# PAN AFRICAN GLOBAL ACADEMY

# WEEKLY LESSON PLAN UNIT 3

INSTRUCTOR: WEEK: 13<sup>th</sup>

David Lamptey Ending: XX – XX – XX

SUBJECT: Public Health

SPECIFIC TOPIC: Nutrition and the Community

#### INSTRUCTIONAL GOAL:

#### Students will be able to:

- Understand the definition of nutrition
- Understand the six classes of nutrients
- Understand nutritional needs in all stages of life
- Understand and be able to identify the signs of malnutrition in children and adolescents
- Understand how to eat a balanced diet given the foods available in Oshiyie
- Be able to identify balanced and unbalanced meals that can be prepared with the foods available in Oshiyie

# **LESSON CONTENT**

# FOOD SUPPLY/DISTRIBUTION

When thinking about health and nutrition, it is important to consider the economic forces that supply and demand food around us. When a city grows, the demand for food increases while the land available to grow the food simultaneously decreases. The annual rate of growth in Ghana is around 3%, and the population of Accra is growing at a rate of 3.4%. Unless the food rate experiences a simultaneous increase in growth as well, there may be an overwhelming food deficit in the Greater Accra region. It is important that food supply closely match food demand to promote a stable food economy in Accra.

As the population of Ghana has grown and as development has progressed, the demand for foods has also changed. Instead of demanding carbohydrates such as cassava, cocoyam, plantain and yam, people are now eating more protein including meats and dairy products. Because people now have more access to fruits and vegetables than they did several decades ago, Ghanaians should choose to eat fruits and vegetables over proteins as often as they can.

# INTRODUCTION TO NUTRITION

 <u>Nutrition</u> – the science of foods and the nutrients and other substances they contain, and of their actions within the body (including ingestion, digestion, absorption, transport, metabolism and excretion). A broader definition includes the social, cultural, economic and psychological implications of food and eating.

Every day we make food choices that over time will benefit or harm our health. Paying attention to good eating habits now can bring health benefits later in life. Additionally, carelessness about food choices can contribute to chronic diseases later in life such as heart disease.

Foods provide nutrients – substances that support the growth, maintenance and repair of the body's tissues. The six classes of nutrients include:

- 1. <u>Carbohydrates</u> these are sugars that the body uses for quick energy; there are simple carbohydrates such as sugar, candies and white bread and complex carbohydrates such as whole grains
- 2. <u>Lipids</u> these are fats that the body stores for energy when food is scarce or for long-lasting energy such as groundnut (peanut) oil
- 3. <u>Proteins</u> often from meat products, these substances are essential for the growth and development of health muscle tissue
- 4. <u>Vitamins</u> instead of providing energy, vitamins facilitate the release of energy from carbohydrates, lipids and proteins. Vitamins are also important for many bodily functions and processes.
- 5. <u>Minerals</u> some minerals are put together in orderly arrangements in structures such as bones and teeth; minerals are also found in the fluids of the body
- 6. Water provides the environment in which nearly all of the body's activities are conducted

# LIFE CYCLE NUTRITION

#### FIRST YEAR OF LIFE

- The first year of life is a period of remarkable growth and development. Infants' energy requirement is remarkably high about twice that of an adult, based on body weight.
- Initially, the infant drinks only breast milk. After six months of life, infants ought to eat solid foods as well as breast milk. Failing to give infants solid food at this age can lead to malnutrition.
- It is essential that infants take in the correct amounts of carbohydrates, lipids and proteins. About 60% of an infant's intake ought to consist of carbohydrates. Fats are prevalent in breast milk, which often provides the primarily source of lipids for an infant. However, no single nutrient is more essential to growth than protein. After six months, infants should be fed supplemental protein in addition to breast milk.
- Because the younger an infant is the greater percentage of his or her body is waster, rapid fluid loss and the resulting dehydration can be life threatening to an infant. Conditions that cause rapid fluid loss, such as severe diarrhea and vomiting, require immediate medical care.

#### CHILDREN AND ADOLESCENTS

- Children's appetites begin to diminish around one year of age, consistent with the slowing of growth. After one year, children may demand more food during periods of rapid growth and less during slow growth. After one year of age, carbohydrate and other types of energy are required in roughly the same percentages as in adults.
- After one year of age, the child should ideally be eating what the rest of the family eats.

# HUNGER AND MALNUTRITION IN CHILDREN

• When hunger is chronic, children become malnourished and suffer growth retardation. A child with any of several nutrient deficiencies may be irritable, aggressive and disagreeable, as well as sad and withdrawn.

Physica	l Signs	of Ma	Inutrition	in Children
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- 1					
	Well-Nourished	Malnourished	Possible Nutrient		
			Deficiencies		

Eyes	Bright, clear pink	Pale membranes; spots;	Vitamin A, the B vitamins,
Lyes	membranes; adjust easily to	redness; adjust slowly to	zinc and iron
		darkness	Zinc and non
Tooth and Come	light	3.3	Naise and a second a site and a sit a site and a site a
Teeth and Gums	No pain or cavities, gums	Missing, discolored, decayed	Minerals and vitamin C
	firm, teeth bright	teeth; gums bleed easily and	
		are swollen and spongy	
Face	Clear complexion without	Off-color, scaly, flaky,	PEM, vitamin A, iron
	dryness or scaliness	cracked skin	
Glands	No lumps	Swollen at front of neck,	PEM and iodine
		cheeks	
Tongue	Red, bumpy, rough	Sore, smooth, purplish,	B vitamins
		swollen	
Skin	Smooth, firm, good color	Dry, rough, spotty;	PEM, essential fatty acids,
		"sandpaper" feel or sores;	vitamin A, B vitamins, and
		lack of fat under skin	vitamin C
Nails	Firm, pink	Spoon-shaped, brittle, rigid	iron
Internal Systems	Regular heart rhythm, heart	Abnormal heart rate, heart	PEM and minerals
	rate and blood pressure; no	rhythm, or blood pressure;	
	impairment of digestive	enlarged liver, spleen;	
	function, reflexes or mental	abnormal digestion; burning,	
	status	tingling in hands, fee; loss of	
		balance; mental confusion,	
		irritability, fatigue	
Muscles and Bones	Muscle tone; posture, long	"wasted" appearance of	PEM, minerals and vitamin D
	bone development	muscles; swollen bumps on	
	appropriate for age	skull or ends of bones; small	
		bumps on ribs; bowed legs	
		or knock-knees	

# **EATING A BALANCED DIET**



MyPyramid Food Pyramid <a href="http://www.foodpyramid.com/wp-content/uploads/2009/09/MyPyramid2.jpg">http://www.foodpyramid.com/wp-content/uploads/2009/09/MyPyramid2.jpg</a>

Emphasize the importance of eating a variety of foods (grains, vegetables, fruits, milk and meat/beans) and point out how the different sizes of the colors in the pyramid remind us that some of these foods should be eaten more than others.

