

TEST I. HEALTH

SUBAREA I. PERSONAL HEALTH AND DEVELOPMENT

COMPETENCY 1.0 UNDERSTAND HUMAN GROWTH AND DEVELOPMENT

SKILL 1.1 Demonstrating knowledge of patterns, stages, and characteristics of physical, cognitive, social, and emotional growth and development

Physical development – Small children (ages 3-5) have a propensity for engaging in periods of a great deal of physical activity, punctuated by a need for a lot of rest. Children at this stage lack fine motor skills and cannot focus on small objects for very long. Their bones are still developing. At this age, girls tend to be better coordinated while boys tend to be stronger.

The lag in fine motor skills continues during the early elementary school years (ages 6-8).

Pre-adolescent children (ages 9-11) become stronger, leaner, and taller. Their motor skills improve, and they are able to sit still and focus for longer periods of time. Growth during this period is constant. This is also the time when gender-related physical predispositions will begin to show. Without proper nutrition and adequate activity, pre-adolescents are at risk of obesity.

Young adolescents (ages 12-14) experience drastic physical growth (girls earlier than boys) and are highly preoccupied with their physical appearance.

As children proceed to the later stages of adolescence (ages 15-17), girls will reach their full height, while boys will still have some growth remaining. The increase in hormone levels will cause acne, which coincides with a slight decrease of preoccupation with physical appearance. At this age, children may begin to initiate sexual activity (boys generally are more motivated by hormones, and girls more by peer pressure). There is a risk of teen pregnancy and sexually transmitted diseases.

Cognitive development – Language development is the most important aspect of cognitive development in small children (ages 3-5). Allowing successes, rewarding mature behavior and allowing the child to explore can improve confidence and self-esteem at this age.

Early elementary school children (Ages 6-8) are eager to learn and love to talk. Children at this age have a very literal understanding of rules and verbal instructions and must develop strong listening skills.

Pre-adolescent children (ages 9-11) display increased logical thought but their knowledge or beliefs may be unusual or surprising. Differences in cognitive styles develop at this age (e.g. field dependant or independent preferences).

In early adolescence (ages 12-14), boys tend to score higher on mechanical/spatial reasoning, and girls on spelling, language, and clerical tasks. Boys are better with mental imagery, and girls have better access and retrieval of information from memory. Self-efficacy (the ability to self-evaluate) becomes very important at this stage.

In later adolescence (ages 15-17), children are capable of formal thought, however they don't always apply this ability. Conflicts between teens' and parents' opinions and worldviews will arise. Children at this age may become interested in advanced political thinking.

Social development – Small children (ages 3-5) are socially flexible. Different children will prefer solitary play, parallel play, or cooperative play. Frequent minor quarrels will occur between children, and boys will tend to be more aggressive (children at these ages are already aware of gender roles).

Early elementary school children (ages 6-8) are increasingly selective of friends (usually of the same sex). Children at this age enjoy playing games but they are excessively preoccupied by the rules. Verbal aggression becomes more common than physical aggression and adults should encourage children at this age to solve their own conflicts.

Pre-adolescent children (ages 9-11) place great importance on the (perceived) opinions of their peers and of their social stature. They will also go to great lengths to 'fit in'. Friendships at this age are very selective and usually of the same sex.

Young adolescents (ages 12-14) develop greater understanding of the emotions of others resulting, in increased emotional sensitivity which impacts peer relationships. Children at this age develop an increased need to perform.

In the later stages of adolescence (ages 15-17), peers are still the primary influence on day-to-day decisions but parents have increasing influence on long-term goals. Girls' friendships tend to be close and intimate, whereas boys' friendships are based on competition and similar interests. Many children this age will work part-time and educators should be alert to signs of potential school dropouts.

Emotional development – Small children (ages 3-5) express emotion freely and have a limited ability to learn how emotions influence behavior. Jealousy at this age is common.

Early elementary school children (ages 6-8) have easily bruised feelings and are just beginning to recognize the feelings of others. Children this age will want to please teachers and other adults.

Pre-adolescent children (ages 9-11) develop a global and stable self-image (self-concept and self-esteem). Comparisons to their peers and the opinions of their peers are important. An unstable home environment at this age contributes to an increased risk of delinquency.

