

**Adolescent Development: Introducing the Basics**  
Learning Activities developed for the  
National Collaborative on Workforce and Disability for Youth, 2006

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**Introduction**

The following lessons are designed to help explain the changes that occur in youth during adolescence and the effect these changes have on the workforce development and education aspects of their lives. In turn, practitioners participating in these lessons will be able to work more effectively with youth during this phase of life when adolescents are attempting to identify and formulate their self-image, values, and ideals along with gaining independence from their parents or guardians. Through a better understanding of adolescent development, practitioners will be better prepared to help youth establish goals and strengthen decision-making skills, help youth explore occupations, and discuss with youth the best mix of education, training, and work experience for their prospective industry or career choice.

**Objectives**

Through the information and activities, **participants will be able to:**

I.1.1A Identify, describe and critique youth development theories and models, such as Forum for Youth Investment's Five Areas of Youth Development, Search Institute's "Developmental Assets" Theory, NCWD/Y's Youth Development and Youth Leadership Areas, Kohlberg's Moral Reasoning theory, and Erikson and Piaget's Cognitive Development theory

I.1.1B Describe adolescent & human development in terms of physical, cognitive, emotional, social, and behavioral factors and developmental systems theory

I.1.1C Relate youth development and adolescent/human development to their work place setting and daily practice with youth.

## Lesson I: PSYCHOLOGICAL & COGNITIVE DEVELOPMENT

### **Objective**

The practitioner will:

Learn about several theories of adolescent psychological development and their applications to workforce development:

The practitioner will be able to:

1. Talk about the three stages of adolescence
2. Discuss several theories of cognitive development
3. Apply these stages and theories to their work with youth

### **Procedure**

#### **Read:**

### **BACKGROUND ON: THE PSYCHOLOGICAL DEVELOPMENT OF THE ADOLESCENT**

Adolescent maturation is a personal phase of development where youth have to establish their own beliefs, values, and what they want to accomplish out of life. Because adolescents constantly appraise themselves in a variety of ways, they are often characterized as being extremely self-conscious. However, the self-evaluation process leads to the beginning of long-range goal setting, emotional and social independence, and the making of a mature adult.

Three distinct stages can be identified in the psychological development of the adolescent, even though there is a great deal of overlap in the stages, and they may not occur during the age span indicated.

During **early adolescence** (ages 11-13), development usually centers around developing a new self-image due to their physiological changes. This stage is characterized by attempts to become independent and leave childhood behind. "Fitting in" with the crowd and conformity are also key characteristics. Adolescents need to make use of their newly acquired skills of logical thinking and ability to make judgments rationally.

At ages 14-15 (the period known as **mid-adolescence**), adolescents strive to loosen their ties to their parents, and their emotions and intellectual capacities increase. The adolescent becomes adventuresome and experiments with different ideas. This plays an important role in finding one's relations to oneself, groups, and the opposite sex. During this time, the adolescent battles over her/his own set of values versus those established by parents and other adult figures. **The adolescent also begins to take on more control of educational and vocational pursuits and advantages.** It is during this time that

adolescents' self-dependence and a sense of responsibility become apparent, along with their quest to contribute to society and find their place in it.

During **late adolescence** (ages range from 16 on), adolescents have a more stable sense of their identity and place in society. At this stage in life they should feel psychologically integrated and should have a fairly consistent view of the outside world. Adolescents should, by this time, have established a balance between their aspirations, fantasies, and reality. In order for them to achieve this balance they should be displaying concern for others through giving and caring, instead of the earlier childhood pattern of self-gratification. At the conclusion of late adolescence they should have designed or discovered their role in society, have set a realistic goal in life, and have begun in earnest to achieve it.

### **Using Developmental Psychology to Understand the Adolescent**

Explaining the psychological development of adolescents is difficult due to the lack of empirical research and the great variety of adolescent behavioral modes. However, developmental psychologists have formulated theories describing human psychological development which are useful in understanding adolescents. They demonstrate sequential patterns of development and make some rough estimates about the ages at which adolescents should demonstrate particular developmental characteristics. Because of the great benefits that developmental psychology offers both practitioners and parents in suggesting ways to help children in our society, and its usefulness in identifying children who lack skills, this unit will conclude by exploring three significant theories to show how they characterize adolescent development in the areas of cognition, moral reasoning, and establishing identity.

In developing strategies for youth that utilize these theories, a practitioner must find the overall level at which the group of youth is functioning. For example, once Piaget's theory is reviewed, the practitioner should develop lessons which will help youth move from the concrete level of thinking to the formal operational stage. This unit includes two activities in which Piaget's theory is performed with a group of adolescents. As you read the lesson plans based on Piaget's theory, it is the behavioral tasks that are important not the outcome. The more advanced the adolescents performing the experiment, the more systematically they will perform the task.

Upon completion of this exercise, the practitioner will discover the connection between Piaget's theory and Erickson's psychosocial theory. In order for the adolescent to develop a sense of industry (See Erickson's theory below for explanation), adolescents must feel that they are successful in school and in youth programs. Therefore, when adolescents complete "hands-on" academic or work-related tasks, they will feel good about themselves. Review of Erickson's theory below will stress to the practitioner the critical importance of identity development within the adolescent. In the lesson plans provided in this

curriculum unit, you will find exercises that will help adolescents critically think about their personalities and future vocation.

Another vital aspect of adolescent psychological development includes the evolution of values through moral reasoning. Lawrence Kohlberg's theory on moral development provides valuable insight into the evolution of moral reasoning within human beings. This theory provides practitioners a basis for understanding how this aspect of adolescent psychological development occurs and helps to categorize the level at which the adolescent reasons.

According to Kohlberg's theory, adolescents should be provided with hypothetical dilemmas where they can explore their feelings and openly discuss their viewpoints in choosing between conflicting scenarios. Through their discussions, adolescents become more aware of their power to make choices and decisions about their lives. Lesson plans reflecting this theory have been included involving two hypothetical situations which help to guide adolescent moral reasoning through group discussion. The practitioner's role in the lessons will be to act as a facilitator in encouraging the youths to voice and accept opinions of others.

### **Piaget's Theory of Cognitive Development**

Jean Piaget dedicated most of his life's work to understanding how children develop intellectually. His work on cognitive development is the most complete theory available today and is widely used. (Pulaski, 1970) According to Piaget's theory, children progress through four stages in their cognitive development—seriomotor (birth to two years of age), pre-operational (2 to 7 years of age), concrete operational (7 to 11 years of age) and formal operational (11 to 15 years of age). Each of these stages represents a qualitative leap forward in the child's ability to solve problems and reason logically.

As children enter adolescence, their cognitive abilities lie somewhere between Piaget's third stage of cognitive development—the period of concrete operational—and the fourth, or last stage—formal operational. During the concrete operational stage, children begin to understand the concept of conservation. From the Piaget perspective, conservation means that children realize that quantities remain the same, even if they are placed in containers of different shapes and sizes. The adolescent also becomes less egocentric, that is, he now understands that everyone does not see things in the same way that he does. The adolescent also becomes capable of reasoning deductively, performing simple operations with physical objects, and applying logic to arrive at conclusions. Even though adolescents at the latter part of this stage display some cognitive maturity, they still are incapable of thinking abstractly. During this stage, things are understood concretely and literally. For example, you cannot say: "That was the straw that broke the camels back," and expect the child to understand what you are talking about. Unrealistic math problems such as: if a

dog has six legs, then how many legs will four dogs have, will result in a child arguing that a dog does not have six legs.