### **CASE STUDY**

One day, Charlotte decides to eat banku with fish for dinner. Which of the food groups are represented by her dinner? Which are left out? What could Charlotte add to her dinner to make sure that all of the food groups are represented?

#### **CASE STUDY**

Edmund decides that his family should eat wache for dinner. What could Edmund's family add to wache in order to make the meal balanced? What could the family add during the summer? During the fall? Winter? Spring?

# **OLDER ADULTS**

- In general, older people tend to lose bone and muscle mass as they age.
- Older people are also more susceptible to acquiring compromised immune systems.
- The intestinal walls lose strength and elasticity with age, making it harder for older people to digest food.
- It is common for older people to be constipated and to have a diminished appetite.
- Tooth loss and gum disease are also common problems.
- Failing eyesight as well as diminished taste and smell sensitivities can also affect older people.
- Energy usage falls as we age. Thus older people need to eat less food to maintain their weight.
- Protein is especially important for the elderly to support a healthy immune system, prevent muscle wasting, and optimize bone mass.
- Abundant carbohydrates are needed to protect protein from being used as an energy source.
- Sources of complex carbohydrates such as legumes, vegetables, whole grains, and fruits are rich in fiber and essential vitamins and minerals.
- Fat intake should be moderate in old age

# MATERIALS AND AIDS:

- Lecture Notes
- Poster that displays the Food Pyramid

# **TEACHING AND LEARNING ACTIVITIES:**

# Teacher will:

- Explain the definition of nutrition
- Distinguish between the six classes of nutrients
- Highlight human nutritional needs in all stages of life
- Point out the signs of malnutrition in children and adolescents
- Help students understand how to eat a balanced diet given the foods available in Oshiyie
- Distinguish between balanced and unbalanced meals that can be prepared with the foods available in Oshiyie

# **EVALUATION**

# Sample Quiz

- 1. Name the six classes of nutrients.
- 2. How can our eating habits when we are young influence our health later in life?
- 3. What provides the environment in which almost all of the body's activities are conducted?

- 4. Having a sore, smooth, purplish or swollen tongue is indicative of what kind of nutrient deficiency in children?
- 5. A deficiency of vitamin D can cause which of the following signs in malnourished children?
  - A. Decaying teeth
  - B. Scaly or flaky skin
  - C. Brittle nails
  - D. Bowed legs

# Resources / references:

Whitney, Ellie and Sharon Rady Rolfes. *Understanding Nutrition*. Thomson Learning, Inc., 2008. Print.

"MyPyramid: Steps to a Healthier You." *MyPyramid*. <a href="http://www.foodpyramid.com/wp-content/uploads/2009/09/MyPyramid2.jpg">http://www.foodpyramid.com/wp-content/uploads/2009/09/MyPyramid2.jpg</a>.

"Food Supply and Its Distribution to Accra and its Metropolis." *AMA-FAO Workshop*. Accra Metropolitan Society; the FAO Regional Office for Africa; Marketing and Rural Finance Service; and Agricultural Support Systems Division FAO, 1998. <a href="http://www.fao.org/3/a-x6972e.pdf">http://www.fao.org/3/a-x6972e.pdf</a>.

#### PAN AFRICAN GLOBAL ACADEMY

# WEEKLY LESSON PLAN

**UNIT 3** 

INSTRUCTOR: WEEK: 14<sup>th</sup>

David Lamptey Ending: XX – XX – XX

SUBJECT: Public Health

SPECIFIC TOPIC: Substance Abuse

#### INSTRUCTIONAL GOAL:

Students will be able to;

- Understand the risk factors that make people more likely to use drugs
- Understand the protective factors that can help people avoid drug use
- Understand why adolescents commonly use drugs
- Understand how drugs in general affect your body and brain as well as how specific drugs affect the brain
- Understand that prescription drugs can be just as dangerous as illicit street drugs
- Understand common ways to prevent drug usage among themselves as well as in their community
- Recognize the complexity of treating drug dependence

#### **LESSON CONTENT**

# WHAT IS A DRUG?

A **drug** is a chemical substance that interacts with a living system and produces a biological response. Sometimes we think of there being only bad drugs, but the truth is that many drugs, such as paracetamol can be very beneficial to human health. However, some drugs can be detrimental to health by causing addiction and facilitating the transmission of STIs. These are the types of drugs that we will focus on in this lesson.

#### RISK FACTORS

Risk factors are those which increase an individual's risk of taking drugs. There are many risk factors for drug usage:

- 1. <u>Being young</u> as one is struggling to affirm and define identity, young people often start experimenting with drugs to define their sense of belonging to a group.
- 2. <u>Genetic factors</u> there is evidence that some people are genetically predisposed to becoming addicted to drugs. If put in a particular personal or environmental situation, these people have a higher risk of becoming drug addicts than others.
- 3. Mental health it has been found that there is a relationship between using drugs and one's mental health. Although the nature of this relationship has yet to be analyzed, it is clear that there is a high incidence of drug abuse in psychiatric patients and a high incidence of mental disorder among drug abusers seeking treatment.
- 4. <u>Unsupportive family</u> family disruption, ineffective supervision, criminality and drug abuse within the family increase an adolescent's risk for drug usage. This is also the case if the

- adolescent's family does not support him or her physically and emotionally.
- 5. <u>No education</u> having few or no opportunities for education or performing poorly in school have been shown to increase an adolescent's risk for using drugs.