Young adolescence (ages 12-14) can be a stormy and stressful time for children but, in reality, this is only the case for roughly 20% of teens. Boys may have trouble controlling their anger and may display impulsive behavior. Girls may suffer depression. Young adolescents are very egocentric and concerned with appearance and will feel very strongly that “adults don’t understand.”

In later stages of adolescence (ages 15-17), educators should be alert to signs of surfacing mental health problems (e.g. eating disorders, substance abuse, schizophrenia, depression, and suicide).

SKILL 1.2 Recognizing factors that affect physical, cognitive, social, and emotional growth and development in childhood and adolescence (e.g., effects of economic factors on child development)

The effect of factors such as gender, age, environment, nutrition and heredity are crucial in understanding childhood and adolescence development. From a physiological standpoint, specifically in regard to the onset of puberty, girls normal range of onset is ages 8-14 in, while boys normal onset of puberty is ages 9-15. While environment (social, cultural and ambient) is considered to play a huge role in the age onset of both genders, it is more and more widely accepted and believed that the determination of the onset of puberty is also controlled by interactions between the brain and the pituitary glands.

Environment has and continues to be considered an extremely important contributing factor in all aspects of childhood and adolescent growth and development. Children that live in environments that include substance abuse tend to exhibit behavioral, emotional and social problems more readily than those that are not. Additionally, without adequate, healthy and appropriate social role models, children tend to have a difficult time forming positive social relationships with their peers. Without positive child-adult patterns, children's social growth and development is impaired. Research indicates without these, children have a much more difficult time acquiring skills needed later in life to carry out adult roles. Also, in adolescence, without proper social skill development through environmental influences, such as mentioned, healthy child-adult patterns, positive adult role models, students tend to have significant behavioral and development, negative consequences (i.e., sexual interactions at any early age, high risk behaviors, substance use/abuse, cigarette smoking, mental health problems). Other environment factors affecting growth and development of children and adolescents are adequate cleanliness, air quality, health care, neighborhood safety, parental involvement and family income.

Children's environments also need to provide or adequate sleep. Sufficient sleep for children is considered to be 7-8 hours a night and is critical for all areas of childhood growth and development. During sleep, the body performs many important cleansing and restoration tasks. Most importantly, the immune and excretory systems clear waste and repair cellular damage that accumulates in the body each day. Lack of sufficient amount of sleep leaves the body much more vulnerable and susceptible to infections and disease. Additionally, if children do not get a sufficient amount of sleep, their concentration levels, emotional control and equilibrium as well as their energy for activity will be negatively affected.

Proper nutrition positively influences the quality of a child's physical activity level, their cognitive abilities, such as classroom concentration, as well as their emotional and mental growth. Adequate and proper nutrition is vital to encourage and support all aspects of children's development. Obesity, chronic diseases, high blood pressure, type 2 diabetes and even heart disease are just a few of the negative consequences that can result from poor nutrition in children. Additionally, obese children are at greater risk of becoming obese adults. Daily calorie intake is determined by children's age, size and their activity level. Meals should mainly include whole grains, low-fat or nonfat dairy products, vegetables, fruits and lean meats. It is also recommended introducing fish into children's diets along with reductions in the intake of beverages high in sugar and highly salted foods.

Specific Nutritional Recommendations for Children						
Nutrient		Nutrient Recommendations by Age				
		2 - 3 years	4 - 8 years	9 - 13 years	14 - 18 yr girls	14 - 18 yr boys
Protein (grams)		13	19	34	46	52
Iron (mg)		7	10	8	15	11
Calcium (mg)		500	800	1300	1300	1300
Vitamin A (IU)		1000	1333	2000	2333	3000
Vitamin C (mg)		15	25	45	65	75
Fiber (g)		14 - 19	19 - 23	23- 28 (girls) 25- 31 (boys)	23	31-34
Sodium (mg)		1000- 1500	1200- 1900	1500-2200	1500-2300	1500-2300
Cholesterol (mg)		<300 for over age 2	<300	<300	<300	<300
Total Fat (g)**		33 - 54 (30 -35% of calories)	39 - 62 (25 - 35% of calories)	62 - 85 (25 - 35% calories)	55 - 78 (25 - 35% calories)	61 - 95 (25 - 35% of calories)
Saturated Fat (g)		12 - 16 (> age 2) (<10% calories)	16 to 18 (<10% calories)	girls: 18-22 boys: 20-24 (<10% calories)	22 (<10% calories)	24 - 27 (<10% calories)
Calories***		1000 - 1400 (2-3 years)	1400-1600	girls: 1600-2000 boys: 1800-2200	2000	2200- 2400

