s theory.
   d. Egocentrism is an aspect of Piaget’s cognitive theory.
12. d. is the answer. (p. 204)
   a. This description of Cassandra’s feelings does not suggest that her relationship with her parents is deteriorating. Cassandra’s social development, like that of most adolescents, is coming under increasing peer influence and diminishing parental influence.
   b. & c. Because Cassandra’s feelings are normal, there is no reason for her to change her circle of friends or for her parents to seek counseling.
13. c. is the answer. (p. 199)
   a., b., & d. Piaget did not link cognitive ability to amount of schooling, gender, or differences in how boys and girls are socialized.
14. c. is the answer. Reasoning is based on fluid intelligence. (p. 215)
   a. There is no “analytic” intelligence.
   b. Crystallized intelligence increases up to old age.
   d. Preoperational refers to the thinking of young children before they are capable of reasoning.
15. c. is the answer. Because several variables (education, affluence, etc.) generally distinguish the various groups in a cross-sectional study, it is impossible to rule out that one or more of these, rather than aging, is the cause of the measured intellectual decrease. (p. 214)
a. Small sample size and unrepresentativeness generally are not limitations of cross-sectional research.
b. This refers to longitudinal research.

16. d. is the answer. (p. 213)
a. & c. In tests of recognition memory, the performance of older persons shows little decline.
b. The ability to recall material, especially meaningless material, declines with age.

17. d. is the answer. Research has not uncovered a tendency for people of any particular age group to report greater feelings of satisfaction or well-being. (pp. 220–221)

18. c. is the answer. Although some researchers emphasize stability and others emphasize potential for change, they all agree that stability increases over the life span. (p. 224)
a. One criticism of stage theories is that development does not occur in sharply defined stages.
b. Research has shown that individuals' adult personalities cannot be predicted from their first two years.
d. Social and emotional style are two of the most stable traits.

19. b. is the answer. Conventional morality is based in part on a desire to gain others' approval. (p. 200)
a. Preconventional reasoning is based on external incentives such as gaining a reward or avoiding punishment.
b. Postconventional morality reflects an affirmation of agreed-upon rights or universal ethical principles.
c. Fear of others' disapproval is one of the bases of conventional moral reasoning.

20. b. b. is the answer. (p. 205)
a. In fact, just the opposite is true: Parental influence on children decreases during adolescence.
b. Teens reflect their parents' social, political, and religious views, but rely on peers for matters of personal taste.

21. c. is the answer. Carlos' age and struggle to form a close relationship place him squarely in this stage. (p. 204)
a. Trust versus mistrust is the psychosocial task of infancy.
b. Autonomy versus doubt is the psychosocial task of toddlerhood.
c. Identity versus role confusion is the psychosocial task of adolescence.

Essay Question
Sheryl's age would place her at the threshold of Piaget's stage of formal operations. Although her thinking is probably still somewhat self-focused, Sheryl is becoming capable of abstract, logical thought. This will increasingly allow her to reason hypothetically and deductively. Because her logical thinking also enables her to detect inconsistencies in others' reasoning and between their ideals and actions, Sheryl and her parents may be having some heated debates about now.

According to Kohlberg, Sheryl is probably at the threshold of postconventional morality. When she was younger, Sheryl probably abided by rules in order to gain social approval, or simply because "rules are rules" (conventional morality). Now that she is older, Sheryl's moral reasoning will increasingly be based on her own personal code of ethics and an affirmation of people's agreed-upon rights.

According to Erikson, psychosocial development occurs in eight stages, each of which focuses on a particular task. As an adolescent, Sheryl's psychosocial task is to develop a sense of self by testing roles, then integrating them to form a single identity. Erikson called this stage identity versus role confusion.

Key Terms
Writing Definitions

1. Developmental psychology is the branch of psychology concerned with physical, cognitive, and social change throughout the life span. (p. 173)
2. The zygote (a term derived from the Greek word for "joint") is the fertilized egg, that is, the cluster of cells formed during conception by the union of sperm and egg. (p. 174)
3. The embryo is the developing prenatal organism from about 2 weeks through 2 months after conception; formed from the inner cells of the zygote. (p. 174)
4. The fetus is the developing prenatal human from 9 weeks after conception to birth. (p. 174)
5. Teratogens (literally, poisons) are any chemicals and viruses that cross the mother's placenta and can harm the developing embryo or fetus. (p. 175)
6. Fetal alcohol syndrome (FAS) refers to the physical and cognitive abnormalities that heavy drinking by a pregnant woman may cause in the developing child. (p. 175)
7. A simple form of learning used to study infant cognition, habituation is decreasing responsiveness to a stimulus that is repeatedly presented. (p. 175)
8. Maturation refers to the biological growth processes that enable orderly changes in behavior, relatively uninfluenced by experience or other environmental factors. (p. 177)
Example: The ability to walk depends on a certain level of neural and muscular maturation. For this reason, until the toddler’s body is physically ready to walk, practice “walking” has little effect.