#### PROTECTIVE FACTORS

Protective factors are those that generally reduce the likelihood that one will experiment with drugs. There are many protective factors against drug usage:

- 1. Positive relationships with family members
- 2. High educational aspirations
- 3. Good student-teacher relationships
- 4. High self-esteem
- 5. High degree of motivation
- 6. Optimism
- 7. Willingness to seek support and help from others

# WHY ADOLESCENTS USE DRUGS

Although there is a certain amount of truth to the statement that different people take drugs for different reasons, the most common reasons that adolescents use drugs are outlined below:

- To forget or solve problems Adolescence is characterized primarily by the transition from childhood to adulthood. The demands and expectations from different members of society also accompany the change from childhood to adulthood. Change is often accompanied by stress and instability, and thus it is not surprising that stress is an often-cited reason for using drugs.
- 2. <u>Peer pressure</u> At the beginning of adolescence, adolescents are forming an identity and coming to know who they really are. The peer group reflects who and what an adolescent is, and thus adolescents sometimes see it as vital to maintain peer support even if this means taking drugs.
- 3. <u>Enjoyment, excitement and fun</u> Drugs often (initially) make the user feel good. The use of drugs is often associated with the promise of fun and enjoyment.
- 4. <u>Self image/self concept/body concept</u> Some adolescents believe that drugs say something about the way that an adolescent is perceived. The adolescent may believe that it says that he or she is fun-loving, rebellious, adventurous, different or special. Taking drugs is not only a means for this adolescent to convey this message to others (or so he or she thinks), but also a way of conveying this message to himself or herself.
- 5. <u>Risk taking and rebellion</u> Risk-taking is a normal part of adolescent development. Death may seem to adolescents to be a distant reality, and that fact that most drugs are illegal and dangerous can add to the excitement.
- 6. <u>Curiosity and experimentation</u> Curiosity and experimentation are natural characteristics of human beings that have been responsible for many great achievements in human history.

# DRUG USE: THE FACTS

#### Do Drugs Kill?

People experience a variety of intense negative effects from mood-altering substances, although only a minority die. However, addiction is a much more common and very serious consequence of drug usage.

What Do Drugs Do to the Brain?

The brain is made up of many parts that all work together as part of a team. Different parts of the

brain are responsible for carrying out specialized functions. Drugs can affect important areas of the brain that are needed to sustain life as well as drive the compulsive drug use that characterizes addiction. Most commonly abused drugs target the brain's reward system by flooding the brain with dopamine. Dopamine is a messenger in the brain that can regulate a whole variety of the brain's functions, including movement, emotion, cognition, motivation and feeling pleasure. When the brain is flooded with dopamine from drugs, people often feel lots of pleasure, which then teaches them to repeat the behavior again. Chronic exposure to drugs disrupts the way that important structures in the brain interact with each other to control behaviors related to drug use. Just as continued abuse may lead to the need for higher drug dosages to produce an effect (called **tolerance**), it may also lead to **addiction**. Addiction can drive an abuser to compulsively find and use drugs. Drug addiction inhibits a person's self-control as well as his or her ability to make wise decisions. Drug addiction also triggers intense impulses to take drugs in those addicted to drugs.

# TYPES OF DRUGS AND THEIR EFFECTS

#### ALCOHOL

Alcohol interferes with the communication pathways within the brain. Alcohol changes the way that the brain works and even how the brain looks. These disruptions can change a person's mood as well as their behavior, and can make it much more difficult to think clearly or to move with coordination. Drinking a lot can also damage the heart. The organ most affected by alcohol is almost always the liver, and the pancreas can also be seriously damaged. Drinking too much can also increase your chances of contracting cancer as well as weaken your immune system.

#### **MARIJUANA**

Marijuana is one of the many drugs that use dopamine to act on the brain's reward system. Within a few minutes of inhaling marijuana smoke, your heart rate speeds up, your lung passages relax and become larger, and blood vessels in the eyes expand, making the eyes appear red. The heart rate may increase and even double in some cases. Taking other drugs with marijuana can amplify this effect. Marijuana also impairs your ability to form new memories and shift focus. Memory impairment from using marijuana occurs because the active chemicals in marijuana alter how the brain forms memories.

# PRESCRITPION DRUGS

Lots of people think that just because drugs from pharmacies are used to treat medical conditions and are prescribed by a doctor that they are safer to use than illicit street drugs. However, prescription drugs affect the body very similarly to how street drugs do, and can have equally dangerous effects on the brain and body. You should not ingest drugs unless a medical professional has advised you to take them.

# Class Activity: Body Map

Draw an outline of a human body either on a large piece of paper or on the board (just be sure that it is as large as possible). Then, have students take turns and come up to draw arrows to the parts of the body that can be damaged by taking different drugs. Have the students indicate which drug has what effect. Discuss each arrow drawn with the class to reinforce the topics discussed in the lesson.

#### CONSEQUENCES AND RISKS ASSOCIATED WITH DRUG ABUSE

Besides the chemical effects that drugs can have on the brain and body, there are many other psychological and social effects that drugs can take on you.

- 1. Schoolwork- Taking drugs can affect your ability to focus on your schoolwork.
- 2. Family relations teens that use drugs withdraw from their family members, as well as set

bad examples for younger siblings. Since their judgment and decision-making abilities have been impaired, they may become more hostile toward family members and even steal from family members to get money for drugs.

- 3. <u>Risk of HIV Infection</u> One is much more likely to contract HIV/AIDS as a result of having unsafe sex while under the influence of drugs or by sharing needles when injecting drugs.
- 4. <u>Peers</u> teens who use drugs are often alienated and stigmatized from their peers, and this can sometimes cause them to disengage from their friends and peers in their school as well as in their community
- 5. <u>Delinquency</u> there is an undeniable link between teenage drug abuse and criminal behavior.

#### PREVENTION OF DRUG USE

- 1. <u>Teaching people early</u> The earlier adolescents are taught the correct information about drug use, the better able they are to make healthy choices.
- 2. <u>Supportive family and friends</u> Adolescents are able to ask family members questions if they are thinking about using drugs. Family members can also support an adolescent who is having trouble saying 'no' to drug use.
- 3. <u>Drive and ambition</u> It is known that drug use is correlated with poor performance in school as well as little success later in life. Students in school should remember that if they want to succeed in school, they must stay away from drugs.

# TREATMENT OF DRUG DEPENDENCE

Treatment centers, counseling services and rehabilitation centers provide safe, healthy environments where people who are addicted to drugs can seek the help that they need to become healthy. Often a combination of treatment methods is needed, individually tailored to the needs of each person. Although drug dependence is treatable, a person who has been addicted to drugs will always be vulnerable to using them again, which is called **relapse**. Drug dependence requires long-term treatment, and there are no simple solutions. If you are thinking about using drugs or have used drugs or have used drugs and engaged in risky behavior (such as having unsafe sex or sharing used needles), then you should talk to a trusted adult as soon as you can. If it is the case you have had unsafe sex or shared needles with other people, then it is very important to get tested for sexually transmitted illnesses especially and/or HIV.

