JSS 3 OMEGA TERM E-NOTE

SCHEME OF WORK

WEEK 1-Family life Education One

WEEK 2-Family life Education Two

WEEK 3-Radioactivity

WEEK 4-Ethical issues in Science and Development

WEEK 5-Simple Machine

**WEEK 1-** **FAMILY LIFE EDUCATION [i]**

**TEENAGE PREGNANCY**: is defined as pregnancy which occurs in young women between age of ten to nineteen Regardless of whether the woman is married or is legally an adult. Teenage pregnancy is associated with risk such as biological effect with social factors.

**CAUSES OF TEENAGE PREGNANCY.**

1. Societal belief such as early marriage and traditional gender.

2. Lack of sexuality education such as save sex from school, parent, and otherwise.

3. Use of high failure rate control

3. Use of drugs and alcohol may lead to unwanted sexual activities.

4. Poverty

5. Lack basic things that will kill life group.

**IMPLICATION OF TEENAGE PREGNANCY.**

a. Health implication.

1. Pregnancy may be inducing hypertension which can cause heart failure and death of both mother and child.

3. from deficiency anemia which reduces the chance of survival and excessive bleeding.

4. Incomplete abortion.

5. Infectious and injuries to genital organs.

b. It aim lead to unsafe abortion by unwanted and untrained and unqualified health care provider.

c. Social – Economic implication

i. Termination of education

ii. Disruption of life plans and career goals.

iii. Early and forced marriage due to pregnancy.

iii. Low self esteem

iii. Few job opportunities with low income and poverty.

D. Emotional or psychological implication.

i. Loneliness and depression.

ii. Feeling of guilt and fear.

iii. Emotional or psychological in balance due to loss of childhood and adapting to adulthood.

**CARE NEEDED DURING PREGNANCY.**

i. Going for pregnancy lost immediately one miss her period.

ii. Talk with someone you trust.

iii. Enroll for ante-natal care check up with a medical provider.

iv. Follow proper anti-natal care instruction by keeping to the recommended drug by medical provider.

V. eat nourishing food rich in protein, calcium, folic acid, iodine and iron

vi. Get adequate rest and relaxation

vii. Avoid smoking cigerate and drinking of alcohol

**MYTHS AND FACTS ABOUT PREGNANCY.**

**A myth** is something that makes people beliefs but does not exist in the reality.

**A fact** is something that is true and can also be proved.

**MYTHS ABOUT PREGNANCY.**

i. Only pregnant make a woman period cease

ii. Every pregnant woman vomit.

iii. Pregnancy makes women unclean before God

iv. All pregnant women have morning sickness.

v. Pregnant women should nit dye their hair.

vi. Pregnant women shouldn’t eat fish.

vii. Pregnancy is not possible during period.

viii. first time sex can lead to pregnancy.

ix. washing vagina after sex won’t lead to pregnancy.

x. pregnant women should not take bath.

**FACT ABOUT PREGNANCY.**

A. Pregnant women should not carry heavy item.

B. Some women experience bleeding even though they are pregnant.

C. Pregnant women should not drink alcohol.

D. Pregnancy may last for more than a year.  
E. Pregnant women should not change can litter.

ASSSIGHNMENT.

1.Life begins with the union of A. zygote, sperm B. egg, zygote C.sperm, ovum D. male and female.

2.Early marriage and pregnancy is more common in A. traditional rural communities B.cities C. developed nation D.educational communities.

3.Which of the following is not health implication of teenage pregnancy? A.induced hypertention B.pre –mature labour C.incomplete abortion D.loss of weight.

4. State four facts about pregnancy.

5.State four cares needed during pregnancy.

6.state four myths about pregnancy.

**WEEK 2-** **FAMILY LIFE EDUCATION [ii].**

ABORTION: Is defined as the deliberate termination of human pregnancy. It ends the pregnancy by removing the foetus and embryos before it can survive outside the uterus.

**TYPES OF ABORTION.**

1. **INDUCED ABORTION**: This is the intentional decision of a woman to end the pregnancy through surgery or by taking medicine.

2**. SPONTANEOUS / MISCARRIAGE ABORTION**: This is when abortion happens naturally on its own without induction.

**REASON FOR ABORTION.**

1. Birth control contraceptive failure

2. Inability to support or care for a child.

3. Unwanted pregnancy.

4. to prevent the birth of a child with birth defect.

5. pregnancy developed as a result of rape or incest.

6. Health problem that may endanger the woman life.

7. Fear of expulsion from school/fear of parent.

**CONSEQUENCE OF UNSAFE ABORTION.**

1. Incomplete abortion may lead to hemorrhage, cramps and pain in the pelvics and protracted bleeding for more than 3 weeks.

2. Infection my rise as a result of the use of unsterilized instrument.

3. It may lead to perforation of the uterus.

4. It may lead to secondary sterility.

5. Feeling of guilt and shame

6. It may lead to frequent miscarriage and premature birth

7. It may lead to physical trauma before and after the abortion.

**WAYS OF PREVENTING ABORTION.**

A. Having proper sex education.

B. Abstinence.

C. Pregnancy prevention plan [PPP].

D. Uses of Condom

E. Sterilization which prevent the user from getting pregnant.

**NEED TO SEEK FOR COUNSELLING OVER UNWANTED PREGNANCY**

Seeking assistance involving providing support or relief to make the situation bearable.