However, once the adolescent enters the last stage—formal operational – he/she develops the ability to test hypotheses in a mature, scientific manner. They can communicate their position on complex ethical issues, and become capable of thinking abstractly. They can discuss abstract terms such as freedom or liberty without difficulty.

Although Piaget was not interested in formal teaching strategies, practitioners can apply Piaget's concepts. Examples of Piaget's theory being used in school includes: (1) using Piaget-like tasks to determine the intellectual ability of children and adolescents; (2) working with children and adolescents with cognitive levels in mind; (3) being careful to sequence instruction; (4) using assessments children and adolescents to determine what they have learned; (5) encouraging social interaction to facilitate learning, and (6) remembering that the thought processes of children and adolescents are not the same as adults. Piaget's theory could be applied to program settings in similar ways.

### **Erik Erikson's Psychosocial Theories**

Psychosocial theorists based the development of identity on the outcome of crises that occur during the life of a person. Psychosocial theorists define crises as times at which a person actively focuses on, and questions, aspects of his/her identity. Erickson's psychosocial theory states that human beings develop according to a preset plan, the epigenetic principle, that consist of two main elements. First, personality develops according to a predetermined pattern that is maturationally set. Second, each society is structured to encourage challenges that arise during these times.

According to Erikson's theory, individuals proceed through eight stages of development which begin at birth and conclude at death. If the particular crisis is handled appropriately, the outcome will be positive. If not, then a negative outcome will be the result. The two stages which involve conflicts that significantly affect early and late adolescent development are stage 4, the latency state (ages 6-11), and stage 5, puberty and adolescence (ages 12-18).

Stage four of Erikson's theory occurs during the middle school years when children must master skills in math, reading, and writing, basic skills which are necessary for almost any career path. At that time the child is faced with the conflict of industry versus inferiority. If the child masters the skills, the child develops a sense of industry and has a positive view of the achievement and their own abilities. However, if a child doesn't meet the expectations of mastering these skills and is constantly criticized, then he/she may develop a feeling of inferiority.

The fifth psychosocial stage occurs during the ages of 11-18. Adolescents begin to consider their futures and decide on careers. During this stage, they face the conflict of identity versus role confusion. If the adolescent formulates a satisfying plan of action about his/her future, the outcome is positive and establishment of identity is achieved. Adolescents who do not develop this sense of identity may develop "role confusion" and aimlessly move through life without any plan of action or sense of security about their future.

Erikson's theory demonstrates the importance of helping children establish their identity upon reaching adolescence. The child must master academic skills in order to feel positive about him/herself. In addition to monitoring skill mastery, the educator must cover the topic of career exploration, and expose the youth to as many career choices as possible. Should the youth show interest in a certain occupation, then exposure to the right vocational program or academic track can help him/her successfully pursue a goal.

### **Kohlberg's Theory of Moral Reasoning**

Lawrence Kohlberg viewed development in terms of different levels of reasoning applied to choices people make in their lives. This type of moral reasoning occurs throughout a person's life and depends on an individual's social interaction. A person evolves from one level of reasoning to another as he/she is able to understand the higher level of reasoning and is able to experience in social interactions a conflict that implies then to accept the newer, higher-level values. Kohlberg viewed moral reasoning in three levels which included six sequential stages. Kohlberg perceived these stages as universal, that is, no stage is ever skipped, and applicable to all cultures. Kohlberg stressed that the actual decisions people make are not important, but that the reasoning behind the decisions was important. This reasoning determines which stage of development a child is in.

Unlike the other theories discussed above, Kohlberg's developmental levels and stages are not related to age. Developmental levels are determined by the dilemmas people face and the reasoning they apply in making decisions to resolve these dilemmas. The levels of development range from reasoning based upon self-gratification (preconventional morality), to reasoning based upon conformity (conventional morality) to reasoning based upon individual values that have been internalized (postconventional morality). As each level and its respective stages are discussed below, it is important to remember that youths will function at a level or stage more so than others. Determination of the stage at which an youth is functioning must be determined by observation and evaluation of the reasoning applied by the child to the dilemmas he/she faces.

#### **Level One: Preconventional Morality**

At this level, the child makes decisions based on cultural roles of what is considered to be right or wrong. The reasoning applied is based upon reward and punishment and the satisfaction of their own needs. This level is divided into two stages.

***Stage One Punishment and Obedience Orientation.***

The person acting in this level avoids breaking rules because he/she may be punished. The individual demonstrates complete deference to rules. Often the interests of others are not considered.

***Stage Two Instrumental Relativist Orientation.***

The reasoning applied during this stage is the one that satisfies the needs of the individual and sometimes the needs of others. However, the only reason that the individual helps another is because a deal has been made where the person the individual helps owes him/her something.

*Level Two: Conventional Morality*

Conformity is the most important aspect at this level. The individual conforms to the expectation of others, including the general social order. Kohlberg has identified two stages within this level.

***Stage Three Interpersonal concordance or “Good Boy/Nice Girl Orientation.”***

Living up to the expectations of others and good behavior are the important considerations for the individual in this stage. There is an emphasis on gaining approval by being nice.

***Stage Four “Law and Order” Orientation.***

The person acting in this stage is oriented towards authority and maintaining the social order. The emphasis is on doing one’s duty and showing respect for authority.

*Level Three: Postconventional Morality*

People who are in this level make decisions on the basis of individual values that have been internalized. These values are not dependent on one’s friends, family, or group, but totally on the individual making the decision. The stages of reasoning also comprise this level.

***Stage Five Social Contract, Legalistic Orientation.***

In this stage, correct behavior is defined in terms of individual rights and the consensus of society. Right is a matter of personal opinion and values, but there is an emphasis on the legal point of view present here.

### **Stage Six Universal Ethical Principle Orientation.**

In this highest stage, the correct behavior is defined as a decision of conscience in accordance with self-chosen ethical principles that are logical, universal and consistent. These are very abstract guidelines. (Kohlberg and Kramer, 1969)

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## **Questions to Consider for Professionals Working with Adolescents**

Source: ReCAPP,

<http://www.etr.org/recapp/index.cfm?fuseaction=pages.TheoriesDetail&PageID=339>

- How does the work that you (or your organization) do incorporate what we know about adolescent development?
- Are the program activities you are currently implementing appropriate to adolescent physical, cognitive, emotional, social, and behavioral development? What evidence do you have to support your answer?
- How would you adapt the current program you are using to better meet the developmental capacities of the early, middle and late adolescent? How would the program change for the three different stages of adolescence?
- How well do you think the adults working with teens you know understand and apply adolescent development principles to the work they do with teens?
- If your answer to the last question was something like "not so well," then how might you open the dialogue about adolescent development with these adults?