# MATERIALS AND AIDS:

- Lecture notes
- Poster or outline of a human body
- Markers or pens

# TEACHING AND LEARNING ACTIVITIES

- Teacher explains the risk factors that make people more likely to use drugs as well as the protective factors that can help people avoid drug use
- Teacher helps students understand why adolescents commonly use drugs
- Teacher encourages the class to analyze how drugs in general affect your body and brain as well as how specific drugs affect the brain
- Teacher explains why prescription drugs can be just as dangerous as illicit street drugs
- Teacher helps the class come up with common ways to prevent drug usage among themselves as well as in their community

Teacher encourages the class to recognize the complexity of treating drug dependence

#### **EVALUATION**

#### Sample quiz

- 1. Name three of the five risk factors for using drugs.
- 2. Name three of the five protective factors against using drugs.
- 3. Are there any risk factors that apply to you for using drugs? If so, discuss ways that you could use protective factors to ensure that you stay healthy and do not use drugs.
- 4. Name three drugs commonly used in Ghana and their corresponding effect(s) the brain.
- 5. Which of the following is NOT a common consequence of using drugs?
  - A. Inability to feel emotions
  - B. HIV Infection
  - C. Inability to focus on schoolwork
  - D. Inability to mediate conflicts between family members

# **RESOURCES / REFERENCES:**

- "Youth Initiative: Discussion Guide on Drugs and Crime." United Nations Office on Drugs and Crime (UNODC). New York, April 2012.
- "A Teacher's Guide on the Preventive of Drug Abuse in Schools." Ghana Education Service. UNESCO 1995.
- "Conducting Effective Substance Abuse Work Among the Youth in South Africa." United Nations Office on Drugs and Crime (UNODC) and the Cape Town Drug Counseling Center.
- "Drugs, Brains, and Behavior: The Science of Addiction." United States of America National Institute on Drug Abuse (NIDA). NIH Pub. No. 14-5605. July 2014.
  - http://www.drugabuse.gov/sites/default/files/soa\_2014.pdf
- "Alcohol's Effects on the Body." United States of America National Institute on Alcohol Abuse and Alcoholism. http://www.niaaa.nih.gov/alcohol-health/alcohols-effects-body
- "Get Smart About Drugs: A DEA Resource for Parents." United States of America Drug Enforcement Administration.

# PAN AFRICAN GLOBAL ACADEMY

# WEEKLY LESSON PLAN UNIT 3

INSTRUCTOR WEEK: 15<sup>th</sup>

Mr. David Lamptey Ending: XX - XX - XX

SUBJECT: Public Health

SPECIFIC TOPIC: Adolescent Development

# **LEARNING OBJECTIVES:**

#### Students will:

- Understand the concepts of adolescence and puberty
- Understand growth spurts, as well as that people grow at different rates
- Understand the Tanner stages of development
- Understand changes to skin during puberty
- Understand changes to body hair during puberty
- Understand the changes that mark the progression of puberty in both boys and girls
- Understand the practice and safety of both male and female circumcision

# LESSON CONTENT

#### NORMAL DEVELOPMENT



Your parents may find your adolescence a bit nerve-wracking

Watson, Catherine and Ellen Brazier. You, Your Life, Your Dreams: A Book for Adolescents.

**Class Activity:** Start off by showing the class this humorous cartoon (pass a copy around). Ask the class what it means to be an adolescent. After discussion, let them know that most people around the world define adolescence as the period between 10 and 19 years of age. Puberty often occurs when one is an adolescent.

# **PUBERTY**

Between the ages of 10 and 16, most girls and boys enter puberty. Puberty is the time when you

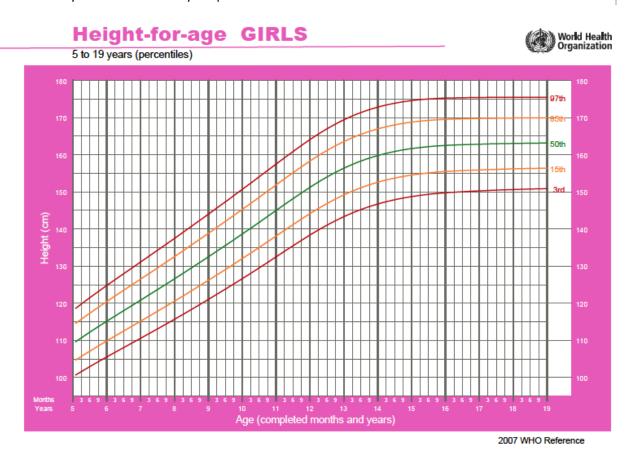
change physically, emotionally and mentally from a child into a young adult.

# **GROWTH SPURTS**

- Until the age of 9 or 10, boys and girls have may more similarities than differences. They have different sexual organs, but both have flat chests and similarly sized muscles.
- Around the age of 10 or 11, girls start growing faster and experience a "growth spurt." During these years girls are often taller and bigger than boys of the same age. Boys start their growth spurt around 12 or 13 years of age, and boys keep growing until they are 19 or 20. If you do not start puberty at these ages, you should seek medical care. However, it is important to remember that these ages are only average ages. Some adolescents begin growing earlier or later than others. Starting earlier or later doesn't have much of an effect on how tall you will be or how quickly you will grow.

# SAMPLES OF GROWTH CHARTS

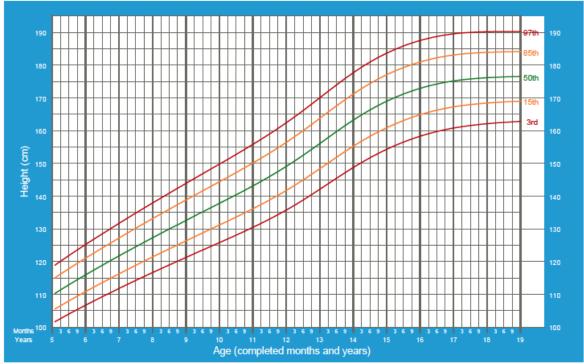
Because everyone is different, everyone grows at different rates. Different people will be at different ends of the spectrum of height at different ages. Through all of these changes, be patient with yourself! Your body is just fine, and you are perfectly normal. When you start growing is primarily determined by the traits that you inherited from your parents.