9. Cognition refers to all the mental processes associated with thinking, knowing, remembering, and communicating. (p. 179)

10. In Piaget’s theory of cognitive development, schemas are mental concepts or frameworks that organize and interpret information. (p. 180)

11. In Piaget’s theory, assimilation refers to interpreting a new experience in terms of an existing schema. (p. 180)

12. In Piaget’s theory, accommodation refers to changing an existing schema to incorporate new information that cannot be assimilated. (p. 180)

13. In Piaget’s theory of cognitive stages, the sensorimotor stage lasts from birth to nearly age 2. During this stage, infants gain knowledge of the world through their senses and their motor activities. (p. 181)

14. Object permanence, which develops during the sensorimotor stage, is the awareness that things do not cease to exist when not perceived. (p. 181)

15. In Piaget’s theory, the preoperational stage lasts from about 2 to 6 or 7 years of age. During this stage, language development is rapid, but the child is unable to understand the mental operations of concrete logic. (p. 183)

16. Conservation is the principle that properties such as number, volume, and mass remain constant despite changes in the forms of objects; it is acquired during the concrete operational stage. (p. 183)

17. In Piaget’s theory, egocentrism refers to the difficulty that preoperational children have in considering another’s viewpoint. Ego means “self,” and centrism indicates “in the center”; the preoperational child is “self-centered.” (p. 183)

18. Our ideas about our own and others’ thoughts, feelings, and perceptions and the behaviors these might predict constitute our theory of mind. (p. 184)

19. During the concrete operational stage, lasting from about ages 6 or 7 to 11, children can think logically about concrete events and objects. (p. 185)

20. In Piaget’s theory, the formal operational stage normally begins about age 12. During this stage people begin to think logically about abstract concepts. (p. 185)

Memory aid: To help differentiate Piaget’s stages remember that “operations” are mental transformations. Preoperational children, who lack the ability to perform transformations, are “before” this developmental milestone. Concrete operational children can operate on real, or concrete, objects. Formal operational children can perform logical transformations on abstract concepts.

21. Autism is a disorder that appears in childhood and is marked by deficient communication, social interaction, and understanding of others’ states of mind. (p. 186)

22. Stranger anxiety is the fear of strangers that infants begin to display by about 8 months of age. (p. 188)

23. Attachment is an emotional tie with another person, shown in young children by their seeking closeness to a caregiver and showing distress on separation. (p. 188)

24. A critical period is a limited time shortly after birth during which an organism must be exposed to certain stimuli or experiences if it is to develop properly. (p. 189)

25. Imprinting is the process by which certain animals form attachments during a limited critical period early in life. (p. 189)

26. According to Erikson, basic trust is a sense that the world is predictable and trustworthy, a concept that infants form if their needs are met by responsive caregiving. (p. 191)

27. Self-concept is our understanding and evaluation of who we are. (p. 194)

28. Adolescence refers to the life stage from puberty to independent adulthood, denoted physically by a growth spurt and maturation of primary and secondary sex characteristics, cognitively by the onset of formal operational thought, and socially by the formation of identity. (p. 196)

29. Puberty is the early adolescent period of sexual maturation, during which a person becomes capable of reproducing. (p. 197)

30. The primary sex characteristics are the body structures (ovaries, testes, and external genitalia) that enable reproduction. (p. 197)

31. The secondary sex characteristics are the nonreproductive sexual characteristics, for example, female breasts, male voice quality, and body hair. (pp. 197–198)

32. Menarche is the first menstrual period. (p. 198)

33. In Erikson’s theory, establishing an identity, or one’s sense of self, is the primary task of adolescence. (p. 203)
34. **Social identity** refers to person's self-concept as defined by the groups to which he or she belongs. (p. 203)

35. In Erikson's theory, **intimacy**, or the ability to establish close, loving relationships, is the primary task of late adolescence and early adulthood. (p. 204)

36. **Emerging adulthood** is the period from age 18 to the mid-twenties, when many young people are not yet fully independent. (p. 206)

37. **Menopause** is the cessation of menstruation and typically occurs in the early fifties. It also refers to the biological changes experienced during a woman's years of declining ability to reproduce. (p. 207)

38. In a **cross-sectional study**, people of different ages are compared with one another. (p. 214)

39. In a **longitudinal study**, the same people are tested and retested over a period of years. (p. 214)

40. **Crystallized intelligence** refers to those aspects of intellectual ability, such as vocabulary and general knowledge, that reflect accumulated learning. Crystallized intelligence tends to increase with age. (p. 215)

41. **Fluid intelligence** refers to a person's ability to reason speedily and abstractly. Fluid intelligence tends to decline with age. (p. 215)

42. The **social clock** refers to the culturally preferred timing of social events, such as leaving home, marrying, having children, and retiring. (p. 217)

**Cross-Check**

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