### **Other possible Mini-Activities**

- 1. From an assigned life stage, identify a specific issue or condition, i.e. biological, psychological, or social, that developmental theory has consistently associated with the life stage. Develop a presentation that includes:**
  - An overview of the issue or condition (define and describe the issue or condition);
  - Link potential individual outcomes to family and community systems.
  - Social and developmental theories: Discuss the underlying relationship between individuals in the assigned life stage and factors that put them at risk for the identified issue or condition.

## 2. Acquire techniques for observing, recording, and reporting observable behaviors of "at-risk" children and adolescents.

- Define anecdotal and documentation recording procedure.
- Record at least five observations of either child or adolescent behavior per week, ensuring subject confidentiality.
- Compare observed behaviors to published milestones or age expectancy.
- Recognize observable symptoms of visual, hearing, speech, learning and behavior disorder.
- Identify inappropriate behaviors as either normal, problem or referable, based published milestones
- Describe possible intervention strategies involving youth, parent, and organizational staff to reduce specific identified inappropriate behaviors.
- Demonstrate skills for recommending appropriate placement in programs based upon knowledge of the individual's learning level and stage of development.

## 3. Implementation of Youth Work Philosophy Observation Assignment

**GOAL: For you to consider WHY practitioners do what they do in the program setting and the match between beliefs and practices.**

For the following five exercises, jot down your notes in a journal.

Do each exercise during different activities, perhaps with different practitioners.

- A. Describe how principles of reinforcement are used to manipulate youths' behavior during an activity. Think how subtle methods are used such as verbal praise.

Encouraging Desirable Behavior:

- Negative: removing something bad, i.e. "Okay, because you were so cooperative in group today, I won't keep you after for five minutes."
- Positive: giving something good, i.e. "Thank you for being so cooperative in group today, you can work on the computer today."

Discouraging Undesirable Behavior:

- Punishment: give something bad, i.e. "Stop fighting, you'll have to stop working with this group" or removing something good, i.e. "You have talked too much during this session so you will not be able to leave the program early today."

How effective do you believe the use of behaviorist principles were in these instances? What were the short term effects? What do you think will be the long term effects?

- B. Look for evidence that these guiding principles of constructivism are being used:
- Posing problems of emerging relevance to youth
  - Structuring learning around primary concepts: the quest for essence (What is this really all about? Looking for main points or themes.)
  - Seeking and valuing youths' points of view
  - Adapting curriculum/program to address youths' suppositions and ideas
  - Assessing youth learning in the context of program activities

Describe your findings.

What were the short term effects of the lack or presence of these principles in the given setting? What will be the long term effects?

- C. Describe the practitioner's goals for the activity.
- What are the content goals? Who decided what the content should be?
  - What is the purpose of this activity? Is it for the individual (i.e. to create individual meaning)? For "society" (i.e. to acquire unchanging ideas)?
  - What methods are used to educate the youth?
  - Do youth make decisions regarding the curriculum/program they follow?

Of the theorists you have explored, who do you think this practitioner's philosophy is similar to? Why? Do you think this philosophy is effective for this group of youths? Why? What other philosophy might be more effective? Why?

- D. Ask the practitioner you observed for exercise (C ) about his/her philosophy of youth work. Try to get answers to our four questions. What is the purpose of this activity? What methods are used? What is the content? (and who decides?) What is youths' role? Do not necessarily ask these specific questions, but try to get a feel for why the practitioner does what he/she does.
- E. From your perspective, did the practitioner observed in exercise (C ) match her/his philosophy with his/her practice? Why? Why not? Reflect on how you might create a match between your philosophy/beliefs. What types of things would you do in your program that would indicate to an observer what your philosophy of youth work is?

- F. Using notes from your journal, SUMMARIZE your findings from the five exercises. What did you learn from the exercises? What aspects of the experience were valuable? What aspects of the experience were less valuable? What might make it more valuable?

#### 4. Intellectual, Social, and Physical Development of Youth - Observation Assignment

**GOAL:** For you to consider the role that youth's cognitive, social, and physical development plays in the situations that you are observing.

**OVERVIEW:** Observe a couple of settings while you think of the perspectives outlined in the Topics A through C below. Write in your journal answers to questions under those topics.

##### A. Emotional and Practical Intelligences

In your observations of youth so far, which youth appear to have higher **emotional** intelligence? Which have higher **practical** intelligence? What does that mean? How might the practitioner be affecting or utilizing youths' **emotional** or **practical** intelligence in this program? Why do you think so? In what ways might you nurture or capitalize on the emotional or practical intelligence of the youth in this program? Write your answers to these questions in your journal.

##### B. Multiple Intelligences

Many have suggested a number of ways to address multiple intelligences in the program and/or informal settings. In what ways are youths' different intelligences evident in this program? In job interviews, a typical question is "How would you address the multiple intelligences of your youth?" How would you adjust your activities with youth to affect and utilize their multiple intelligences? Write your answers to these questions in your journal.

##### C. Social and Physical Development

Erikson's stages of psychosocial development indicate that children are developing a sense of themselves at an early age. A critical time for girls occurs when they are developing confidence in themselves, particularly as they begin to look more like women—for boys, particularly as they begin to look like men, "try on personalities". How do you think this stage of development affects the dynamics and interactions in your situation or in the informal settings you are observing? Consider each youth and their

personal lives with family and friends. How might an awareness of these development and personal relationships impact your program design and interactions? Write your answers to these questions in your journal?

## **5. Motivation in the Program - Observation Assignment**

**GOAL:** For you to consider **WHY** adolescents do what they do and evidence of motivational principles in program settings.

**OVERVIEW:** observe two different groups with the following perspectives. Interview youth and staff about motivation issues. As you do this, write your findings in your journal. Write a paper summarizing your findings.

### **A. Observing Practitioner Expectations**

Using the tally sheet (See Activity 5 Worksheet Part 1) regarding general focus, for each participation/interaction with the practitioner, note the youth's name and make a tally in the appropriate column.

### **B. In the same setting, choose two youth. Choose one "low" and one "high". (In your reflection explain how you have defined these terms.)** Tally the marks on the individuals' focus handout.

6. Choose at least two youths in a class. Choose youths who seem to have different levels/types of motivation. Interview them regarding their motivation in class. Why do they choose to do what they do in class--participate, do assignments, etc. or not participate, do assignments, etc.?
7. Interview practitioners regarding participant motivation in class or activities. Why he/she think youths do what the practitioner wants them to do? Why do youths choose to not do what the staff wants them to do? Write a brief reflection regarding your discussion.

Activity 5 Worksheet Part 1  
**Observing Expectations**  
**General Class Focus**

Directions: For each participation/interaction with the practitioner, note the youth's name and make a tally in the appropriate column.