# **Height-for-age BOYS**

5 to 19 years (percentiles)





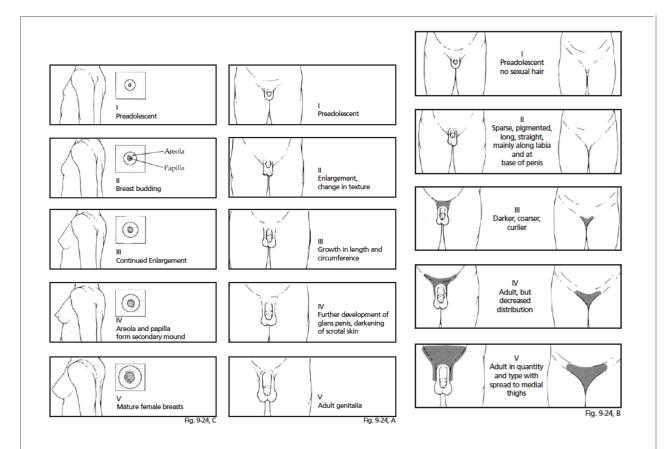
2007 WHO Reference

# **CHANGES TO THE GENITALS**

The term "genitals" is the scientific word for private parts. During adolescence, the genitals grow. For girls, the skin and tissue in the genitals grows softer and more fatty. For boys, the penis lengthens and thickens. The genitals also start to produce fluid during puberty. Boys produce semen, a mucus-like fluid that contains sperm, and girls produce menstrual blood and vaginal fluid.

# **TANNER STAGES**

Because the onset and progression of puberty are so variable, a scale called the Tanner Scale has been proposed by the United States Vermont Department of Health to describe the onset and progression of pubertal changes. Briefly describe the changes and the characteristics of each stage (see supplemental documents).



#### **CHANGES TO SKIN**

During adolescence, boys and girls skin often becomes much more oily. This can lead to pimples. Good hygiene during adolescence is especially important because your skin is producing more fluids than it did when you were a child. Bathing at least once a day and making sure to wash your face as well as your genitals is important to staying healthy.

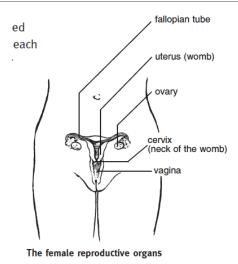
#### CHANGES TO BODY HAIR

Another sign of puberty is hair growing in new places on the body. Both boys and girls may notice a little more hair on their legs and arms. In addition, boys will grow hair on their private parts, face, chest and under their arms. Girls will grow hair under their arms and on their private parts. Hair on the private parts is called pubic hair. Pubic hair helps to keep the genital area clean. Pubic hair is natural and has a job to do, so whether you have a lot or a little do not worry too much about it. For boys, facial hair is usually the last body hair to develop. For most boys, facial hair starts growing between the ages of 14 and 18, but it can start earlier or later without anything being wrong. If you find that you grow hair very early, you should seek medical care.

#### **BOYS DURING PUBERTY**

- Some of your bones will grow more than others, and this will cause your body shape to change more into that of a grown man.
- Your muscles will get bigger, particularly those in your arms and legs. Some boys may find that their breasts swell and are painful. This is normal, and will subside when your hormone levels go down later.

- As your voice box grows larger and your vocal cords get longer and thicker, your voice will become deeper and lower. When your voice is changing, sometimes it will squeak or break while you are talking. This is also perfectly normal.
- Sometimes boys worry that they are having too many erections. They are disturbed by very frequent erections in class or when they are walking. Sometimes there seems to be no obvious reason for an erection. It can be embarrassing to get an erection in a public place, but most of the time you are probably the only person who is aware of it.
- The teacher should also discuss wet dreams, and that they are very common and normal. GIRLS DURING PUBERTY
  - Around the age of 10 or 11 years old, most girls will notice that their bodies are changing shape.
  - Your hips will start growing, and the hipbones will become larger and softer, with fatty tissue growing on the hips, thighs and buttocks.
  - Some girls begin to develop breasts at the age of 8 or 9, but other girls do not start this until much later. Before your breasts start to form, your nipples will probably get larger and stand out more than they used to. You also might notice that the skin around the nipple is growing darker, larger and developing tiny lumps. These lumps are little glands that will help protect your nipple if you later breastfeed a baby. Some girls' breasts grow slowly and take up to 6 years to fully develop, and others' grow quickly, taking less than a year to fully develop. All breast sizes big and small are good for feeding babies. Breasts also grow unevenly one may be larger than the other. This is perfectly normal.
  - After you pass urine or defecate, you should always clean yourself by cleaning the front of your
    private parts backwards toward the anus. Whether you use toilet tissue, paper, water, grass or
    leaves to clean yourself, you must NOT wipe back to front. If you wipe forwards, you getting an
    infection.
  - Most girls begin having menstrual periods between the ages of 10 and 16. Girls who have started menstruating have "monthly cycles." On day 1, she starts to bleed. For the next 5 to 7 days her body will shed the lining of the uterus. The body will then build up another lining in preparation for a pregnancy. Halfway through the cycle, around day 14, an egg is released. The egg then spends a few days waiting for male sperm to fertilize it. If no sperm arrives, then is passes out of her body around day 20. About a week later, the body realizes that there has been no fertilization this month, and that it needs to shed the lining of the uterus.



Watson, Catherine and Ellen Brazier. You, Your Life, Your Dreams: A Book for Adolescents.

# MALE CIRCUMCISION

Male circumcision is an operation where the fold of the skin around the top of the penis (the foreskin) is cut. There is nothing wrong with being circumcised, and there is nothing wrong with not being circumcised. Both circumcised and uncircumcised males can enjoy sex and can make their wives happy. Circumcision makes it easier to keep the penis clean. For some boys and men, the foreskin is too tight or is attached to the head of the penis and cannot be rolled back. This can cause swelling and pain, and circumcision is often the best solution. Even if you have been circumcised, you are still at risk for getting HIV/AIDS and STIs if you practice unsafe sex.

If you are not circumcised and cannot roll back the foreskin or feel pain when you get an erection, you should seek medical care.