Source: American Heart Association

Heredity factors affecting children's growth and development include height, susceptibility to diseases and genetic predispositions to mental illnesses and developmental disabilities.

SKILL 1.3 Analyzing factors that affect maturation from childhood to adolescence and from adolescence to young adulthood and ways to address these transitions

A variety of influences affect a students' maturation from childhood to adolescence to adulthood. A variety of factors also influence student motor development and attitudes toward physical activity.

Societal – We cannot separate students from the societies in which they live. The general perceptions around them about the importance of fitness activities will have an effect on their own choice regarding physical activity. We should consider the “playground to PlayStation” phenomena and its negative affect on children's motor development and fitness.

Psychological – Psychological influences on motor development and fitness include a student's mental well-being, perceptions of fitness activities, and level of comfort in a fitness-training environment (both alone and within a group). Students experiencing psychological difficulties, such as depression, will tend to be apathetic and lack both the energy and inclination to participate in fitness activities. As a result, their motor development, overall attitude towards leading a healthy lifestyle and fitness levels will suffer. Factors like the student's confidence level and comfort within a group environment, related to both the student's level of popularity within the group and the student's own personal insecurities, are also significant. It is noteworthy, though, that in the case of psychological influences on attitudes, motor development and fitness levels, there is a more reciprocal relationship than with other influences. While a student's psychology may negatively affect their fitness levels, proper fitness training has the potential to positively affect the student psychologically, thereby reversing a negative cycle than can continue with them into adulthood.

Economic – Economic situation of student’s families can affect their motor development, attitudes towards leading a healthy lifestyle and physical fitness levels. As a result of a lack of resources, parents may be unable to provide access to extra-curricular activities that promote physical fitness involvement, growth and development. Examples include, proper fitness training equipment, ranging from complex exercise machines to team sport uniforms, to something as simple as a basketball hoop. Additionally, inadequate transportation or lack thereof, to bring a student to an after school activity also is a result of a student’s negative economic family situation. It must be noted, however, that low economic situations are becoming less and less an excuse or reason not to provide after school activity involvement for children. The vast majority of cities and counties now provide free recreation activities, as well as providing transportation for children.

Family – Student’s family members attitude and “climate” towards health and physical activity also plays an enormous role in the maturation of the students own attitude concerning leading a healthy lifestyle and staying physically fit. A student’s own attitude toward physical activity and a healthy lifestyle often reflect that of their caregivers and/or role models (like older siblings) . Specifically in regard to physical activity, it is not necessary for the parents to be athletically inclined, so much as it is important for them to encourage their child to explore fitness activities that they may enjoy.+

SKILL 1.4 Analyzing ways in which heredity, environment, and the complex interaction of both affect human growth and development

Genetic make-up (i.e. age, gender, and ethnicity) has a big influence on growth and development. Various genetic and environmental factors directly affect one’s personal health and fitness. Poor health habits, living conditions and afflictions such as disease or disability can impact a person in a negative manner. A healthy lifestyle with adequate conditions and minimal physical or mental stresses will help to contribute in enabling a person to develop towards a positive, healthy existence. A highly agreed upon growth and development theory is the relationship between one’s own heredity and environmental factors.

Children’s developmental stages occur at different times for different individuals. Those student’s that live in an environment that is considered healthy tend to develop and grow more rapidly than those who do not. However, if there is an inherited disability or genetic disorder, a student could be raised in the most ideal environment possible, yet still not develop and grow in the determined, normal, timely stages. Brain development is a physiological factor that is affected by both heredity and environment. Genetic programming as well as environmental factors, such as proper interactions with adults and other students and exposure to words at a young age, both interact to determine a student’s human growth and development from one stage to another.