Youth	Volunteered to Contribute Orally	Asks for Help	Receives Praise (P) or Correction (C)

**Observing Practitioner Expectations**  
**Individual Youth's Focus**

Behaviors	Tallies/Notes	
	Youth A: "High"	Youth B: "Low"
Non-verbal behavior		
1. Smiles, nods, touches affectionately, etc.		
2. Frowns, ignores, touches roughly, etc.		
Questioning		
3. Asks a question		
4. Probes, encourages youth to respond		
5. Praises responses		
6. Criticizes response		
Instruction		
7. Gives instruction, teaches		
8. Evidence of ability grouping		
Other Interaction		
9. Positive interaction, e.g., identifying important points youth made		
10. Negative interaction, e.g. reprimanding		
Other observations:		

Adapted from Allyn and Bacon, Educational Psychology (1993)

## Activity 5 Worksheet Part 2

### **Questions for Practitioners to Ask to Help Them Monitor Behavior Toward High and Low Achievers Stipek, D. Motivation to Learn. (1988)**

1. Am I as friendly with low-achieving youth as I am with high-achieving youth?
2. Do I praise or encourage "lows" when they initiate comments?
3. Do I stay with "lows" in failure situations?
4. Do I praise "lows" only for performance that is truly deserving of praise (i.e. that required real effort)?
5. Do I call on "lows" in public situations?
6. How often do "lows" have positive success experiences in public situations?
7. Are "lows" placed in a "low group" and treated as group members rather than individuals?
8. Are "lows" needlessly criticized for wrong answers or failures to respond?
9. Do I ignore the minor inappropriate behavior of "lows," or do mild violations of program rules bring on strong reprimands?
10. Do I make assignments variable, interesting, and challenging for "lows"?
11. How frequently do "lows" have a chance to evaluate their own work and to make important decisions?
12. What are the work preferences of individual youth--do they like to work in pairs--and how often are those work preferences honored?
13. Do I intervene with "highs" when they are having difficulty?
14. Do I praise "highs" regardless of their effort or the quality of their performance?

### Youth Motivation

In your journal, write out observed examples of at least 3 of the following motivational issues then answer the questions below:

#### *Ability Conceptions:*

Youth who see ability as something that develops as the result of effort and persistence vs. youth who do not expect to succeed and who see ability as a fixed quantity.

#### *Task Orientation:*

Youth who are performance oriented vs. Task oriented Interest  
Adolescents who are intrinsically motivated vs. Extrinsically motivated

#### *Autonomy:*

Youth who are highly dependent on the practitioner v s. Independent from the practitioner and able to take responsibility.

*Utility Value:*

Youth who perceive the usefulness of an activity/connections to life outside the program vs. Youths who perceive the activity as useless and abstract.

- How do you think the issues raised affect the individual young person involved?
- How do you think the issues in each example affect the whole group of youth?
- How do you think the issues in each example affect the practitioner's actions?

## Lesson II:

### KOHLBERG'S THEORY OF MORAL REASONING

#### ***Objectives***

#### ***The participant will:***

1. Discuss the three levels at which youths and adults reason.
2. Identify the six stages involved in the three levels.

#### ***Procedure***

1. Using the information in the section titled "Kohlberg's Theory of Moral Development," explain the three levels at which people reason.
2. Explain the two levels underneath each section.
3. Make up situations for each of the six stages.

***Evaluation: Have participants list and explain the six stages of Kohlberg's Theory of Moral Reasoning.***

## Lesson III:

### YOUTH DEVELOPMENT THEORIES & MODELS

All effective youth programs have youth development at their core and all effective youth leadership programs build on solid youth development principles. This lesson focuses on **Youth Development Theories** (see Module IV, Unit IV.3 for Youth Leadership lessons). Based on its research of existing definitions, NCWD/Youth has adopted the following working definition of youth development adapted from NYEC and National Collaboration for Youth: **youth development** is a process which prepares young people to meet the challenges of adolescence and adulthood through a coordinated, progressive series of activities and experiences which help them to become socially, morally, emotionally, physically, and cognitively competent. Positive youth development addresses the broader developmental needs of youth, in contrast to deficit-based models that focus solely on youth problems.

#### **Objective**

#### **Participants will:**

1. Understand NCWD/Youth's working definition of youth development adapted from NYEC and National Collaboration for Youth
2. Distinguish between youth development and youth leadership definitions
3. Identify, compare and contrast a variety of youth development models
4. Investigate the five developmental areas identified by the Forum for Youth Investment, 2001: **working, learning, thriving, connecting, and leading** as an effective framework for understanding youth development.

#### **Procedure**

Participants should read NCWD/Youth *Youth Development & Youth Leadership Background Paper* available for free at: <http://www.ncwd-youth.info/youth-development/white-paper>.

Participants would be asked to produce or engage in a variety of activities that would help prepare them to better prepare youth in the five areas of development: working, learning, thriving, connecting, and leading. Suggested activities are listed below that correspond to the NCWD/Youth Five Areas of Development with Related Outcomes and Activities Chart.

**Chart A. Five Areas of Development with Related Outcomes and Activities**

	<b>Intended Youth Outcomes</b>	<b>Suggested Activities</b>
<b>Working</b>	<ul style="list-style-type: none"> <li>• Meaningful engagement in own career development process</li> <li>• Demonstrated skill in work readiness</li> <li>• Awareness of options for future employment, careers, and professional development</li> <li>• Completion of educational requirements or involvement in training that culminates in a specific vocation or opportunity for career advancement</li> <li>• Established involvement in meaningful work that offers advancement, satisfaction, and self-sufficiency</li> <li>• Positive attitude about one’s ability and future in working in a particular industry or the opportunities to grow into another</li> </ul>	<ul style="list-style-type: none"> <li>• Career exploration activities including career interest assessment, job shadowing, job and career fairs, and workplace visits and tours</li> <li>• Internships</li> <li>• Work experience, including summer employment</li> <li>• Information on entrepreneurship</li> <li>• Networking activities</li> <li>• Mock interviews</li> <li>• Work readiness workshops</li> <li>• Visits from representatives of specific industries to speak to youth about the employment opportunities and details of working within their industry</li> <li>• Mock job searches, including locating positions online and in the newspaper, “cold-calling,” preparing resumes, and writing cover letters and thank-you letters</li> <li>• Visits to education or training programs</li> <li>• Career goal setting and planning</li> <li>• Job coaching or mentoring</li> <li>• Learning activities using computers and other current workplace technology</li> </ul>
<b>Learning</b>	<ul style="list-style-type: none"> <li>• Basic aptitude in math and reading</li> <li>• Rational problem solving</li> <li>• Ability to think critically toward a positive outcome</li> <li>• Logical reasoning based on personal experience</li> <li>• Ability to determine one’s own skills and areas of academic weakness or need for further education and training</li> <li>• Sense of creativity</li> <li>• Appreciation and the foundation for lifelong learning, including a desire for further training and education, the knowledge of needed resources for said</li> </ul>	<ul style="list-style-type: none"> <li>• Initial and ongoing skills assessment, formal and informal</li> <li>• Initial and ongoing career and vocational assessment, formal and informal</li> <li>• Identification of one’s learning styles, strengths, and challenges</li> <li>• Creation of a personal development plan</li> <li>• Contextualized learning activities such as service-learning projects in which youth apply academic skills to community needs</li> <li>• Monitoring of and accountability for own grades and creation of a continuous improvement plan based on grades and goals</li> <li>• Showcase of work that highlights a youth’s learning experience (e.g. an essay, a painting, an algebra exam, etc.)</li> <li>• Development of a formal learning plan that includes long- and short-term goals and action steps</li> <li>• Group problem-solving activities</li> </ul>

In the table above, column one outlines the five areas of development identified by Ferber, Pittman, & Marshall (2002). Columns two and three list specific intended outcomes and suggested program activities identified by NCWD/Youth through its extensive review of the literature and existing practices.