# **FEMALE CIRCUMCISION**

In some parts of Africa, the clitoris and/or other parts of the female genitalia are cut or removed altogether in a practice called female circumcision, genial cutting or female genital mutilation. While neither the Bible nor the Koran support the practice, many traditional customs across Africa do. Unlike male circumcision, female circumcision can often lead to serious health consequences:

- Severe bleeding girls bleed a lot when their genitalia are cut and can suffer from loss of blood
- <u>Infection</u> if unclean instruments are used during the operation, an infection can spread to the
  uterus, fallopian tubes and ovaries causing pain, infertility and even death
- <u>Urine retention</u> after being cut, females may be unable to pass urine because the hole is too small
- <u>Difficulties during menstruation</u> if the opening of the vagina is too small for blood to flow out properly, then blood may collect in the vagina and uterus. This can result in infection and swell the uterus with blood.
- <u>Difficulties during sexual intercourse and childbirth</u> girls who have been circumcised may find sex painful, and may lose children or die during childbirth if the opening of the vagina is too

narrow for the baby to pass through

 Psychological and social effects – female circumcision may cause a girl to lose trust in her parents and family and suffer from feelings of incompleteness, anxiety and depression

#### MATERIALS AND AIDS

- Lecture Notes
- Diagrams of Tanner stages

#### **TEACHING METHOD:**

#### Teacher will:

- Discuss the concepts of adolescence and puberty
- Explain growth spurts, as well as that people grow at different rates
- Distinguish between the different Tanner stages of development
- Discuss the changes that occur to skin during puberty
- Discuss the changes that occur to body hair during puberty
- Point out the changes that mark the progression of puberty in both boys and girls
- Explain the practice and safety of both male and female circumcision

#### **EVALUATION PROCE DURES**

# Class test/assignment

- 1. What is the name for the time when you change physically, emotionally and mentally from a child into a young adult?
- 2. During which Tanner stage do adolescent females experience 'breast budding'?
- 3. During which Tanner stage do adolescents first grow dark, coarse and curly pubic hair?
- 4. Name two places that adolescents grow new hair during puberty.
- 5. Name three changes that boys experience during puberty
- 6. Name three changes that girls experience during puberty.
- 7. Between what ages do girls usually experience their first menstrual period?
- 8. Are males who are circumcised protected against STIs including HIV?
- 9. Why is female circumcision considered dangerous while male circumcision is not?
- 10. What are possible medical effects that can result from female circumcision?

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#### PAN AFRICAN GLOBAL ACADEMY

# WEEKLY LESSON PLAN

UNIT 3

INSTRUCTOR: WEEK: 16<sup>th</sup>

David Lamptey Ending: XX – XX– XX

SUBJECT: Public Health

SPECIFIC TOPIC: Healthy Relationships

#### **INSTRUCTIONAL GOAL:**

#### Students will:

- Think about what they value in themselves as well as in potential girlfriends or boyfriends
- Be able to understand the differences between healthy relationships and unhealthy relationships
- Understand why it is important to refuse sex until you are married
- Understand what transactional sex is
- Understand common reasons why adolescents engage in transactional sex
- Understand the dangers of transactional sex
- Understand ways to refuse adults trying to engage in transactional sex

# LESSON CONTENT

#### **VALUES**

The word 'value' has many different meanings. One meaning refers to how much something costs in cedi. Another meaning, however, refers to the things that you believe in as well as the things that you think are important in life. Some good values include:

- Honesty
- Openness
- Patience
- Kindness
- Charity
- Forgiveness

You may hold many more values, such as working hard in school, helping your parents at home, being loyal to your friends, and being active in your church or mosque. Values help guide how you act, and values also shape your decisions.

#### **HEALTHY RELATIONSHIPS**

When you are truly in love with someone, you respect each other. You want the other person to be happy, and will never intentionally do anything to hurt the other person. You will also never force each other to do anything that you do not both want to do. True love involves responsibility and commitment. Love does not hold grudges, and is not impatient, irritable or touchy.

- Love makes you and your girlfriend or boyfriend feel good about each other
- Love involves honesty and concern for each other
- Love also involves respect as well as dignity

- Love does not afford for one person to take advantage of the other
- Love does not place unsafe sex ahead of friendship and is NEVER a reason to practice unsafe sex

#### **Class Activity:**

What are your values? Have the students each make a list of 10 things that they value in themselves. Have the students also each come up with a separate list of characteristics that they look for in a girlfriend or boyfriend. Have the students share characteristics from their lists if they want to. Ask if anyone included postponing sex until marriage was on his or her list of values. Ask the students if they agree with this value. Try to have an open discussion with the students about how they feel about refusing sex. For example, women are taught by some to be submissive to men, so it can be difficult at times for a woman to say to a man that she does not want to have sex, especially if she is married to the man. Men can also find it hard to say to women that they do not want to have sex because some men have been raised to believe that a man always wants to have sex.

#### **REFUSING SEX**

Whether you are a boy or a girl, you have a right to refuse sex. It is your body, so you should make your own decision about sex. No matter what your boyfriend or girlfriend says to you, if you do not think that sex is the best decision for you in your life, then you should not have sex.

If you think that your boyfriend or girlfriend will no longer love you if you refuse to have sex with them, then your boyfriend or girlfriend does not really love you. A person who truly loves you would not pressure you to do something that feels wrong to you.

#### **ACTIVITY: SAFE SEX**

Ask community health nurses from Oshiyie, Kokrobite or Bortianor to come in and discuss contraceptive practices as well as abortion with the class. Make sure that the nurses bring wooden dildo(s) to show the class how to properly put on a male condom. These can be purchased in varying sizes in the tourist market off the sidewalk near the Golden Tulip Hotel in Accra if the nurses do not already possess them. Have the class discuss and practice the importance of insisting on condom use for safer sex. Encourage the nurses to have the students role-play what they will say if a partner does not want to practice safe sex.

#### PRESSURE FROM ADULTS AND TRANSACTIONAL SEX

Sometimes older people, even people who are married, try to pressure young people to have sex with them. Usually older men (sugar daddies) want to have sexual relationships with young girls, although sometimes older women (sugar mommies) want to have sexual relationships with young boys as well. The adult will often offer gifts, money or special treatment to the adolescent, such as school fees, clothes and sweets. But it is important to remember that none of these gifts are truly free! After time, the adult will want "payment" for the gifts usually in the form of sex or sexual favors. Sex that is exchanged for gifts or money is called **transactional sex**.

#### REASONS WHY ADOLESCENTS ENGAGE IN TRANSACTIONAL SEX

- <u>Lack of money</u> If you do not have pocket money and your parents cannot afford to buy treats and nice things for you, it can be very enticing to enter into a relationship involving transactional sex. However, no gift and no amount of money is worth the price of what you will eventually have to pay.
- <u>Family</u> Sometimes your family members, especially your parents, may pressure you to engage in transactional sex. This can happen because your parents do not have money and cannot

afford to pay for food, clothes and other things. If this happens to you, reach out to another trusted adult (aunt, uncle, schoolmaster, teacher, someone at your church or mosque) who might be able to help you come up with money without having to engage in transactional sex—do not try to handle this problem on your own!