**Chart A. Five Areas of Development with Related Outcomes and Activities**

	<b>Intended Youth Outcomes</b>	<b>Suggested Activities</b>
	training, and willingness for further planning	<ul style="list-style-type: none"> <li>• Preparation classes for GED, ACT, SAT, etc.</li> <li>• Peer tutoring activities that enhance the skills of the tutor and the student</li> </ul>
<b>Thriving</b>	<ul style="list-style-type: none"> <li>• Understanding of growth and development as both an objective and a personal indicator of physical and emotional maturation</li> <li>• Knowledge and practice of good nutrition and hygiene</li> <li>• Developmentally appropriate exercise (will vary depending on age, maturity, and range of physical abilities)</li> <li>• Ability to identify situations of safety and make safe choices on a daily basis</li> <li>• Ability to assess situations and environments independently</li> <li>• Capacity to identify and avoid unduly risky conditions and activities</li> <li>• Ability to learn from adverse situations and avoid them in the future</li> <li>• Confidence and sense of self-worth in relation to their own physical and mental status</li> </ul>	<ul style="list-style-type: none"> <li>• Workshops on benefits and consequences of various health, hygiene, and human development issues, including physical, sexual, and emotional development</li> <li>• Role playing adverse situations and how to resolve them</li> <li>• Personal and peer counseling</li> <li>• Training in conflict management and resolution concerning family, peer, and workplace relationships</li> <li>• Community mapping to create a directory of resources related to physical and mental health</li> <li>• Meal planning and preparation activities</li> <li>• Social activities that offer opportunities to practice skills in communication, negotiation, and personal presentation</li> <li>• Sports and recreational activities</li> <li>• Training in life skills</li> </ul>

In the table above, column one outlines the five areas of development identified by Ferber, Pittman, & Marshall (2002). Columns two and three list specific intended outcomes and suggested program activities identified by NCWD/Youth through its extensive review of the literature and existing practices.

**Chart A. Five Areas of Development with Related Outcomes and Activities**

	<b>Intended Youth Outcomes</b>	<b>Suggested Activities</b>
<b>Connecting</b>	<ul style="list-style-type: none"> <li>• Quality relationships with adults and peers</li> <li>• Interpersonal skills such as ability to build trust, handle conflict, value differences, listen actively, and communicate effectively</li> <li>• Sense of belonging and membership (i.e., valuing and being valued by others, being a part of a group or greater whole)</li> <li>• Ability to empathize with others</li> <li>• Sense of one’s own identity apart from and in relation to others</li> <li>• Knowledge of and ability to seek out resources in the community</li> <li>• Ability to network to develop personal and professional relationships</li> </ul>	<ul style="list-style-type: none"> <li>• Mentoring activities that connect youth to adult mentors</li> <li>• Tutoring activities that engage youth as tutors or in being tutored</li> <li>• Research activities identifying resources in the community to allow youth to practice conversation and investigation skills</li> <li>• Letter writing to friends, family members, and pen pals</li> <li>• Job and trade fairs to begin building a network of contacts in one’s career field of interest</li> <li>• Role plays of interview and other workplace scenarios</li> <li>• Positive peer and group activities that build camaraderie, teamwork, and belonging</li> <li>• Cultural activities that promote understanding and tolerance</li> </ul>
	<b>Youth Leadership Program specific:</b>	
	<ul style="list-style-type: none"> <li>• Ability to communicate to get a point across</li> <li>• Ability to influence others</li> <li>• Ability to motivate others</li> <li>• Ability to seek out role models who have been leaders</li> <li>• Ability to be a role model for others</li> </ul>	<ul style="list-style-type: none"> <li>• Workshops in public speaking</li> <li>• Research on historical or current leaders</li> <li>• Contact with local leaders</li> <li>• Strategic planning to change something in the community or within the youth program</li> </ul>

In the table above, column one outlines the five areas of development identified by Ferber, Pittman, & Marshall (2002). Columns two and three list specific intended outcomes and suggested program activities identified by NCWD/Youth through its extensive review of the literature and existing practices.

**Chart A. Five Areas of Development with Related Outcomes and Activities**

	<b>Intended Youth Outcomes</b>	<b>Suggested Activities</b>
<i>Leading</i>	<ul style="list-style-type: none"> <li>• Ability to articulate personal values</li> <li>• Awareness of how personal actions impact the larger communities</li> <li>• Ability to engage in the community in a positive manner</li> <li>• Respect and caring for oneself and others</li> <li>• Sense of responsibility to self and others</li> <li>• Integrity</li> <li>• Awareness of cultural differences among peers and the larger community</li> <li>• High expectations for self and community</li> <li>• Sense of purpose in goals and activities</li> <li>• Ability to follow the lead of others when appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• Personal plan development with goals, action steps, and deadlines</li> <li>• Resource mapping activities in which youth take the lead in planning and carrying out a search of community resources for youth</li> <li>• Voter registration and voting in local, state, and federal elections</li> <li>• Participation in town hall meetings</li> <li>• Community volunteerism such as organizing a park clean-up or building a playground</li> <li>• Participation in a debate on a local social issue</li> <li>• Training to be a peer mediator</li> <li>• Participation in a letter-writing campaign</li> <li>• Opportunities to meet with local and state officials and legislators</li> <li>• Participation in a youth advisory committee of the city, school board, training center, or other relevant organization</li> <li>• Learning activities or courses about leadership principles and styles</li> <li>• Group activities that promote collaboration and team work</li> <li>• Mentoring relationships with positive role models</li> <li>• Opportunities to serve in leadership roles such as club officer, board member, team captain, or coach</li> </ul>
	<b>Youth Leadership Program specific:</b>	
	<ul style="list-style-type: none"> <li>• Ability to motivate others</li> <li>• Ability to share power and distribute tasks</li> <li>• Ability to work with a team</li> <li>• Ability to resolve conflicts</li> <li>• Ability to create and communicate a vision</li> <li>• Ability to manage change and value continuous improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Mediation and conflict resolution training</li> <li>• Training in team dynamics</li> <li>• Training in project management</li> </ul>

In the table above, column one outlines the five areas of development identified by Ferber, Pittman, & Marshall (2002). Columns two and three list specific intended outcomes and suggested program activities identified by NCWD/Youth through its extensive review of the literature and existing practices.

## Chart B. Organizational & Program Components

Organizational Level			
Components of Youth Development Programs	Additional Components of Youth Leadership Programs	Additional Components for Disability Focus	
<ul style="list-style-type: none"> <li>• Clear mission and goals</li> <li>• Staff are trained, professional, supportive, committed, and youth-friendly</li> <li>• Safe and structured environment</li> </ul>	<ul style="list-style-type: none"> <li>• Youth involvement at all levels including administration and the Board of Directors</li> </ul>	<ul style="list-style-type: none"> <li>• Physically and programmatically accessible</li> <li>• Staff are aware, willing, prepared, and supported to make accommodations</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and inventory on your organizations physical and programmatically accessible</li> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>• Connections to community and other youth-serving organizations</li> </ul>		<ul style="list-style-type: none"> <li>• Knowledge of resources (national and community-specific) for youth with disabilities</li> <li>• Partnerships and collaboration with other agencies serving or assisting youth with disabilities</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a database of resources (national and community-specific) for youth with disabilities</li> </ul>
Programmatic Level			
Components of Youth Development Programs	Additional Components of Youth Leadership Programs	Additional Components for Disability Focus	
<ul style="list-style-type: none"> <li>• Focus on each young person's individual needs, assets, and interests</li> </ul>			
<ul style="list-style-type: none"> <li>• Hands-on experiential and varied activities</li> <li>• Youth involvement in developing and implementing activities</li> </ul>	<ul style="list-style-type: none"> <li>• Hands-on involvement at all programmatic levels such as planning, budgeting, implementing, and evaluating programs</li> </ul>		
<ul style="list-style-type: none"> <li>• Opportunities for success</li> <li>• Opportunities to try new roles</li> <li>• Youth leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple opportunities to develop and practice leadership skills</li> <li>• Varied, progressive leadership roles for youth: small group, large group, event, program</li> </ul>		
<ul style="list-style-type: none"> <li>• Mentoring/role models</li> </ul>		<ul style="list-style-type: none"> <li>• Ensure peer and adult role models and mentors include people with disabilities</li> </ul>	

### Chart B. Organizational & Program Components

<ul style="list-style-type: none"> <li>• Personal responsibility</li> </ul>		<ul style="list-style-type: none"> <li>• Self-advocacy skills building</li> <li>• Independent living information and assessment (career, employment, training, education, transportation, recreation, community resources, life skills, financial, benefits planning)</li> </ul>	
<ul style="list-style-type: none"> <li>• Family involvement and support</li> </ul>			
<ul style="list-style-type: none"> <li>• Opportunities for youth to develop self-awareness, identity, and values</li> </ul>	<ul style="list-style-type: none"> <li>• Education on community &amp; program values and history</li> </ul>	<ul style="list-style-type: none"> <li>• Disability history, law, culture, policies, and practices</li> </ul>	

**Procedure:** Review the Comparison of Youth Development Models Matrix in Chart C (next page) developed by NCWD/Youth and discuss which model most closely describes your organization.

**Chart C. Comparison of Youth Development Models**

<b>M O D E L S</b>	Combined list of competencies from all models (The numbers in parentheses after the competencies in each model correspond with the numbering in the list below.)	<b>Community Youth Development</b>	<b>Advancing Youth Development</b>  <b>Center for Youth Development &amp; Policy Research, Academy for Educational Development</b>	<b>Family &amp; Youth Services Bureau</b>  <b>US Department of Health and Human Services, Administration for Children and Families</b>	<b>Youth Development Institute</b>  <b>Fund for the City of New York</b>	<b>S.673 Youth Development Block Grant, 104<sup>th</sup> Congress</b>  <b>Supported by the National Collaboration for Youth</b>
<b>O U T C O M E S</b>  <b>C O M P E T E N C I E S</b>  <b>N E E D S</b>	1. Safety 2. Structure 3. Mastery 4. Future 5. Belonging 6. Membership 7. Self-Worth 8. Responsibility 9. Self-Awareness 10. Spirituality 11. Civic Ability 12. Social Ability 13. Intellectual Ability 14. Competence 15. Meaningful Role 16. Employability 17. Cultural Ability 18. Valued & Respected 19. Self-efficacy 20. Mental Health 21. Physical Health 22. Caring Adults 23. Learning Opportunities 24. Creativity	<u>Youth Needs:</u> <ul style="list-style-type: none"> <li>• Sense of safety and structure (1, 2)</li> <li>• Mastery of skills (3)</li> <li>• Sense of hope and belief in the future (4)</li> <li>• Belonging (5)</li> <li>• Self-worth (7)</li> <li>• Personal responsibility (8)</li> <li>• Self-awareness (9)</li> <li>• Spirituality (10)</li> <li>• Bonding and connection to others (12)</li> <li>• Sense of competence (14)</li> <li>• Meaningful role (15)</li> <li>• Valued and respected (18)</li> <li>• Self-efficacy (19)</li> </ul>	<u>Youth Outcomes</u>  <u>Aspects of Identity:</u> <ul style="list-style-type: none"> <li>• Safety and structure (1, 2)</li> <li>• Mastery and future (3, 4)</li> <li>• Belonging and membership (5, 6)</li> <li>• Self-worth (7)</li> <li>• Responsibility and autonomy (8, 19)</li> <li>• Self-awareness and spirituality (9, 10)</li> </ul> <u>Aspects of Ability:</u> <ul style="list-style-type: none"> <li>• Civic and social ability (11, 12)</li> <li>• Intellectual ability (13)</li> <li>• Employability (16)</li> <li>• Cultural ability (17)</li> <li>• Mental health (20)</li> <li>• Physical health (21)</li> </ul>	<u>Youth Needs:</u> <ul style="list-style-type: none"> <li>• Sense of safety (1)</li> <li>• Structure (2)</li> <li>• Mastery of skills (3)</li> <li>• Belonging and membership (5, 6)</li> <li>• Sense of self-worth predicated on achievement and character (7)</li> <li>• Responsibility (8)</li> <li>• Self-awareness (9)</li> <li>• Spirituality (10)</li> <li>• Support and guidance from caring adults (22)</li> <li>• Access to learning opportunities beyond the classroom (23)</li> </ul>	<u>Competency Areas:</u> <ul style="list-style-type: none"> <li>• <b>O</b>riginality (creative competency) (24)</li> <li>• <b>U</b>nderstanding ourselves and others (personal competency) (5, 9, )</li> <li>• <b>T</b>hinking and reasoning (cognitive competency) (13)</li> <li>• <b>C</b>ivic competency (11)</li> <li>• <b>O</b>ur bodies (physical health competency) (21)</li> <li>• <b>M</b>ental health competency (20)</li> <li>• <b>E</b>mployability competency (16)</li> <li>• <b>S</b>ocial Competency (12)</li> </ul>	<u>Competencies:</u> <ul style="list-style-type: none"> <li>• Social competencies (12)</li> <li>• Moral competencies (8, 11)</li> <li>• Emotional competencies (7, 9)</li> <li>• Physical competencies (21)</li> <li>• Cognitive competencies (13, 24)</li> </ul>

## Lesson IV:

### YOUTH DEVELOPMENT MODELS

In an effort to address the need for a comprehensive model to track both short- and long-term outcomes, researchers with the 4-H Youth Development department at Purdue University developed the Four-Fold Youth Development Model encompassing 47 development skills that youth need to become healthy and successful adults (Barkman & Machtmes, 2000). Based on an extensive literature search of both theoretical and empirical research, the model was created by combining four existing skill models: the SCANS Workforce Preparation Model developed by the US Department of Labor, NNST Science Process Skill Model developed by the National Network for Science and Technology, Iowa State University's Targeting Life Skills Model, and the Search Institute's Internal Assets. An accompanying website (<http://www.four-h.purdue.edu/fourfold>) was developed with resources and tools that practitioners can use to link program design to program evaluation. Practitioners designing programs can use the website to identify skills sets and corresponding activities that match a particular development skill they want to target in their program. Practitioners seeking to measure outcomes related to a targeted skill can download an evaluation instrument from the website, enter their own data, have it analyzed, and print a report. This resource was developed to be a cost effective, easy-to-use, and reliable means of measuring youth outcomes.