• <u>Feeling attractive and important</u> – It can be very exciting to have an older person seem interested in you, however, these kinds of relationships are very bad.

Even though it might make you feel attractive and important for an older person to be interested in you, relationships that involve transactional sex are very bad. Transactional sex:

- Can put you at risk for STIs including HIV and pregnancy
- Can disrupt your schooling
- Can make you a target of anger if the adult is married and his wife or her husband comes after you

When there are large differences between two people's age and income, the relationship is NOT equal. If you feel powerless in the relationship, you might be afraid to say "no" to sex because you took money or gifts. You also may be afraid to tell the adult to use a condom. This relationship could ruin your future!

#### **REFUSING TRANSACTIONAL SEX**

If an adult is sending you gifts or money or is pressuring you to have sex with him or her, say "no!" and leave his or her presence right away. Talk to a trusted adult, such as your parents. Do not try to deal with the situation all by yourself.

#### CASE STUDY

Effie is 15 years old. She has a sugar daddy who provides her with everything she wants. One day, the man offered to give Effie a ride to school. On the way to school, the man took another route and drove Effie to a hotel. There, he forced her to have sex with him. Is Effie to blame for the man's actions? Could Effie have done anything to protect herself?

#### SOLUTION

No one who has been forced to have sex or engage in sexual relations is ever to blame for what happened. The man is at fault, not Effie. However, it is possible that Effie could have refused the man's gifts and might have been able to prevent this situation. If Effie had simply refused the man's gifts, however, it is possible that the man would have looked for another victim, possibly one of Effie's friends. The best idea would have been for Effie to tell one of her parents or a trusted adult and have him or her deal with the situation.

#### YOUTH VIOLENCE AND CONFLICT RESOLUTION

Youth violence refers to a multitude of behaviors that can start early and continue into adulthood. Some violent acts, such as bullying, slapping and hitting cause more emotional harm than physical harm. Other acts such as robbery and assault can lead to serious injury and even death. Many young people need medical care for violence-related injuries, including cuts, bruises, broken bones and gunshot wounds. Some of these injuries can lead to lasting disabilities. Because of the lack of speedy medical transportation in Ghana, some of these time-sensitive wounds such as gunshot wounds can quickly lead to death. Violence can also effect the health of the community overall by increasing healthcare costs, decreasing property values and disrupting social services.

Young people can be victims, offenders and bystanders to youth violence. Risk factors for youth violence include:

1. Prior history of violence

- 2. Drug, alcohol or tobacco use
- 3. Association with delinquent peers
- 4. Poor family functioning
- 5. Poor grades in school
- 6. Poverty in the community

# BYSTANDER INTERVENTION

A bystander is any person who is present during and is a witness to an event. Often bystanders fail to intervene during violent situations despite the fact that they are witnesses to a violent event. The potential for bystanders to intervene is not limited to a one-time opportunity to save a victim from a serious attack. In fact, there are lots of ways that bystanders can intervene during youth and sexual violence. These ways include:

- 1. Challenging harmful comments that promote harassment and violence
- 2. Organizing a boycott against a movie that glamorizes violence
- 3. Physically intervening during a sexual assault or rape

There are five reasons why bystanders fail to intervene during a violent attack:

- 1. Failure to notice a violent situation
- 2. Failure to identify the violent situation as high-risk
- 3. Failure to take responsibility for intervening
- 4. Failure because one does not know how to intervene
- 5. Failure to intervene during audience inhibition

#### **CASE STUDY**

While most people agree that violence is not perpetrated in isolation, most people only consider the victim and the abuser when thinking about violence. These individuals are rarely connected with families, friends, work, schools, churches, mosques and other groups. This activity tries to help students identify the large number of people who are in a position to say or do something to prevent the perpetration of violence.

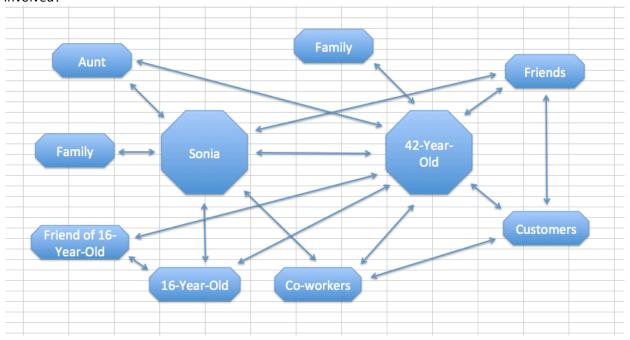
Sonia is 23-years-old and has been married for a year. During the day she works at her aunt's store selling groceries. Every weekday a 42-year-old mobile banker comes into the store and says suggestive remarks to the women there, including Sonia. One week, the banker makes a sexual remark to a 16-year-old girl who is shopping in the store with her friend. After the girls leave the store, the banker then asks Sonia if she thinks that it is acceptable for him to be flirting with the 16-year-old. Sonia replies, "It is not appropriate. There is something wrong with a 42-year-old man trying to flirt with a 16-year-old girl." The 42-year-old man then slaps Sonia across the face and walks out of the store.

Discuss the situation with the class and outline the benefits and risks for Sonia to say something like this to the man. Next, discuss who is in the scenario and whether there are other people who could take action. Some discussion points: Sonia gave a powerful answer. Sonia could have shrugged off the question, afraid to challenge the older man. The action that Sonia took can be considered bystander intervention. List the other people in this scenario who also could have intervened. Possible answers include:

- Sonia's aunt who owns the store
- Other customers in the store
- Friends and family of the 42-year-old man
- The 16-year-old's friend
- Other stores in the area who may be familiar with the man

After making this list, map out each individual and how they are related to the situation (an example is

drawn below). Once you have finished making the map, step back and discuss how many people are in the picture. Why was it only Sonia who said something to the man when so many people were also involved?