#### ***Objective: Participants will:***

1. Understand Purdue University's Four-Fold Youth Development Model
2. Distinguish between Purdue University's Four-Fold Youth Development Model and other youth development models
3. Understand the need for program logic models and the role it plays in program evaluation
4. Investigate Purdue University's Four-Fold Youth Development Model Four-Fold Instruments and the means to utilize the online data analysis program

#### ***Procedure***

Participants should visit Purdue University's Four-Fold Youth Development Model *website available for free at:*

<http://www.four-h.purdue.edu/fourfold>

Participants will create a program logic model for a specific youth program they have developed to determine the outcomes and goals of the program.

Participants will utilize one (or several) pre-created Purdue University's Four-Fold Youth Development Model Four-Fold Instruments (alternatively, participants

could create their own instrument for program measurement (pre/post test), collect data and submit to the online database.

Barkman, S. J. & Machtmes, K. L. (2000). Measuring the impact of youth development programs: The four-fold youth development model. CYD Journal, 1 (4), 42-45.

## **Lesson V: Sexual Maturation of the Female/Male Adolescent**

### ***Objective***

Participants will be able to:

Discuss the sequential pattern of the female/male adolescent's sexual maturation

### ***Procedure***

#### ***Read:***

## **BACKGROUND ON: THE PHYSIOLOGICAL DEVELOPMENT OF THE ADOLESCENT**

### **Introduction**

Adults tend to confuse the terms adolescence and puberty, and use them synonymously. However, there is a distinct difference. Puberty refers to the physiological changes involved in the sexual maturation of a child, as well as other body changes that may occur during this period of time, while adolescence refers to the stage from puberty to adulthood, and includes the psychological experiences of the child during this period. Adolescence is usually described as being the "teenage years" from thirteen to eighteen years of age; however, puberty decides the onset of adolescence. Therefore, adolescence can occur in some children as early as nine years of age. During this period of time the child has a great deal of concern over his or her body image. Adolescents face ongoing conflict and difficulty adapting to the sudden upsurge of sexual and aggressive drives. Some of these changes can cause unrest and confusion in the adolescents' inner selves and in the way they perceive the world. Discrepancies in the child's eye such as obesity, early or late maturation, etc., may be manifested through a variety of disorders.

### **What is Puberty?**

Puberty refers to the physiological changes that the adolescent undergoes in order to reach sexual maturity. It is best characterized as the gradual onset of mature reproductive hormonal activity, triggered by the central nervous system, mainly the hypothalamus and pituitary gland. Most people look at puberty in three distinct stages called the pre-pubescent, pubescent, and postpubescent. The prepubescent stage includes the first evidence of sexual maturation—primary sexual characteristics—and terminates at the first appearance of pubic hair. During this stage, reproduction is virtually impossible. During the pubescent stage the growth spurt begins to accelerate, males experience their first emission of semen usually in the form of "wet dreams," and menarche occurs in the females. The postpubescent stage is characterized by the deceleration of growth spurt, completion of both primary and sexual characteristics, and fertility is possible.

## **The Anatomical Development of the Adolescent**

Adolescent growth first centers on the extremities—the legs and arms during the early stages of adolescence. Changes also occur in the facial configurations of both sexes. The lower portion of the head begins to grow because the chin lengthens and the nose grows in width and/or length. Additional changes in proportion of the face are accredited to changes in tissue distribution. Even though both sexes undergo this change, within females a layer of subcutaneous fat develops which causes the rounding and softening of contours of the face and body. Whereas, the male subcutaneous fat development is much less pronounced, but the development of muscles and bones in the face is clearly seen. This gives the males a leaner and more angular face than the females.

Changes also occur on the surface of the body in both sexes. The most observable change is the growth on body hair, both pubic and axillary (armpit). The development of pubic hair is the first sign of a child ending the prepubescent stage and entering the pubescent stage. This process begins about the same time as the growth spurt begins, and is in the form of slightly coarse, straight hairs that grow at the base of the penis and on the labia majora. The growth of pubic hair continues throughout adolescence, it spreads horizontally and then vertically until it surrounds the genital areas. Characteristically, pubic hair becomes longer, thicker, darker and kinkier as it spreads over the genital areas. In males, the growth of facial and chest hair may be pronounced, and tends to represent virility in the eyes of the adolescent. Noticeable chest hair, with a thickness in texture does not usually appear until the postpubescent stage and continues to grow during manhood. Facial hair usually appears in the form of a dark shadow above the lip. Then it appears on the chin, along the jaw line, and then develops along the neck. Females may also find small amounts of facial and chest hair.

Both male and female skin undergoes other changes, such as becoming coarser with the sebaceous glands becoming more active, producing oily secretions which usually help cause acne or blackheads. Sweat usually causes an odor in adolescents because the chemistry and composition of sweat is altered by the oils that the sebaceous glands emit. Adolescents also show an increase in their blood pressure, and a decrease in both basal metabolic rate—the rate at which the body in a resting state (basal) consumes oxygen—and in pulse rate.

## **The Onset of Puberty in Adolescents**

Amazing as it may seem, sexual maturation is programmable for the primary sexual characteristics to begin their development, the pituitary gland must first release stimulating agents called gonadotropins into the bloodstream. Once they reach the testes in the male and the ovaries in the female, a number of changes will occur.

There are two gonadotropins: follicle stimulating hormone (FSH) and luteinizing hormone (LH). these gonadotropins are present in the adolescent during childhood, but at levels too low for sexual maturation to begin. At the beginning of puberty, the pituitary releases increased amounts of gonadotropins while the child is asleep and stops immediately after the child awakens. However, once the child enters the postpubescent stage, gonadotropins are released both during sleep and during the day. In the ovaries, follicle stimulating hormone is responsible for the development of the follicle which contains a developing ovum (egg). Follicle stimulating hormone also helps produce the female hormone estrogen within the follicle when it is stimulated by luteinizing hormone. In males, FSH incites the growth of seminiferous tubules, which produce sperm in the testes. Luteinizing hormone is responsible for producing androgen male hormone in the Leydig cells. The androgen that the Leydig cells produce, aids in the growth on the seminiferous tubules. As the adolescent grows older, the pituitary releases increased amounts of gonadotropins, ovaries and the testes grow more rapidly, and produce larger amounts of estrogen and/or androgen.

### **Sexual Maturation In the Male Adolescent**

Even though the male adolescent's growth rate varies from child to child, a sequential pattern has been identified. The typical sequence of events occurs as follows:

1. The testes and scrotum begin to increase in size.
2. Pubic hair begins to appear.
3. The penis begins to enlarge, and the adolescent growth spurt begins.
4. The larynx starts to grow and the voice deepens.
5. Hair growth begins on the upper lip.
6. Nocturnal emissions (ejaculation of semen during sleep) may occur as sperm production increases.
7. Pubic hair becomes pigmented, and growth spurt reaches its peak.
8. The prostate gland enlarges.
9. Hair growth begins in the axillas (armpits).
10. Sperm production becomes sufficient for fertility, and the growth rate decreases.
11. Physical strength is at its peak.

### **Sexual Maturation of the Female Adolescent**

Even though the female adolescent's growth rate varies from child to child, a sequential pattern has been identified. The typical sequence of events occur as follows:

1. The adolescent growth spurt begins.

2. Non-pigmented pubic hair (downy) appears.
3. The budding stage of development (breast elevation) and the rounding of the hip begins, accompanied by the beginning of downy axillary hair.
4. The uterus, vagina, labia and clitoris increase in size.
5. Pubic hair growth becomes rapid and is slightly pigmented.
6. Breast development advances, nipple pigmentation begins, and the areola increases in size. Axillary hair becomes slightly pigmented.
7. Growth spurt reaches its peak, and then declines.
8. Menarche occurs.
9. Pubic hair development is completed, followed by mature breast development and completion of axillary hair development.
10. "Adolescent sterility" ends, and the girl becomes capable of conception.

## **Menstruation**

The menstrual cycle is controlled by the hypothalamus, which acts as a menstrual clock. The clock operates through the pituitary gland located at the base of the brain. The pituitary gland cyclically secretes two hormones which directly stimulate the ovary these hormones are follicle stimulating and luteinizing hormones.

As follicle stimulating and luteinizing hormones act on the follicle, its cells multiply causing a large fluid—filled cavity to form. The growth and activity of the follicular cells result in the secretion of estrogen by the cells, and this hormone is found in the fluid of the follicle.

Luteinizing hormones cause the cells of the follicle to rupture and expel the ovum. Then the fluids and cells form a new structure called the corpus luteum. The corpus luteum is stimulated by the gonadotropins and initiate the production of the hormone, progesterone. Progesterone causes the lining of the uterus to change, thus getting it ready for the reception, embedding, and gestation of a fertilized ovum. The coordinated action of progesterone and estrogen makes the lining of the uterus an environment where an embryo can survive during pregnancy.

Menstruation occurs approximately every three to four weeks. If the ovum is not fertilized, most of the lining of the uterus mixed with blood is expelled through the cervix into the vagina. This bloody discharge is referred to as menstruation (menses) or a menstrual period. The entire cycle repeats itself with regularity throughout the reproductive life of the female. However, at its onset after puberty, menstruation may be irregular for up to a year or two.

## ***Procedure***

*Using the information presented, participants will discuss (oral or written) the steps involved in the female/male adolescent's sexual maturation sequentially*

**SEXUAL MATURATION OF THE MALE ADOLESCENT**  
**Place the steps in the correct sequential order**

- \_\_\_\_\_ A. The penis begins to enlarge, and the adolescent growth spurt begins
- \_\_\_\_\_ B. Pubic hair begins to appear
- \_\_\_\_\_ C. The larynx starts to grow and the voice deepens
- \_\_\_\_\_ D. The prostate gland enlarges
- \_\_\_\_\_ E. Hair growth begins on the upper lip
- \_\_\_\_\_ F. The testes and scrotum begin to increase in size
- \_\_\_\_\_ G. Physical strength is at its peak.
- \_\_\_\_\_ H. Nocturnal emissions (ejaculation of semen during sleep) may occur as sperm production increases
- \_\_\_\_\_ I. Sperm production becomes sufficient for fertility, and the growth rate decreases.
- \_\_\_\_\_ J. Pubic hair becomes pigmented, and growth spurt reaches its peak
- \_\_\_\_\_ K Hair growth begins in the axillas (armpits)

**SEXUAL MATURATION OF THE FEMALE ADOLESCENT:  
Place the steps in the correct sequential order**

- \_\_\_\_\_ A. Pubic hair growth becomes rapid and is slightly pigmented
- \_\_\_\_\_ B. Menarche occurs
- \_\_\_\_\_ C. The budding stage of development (breast elevation) and the rounding of the hip begins
- \_\_\_\_\_ D. The adolescent growth spurt begins
- \_\_\_\_\_ E. Breast development advances, nipple pigmentation begins, and the areola increases in size. Axillary hair becomes slightly pigmented
- \_\_\_\_\_ F. Pubic hair development is completed, followed by mature breast development and completion of axillary hair development accompanied by the beginning of downy axillary hair
- \_\_\_\_\_ G. "Adolescent sterility" ends, and the girl becomes capable of conception

\_\_\_\_\_ H. Non-pigmented pubic hair (downy) appears

\_\_\_\_\_ I. The uterus, vagina, labia and clitoris increase in size

\_\_\_\_\_ J. Growth spurt reaches its peak, and then declines

**SEXUAL MATURATION OF THE FEMALE/MALE ADOLESCENT  
EVALUATION KEY**

*Placing the steps in the correct sequential order*

## Male

- 3** A. The penis begins to enlarge, and the adolescent growth spurt begins
- 2** B. Pubic hair begins to appear
- 4** C. The larynx starts to grow and the voice deepens
- 8** D. The prostate gland enlarges
- 5** E. Hair growth begins on the upper lip
- 1** F. The testes and scrotum begin to increase in size
- 11** G. Physical strength is at its peak.
- 6** H. Nocturnal emissions (ejaculation of semen during sleep) may occur as sperm production increases
- 10** I. Sperm production becomes sufficient for fertility, and the growth rate decreases.
- 7** J. Pubic hair becomes pigmented, and growth spurt reaches its peak
- 9** K Hair growth begins in the axillae (armpits)

## Female

- 5 A. Pubic hair growth becomes rapid and is slightly pigmented
- 8 B. Menarche occurs
- 3 C. The budding stage of development (breast elevation) and the rounding of the hip begins
- 1 D. The adolescent growth spurt begins
- 6 E. Breast development advances, nipple pigmentation begins, and the areola increases in size. Axillary hair becomes slightly pigmented
- 9 F. Pubic hair development is completed, followed by mature breast development and completion of axillary hair development accompanied by the beginning of downy axillary hair
- 10 G. "Adolescent sterility" ends, and the girl becomes capable of conception
- 2 H Non-pigmented pubic hair (downy)
- 4 I. The uterus, vagina, labia, and clitoris increase in size
- 7 J. Growth spurt reaches its peak and then decline