#### MATERIALS AND AIDS:

- Lecture Notes
- Pen and paper
- Board with chalk

# **TEACHING AND LEARNING ACTIVITIES:**

#### Teacher will:

- Help students realize what they value in themselves as well as what they value in potential girlfriends or boyfriends
- Lead students in discussion about their values and what they value in girlfriends/boyfriends
- Distinguish between healthy relationships and unhealthy relationships
- Explain why it is important to refuse sex until you are married
- Explain what transactional sex is
- Help students come up with common reasons as to why adolescents engage in transactional sex
- Elaborate on the dangers of transactional sex
- Understand ways to refuse adults trying to engage in transactional sex

# **EVALUATION**

# Sample Quiz

- 1. List three values that you think are important in life.
- 2. List four characteristics of relationships involving love.
- 3. If you think that your boyfriend or girlfriend will no longer love you if you refuse to have sex with them, then is that person truly in love with you?

- 4. Is it ever right for anyone to make you have sex or engage in sexual activities against your will?
- 5. What is the term for sex that is exchanged for money or gifts?
- 6. What are the three reasons why adolescents commonly engage in transactional sex?
- 7. Name two dangers of transactional sex.
- 8. What are two ways that you can challenge violence within your community?
- 9. What are three reasons why bystanders fail to intervene during a violent attack?

#### RESOURCES / REFERENCES:

Watson, Catherine and Ellen Brazier. <u>You, Your Life, Your Dreams: A Book for Adolescents</u>. Family Care International, 2000.

"Understanding Youth Violence Fact Sheet." United States of American National Center for Injury Prevention and Control. 2012. <a href="http://www.cdc.gov/violenceprevention/pdf/yv-factsheet-a.pdf">http://www.cdc.gov/violenceprevention/pdf/yv-factsheet-a.pdf</a>

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#### PAN AFRICAN GLOBAL ACADEMY

# WEEKLY LESSON PLAN UNIT 3

INSTRUCTOR: WEEK: 17<sup>th</sup>

David Lamptey Ending: XX – XX – XX

SUBJECT: Public Health

SPECIFIC TOPIC: Educational Skit about Healthy Relationships and Food Charts

# **INSTRUCTIONAL GOAL:**

Students will be able to:

- Write and act out an educational skit about healthy relationships, transactional sex, conflict resolution, youth violence and/or bystander intervention
- Make a food chart for Oshiyie depicting what foods are in season at what times in the year
- Understand how to eat a balanced diet in Oshiyie at all time during the year

# LESSON CONTENT

This project will consist of two parts, writing an educational skit about healthy relationships and violence as well as making a yearlong food chart depicting how to eat a balanced diet in Oshiyie throughout the year.

#### EDUCATIONAL SKIT ABOUT HEALTHY RELATIONSHIPS AND VIOLENCE

# **Class Activity:**

Have the class break into groups of 5 or 6 students each, and have each group write a skit teaching one of five topics to the class:

- 1. Communication between boys and girls in healthy as well as unhealthy relationships (this can include two short dialogues contrasting healthy and unhealthy interactions)
- 2. Transactional sex
- 3. Conflict resolution
- 4. Youth violence
- 5. Bystander intervention

The students are encouraged to use their imagination and exercise their creativity in coming up with the skits, as long as each skit presents accurate information about the topic covered. Make sure that all students have a role to play in each skit and that girls as well as boys occupy speaking parts in the skits.

# **FOOD CHARTS**

# **Class Activity:**

Again break the students into small groups (this time 3 or 4 per group should be optimal) and have the students come up with posters depicting when different fruits, vegetables and starches are in season in Oshiyie. Assign each group a season or month, and have each group come up with a

balanced meal that can be eaten in that season or month.

# MATERIALS AND AIDS:

- Lecture notes
- Pen and paper
- Wigs, costumes and any props that might be useful for the educational skit
- Posters, markers

#### TEACHING AND LEARNING ACTIVITIES:

#### Class

- Discusses the differences between interactions in healthy and unhealthy relationships
- Discusses the dangers of transactional sex
- Discusses how to engage in effective conflict resolution
- Discusses common causes of and events leading up to youth violence in Oshiyie
- Discusses how bystanders can intervene in situations that pose the potential to become violent
- Discusses what foods are in season at what time, as well as how one can eat a balanced meal year-round in Oshiyie

#### **EVALUATION**

Teachers will grade the students on the creativity and accuracy of the information presented in their educational skits as well as the practicality and accuracy of the information presented in the food charts.

# **RESOURCES / REFERENCES:**

Whitney, Ellie and Sharon Rady Rolfes. Understanding Nutrition. Thomson Learning, Inc., 2008. Print.

"MyPyramid: Steps to a Healthier You." *MyPyramid*. <a href="http://www.foodpyramid.com/wp-content/uploads/2009/09/MyPyramid2.jpg">http://www.foodpyramid.com/wp-content/uploads/2009/09/MyPyramid2.jpg</a>.

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# PAN AFRICAN GLOBAL ACADEMY WEEKLY LESSON PLAN

**UNIT 3** 

INSTRUCTOR: WEEK: 12<sup>th</sup>

David Lamptey Ending: XX – XX – XX

SUBJECT: Public Health

SPECIFIC TOPIC: Unit 3 Test

### INSTRUCTIONAL GOAL:

#### Teacher will:

Administer the test to the students

#### Students will be able to:

- After the test has been completed and graded, go over the questions of the examination after it has been completed and graded with the instructor
- Understand and be able to explain why students missed questions that they missed on the exam in order to gain a better understanding of the course material of Unit 3

# LESSON CONTENT

Unit 3 test questions

# **MATERIALS AND AIDS:**

- Test questions
- Answer sheets

# TEACHING AND LEARNING ACTIVITIES:

Class engages in an interactive discussion of the Unit 3 test questions

# **EVALUATION**

Unit 3 exam questions

# **RESOURCES / REFERENCES:**

Whitney, Ellie and Sharon Rady Rolfes. Understanding Nutrition. Thomson Learning, Inc., 2008. Print.

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- "Food Supply and Its Distribution to Accra and its Metropolis." AMA-FAO Workshop. Accra Metropolitan Society; the FAO Regional Office for Africa; Marketing and Rural Finance Service; and Agricultural Support Systems Division FAO, 1998. http://www.fao.org/3/a-x6972e.pdf.
- "Youth Initiative: Discussion Guide on Drugs and Crime." United Nations Office on Drugs and Crime (UNODC). New York, April 2012.
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- "Drugs, Brains, and Behavior: The Science of Addiction." United States of America National Institute on Drug Abuse (NIDA). NIH Pub. No. 14-5605. July 2014.
  - http://www.drugabuse.gov/sites/default/files/soa\_2014.pdf
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