1. it will make it easier to cope with the problem.

2. it will give situation to the problem.

3. it gives an idea of where to get additional help when it is needed

4. it relieves emotional trauma.

5. it can also improve quality of life.

ASSIGNMENT.

1. Something that many people believe but does not exist is called A. fact B. story C. myths D. lie

2.All these are the reasons for committing abortion except . A. poverty B .ignorance C .unwanted pregnancy D .population explosion.

3.Abortion can be controlled in the following ways except .A abstinence B.sex education C. unprotected sex D. condoms

4.When abortion happens on its own, it is called A. spontaneous abortion B. induced abortion C. common abortion D. delicate abortion

5.State four major reasons for abortion

6.Enumerate four ways of preventing abortion

**WEEK 3-** **RADIOACTVITY**

Radioactivity is the spontaneous disintegration of the nucleus of an atom of an element. Radioactivity involves nucleus reactions. Chemical reaction involves movement of element in its nucleus, the force holding the nucleus become weaker. Such atom becomes unstable, it may break up on its own accord with emission of energy.

The first scientist to observe spontaneous emission of radiation by uranium salt was Becquerel in 1896. Pierre and Marie Currie also isolated two new radioactive element -1.polonium 2.radium

Radioactive elements are isotopes of elements having unstable nucleus that break spontaneously with emission of radiation and release of large amount of energy in achieving a stable composition .isotopes are element with equal nucleus of proton but different numbers of neutron in nucleus .

Examples of Radioactive element are carbon 14; uranium -238, cobalt-60,uranium-235, hydrogen-3 radium -241 thorium-232, potassium-40.

**TYPES OF RADIATION AND PROPERTIES**

1. ALPHA EMISSION –[α]radioactive or radio isotopes emits an alpha particles which is represented [He].The mass number of the radioactivity isotope is reduced by 4 and the atomic number also reduced by 2

**PROPERTIES OF ALPHA EMISSION**

1. it is positively charge .

2. it has penetrating power and can be stopped by sheet of paper .

3. it can be deflected by towards the negatively plate in an electrostatic field since they are positively

4. it has high ionizing power .

5. it has helium particles.

2. **BETA EMISSION** –[β] when a radioactive isotope element emission beta particle, the atomic number is increased by 1. This does not affect the mass number. Beta particle is represented by i.e. A proton with the loss of an electron with escape of Beta particles.

**PROPERTIES OF BETA EMISSION .**

1. The particle is negatively charged.

2. It has a relatively small mass.

3. They are deflected to the positive plate in an electrostatic field.

4. It has more penetrating power than alpha particle.

5. It has lower ionizing power than alpha particle.

3. GAMMA(γ) EMISSION – gamma ray is represented by [γ] it is often emitted along alpha and beta particles

**PROPERTIES OF GAMMA EMISSION**

1. gamma rays are electron magnetics waves similar to visible light

2.it has least ionizing power

3. it has most penetrating power than alpha & beta

4. it causes fluorescence in sodium iodine and zinc sulphate.

5. it is un affected by electrostatic field .

**TYPES OF NUCLEUR REACTION**

1**. NUCLEAR FISSION** –this is the breaking down or splitting of heavy radioactive isotopes to produce smaller [lighter] isotopes of other element.

2**. NUCLEAR FUSION** – this is when two or more light nucleus come together to form a heavy nucleus

**X-RAYS**

X-rays are electromagnetic waves. They penetrate through most solid materials . soft x-rays are used in medicine to take photographs of human body parts it is also used in study the arrangement of particles in crystal .lattice especially protein.

**USES OF RADIOACTIVITY.**

1. It is used in generating electricity

2. It is used in curing cancer or cancer treatment

3. In food industry it is used to kill decay causing bacteria and mould

4. It is used as a tracer

5. It is used in carbon dating to determine the age of specimen

**ASSIGNMENTS.**

**1**.Gamma particles have /are A.postively charged B. deflected by force field C D.most penetrating power

2.Danger of radioactive ray does not include A. destruction of body cell B. undesirable hereditary effects C. tracer of body effects D. death due to over exposure.

3.The radiation used to examine soft body tissue is …………. Ray A. γ B. β C. α D.X

4.Radioactivity is the spontaneous decay of the A. nucleus B. atom C. electron D. proton

**WEEK 4-** **Ethnical issues in science and development**

**ETHICS –**deals with the manners or ways in which thing are done to achieve decorum, coherence and good standard, right application of science to enable progress and development of the society.

Wrong application of science to cause hazardous and un-development

RIGHT APPLICATION OF SCIENCES ARE FOLLOWING

1**. AGRICTURAL DEVELOPMENT** –the technological development has improved agricultural of our people by increasing food production through application of fertilizer

2**. COMMUNICATION** –development through information technology (IT) Has improve communication .The GSM,internet,radio,and television, has reduce than posting letter and is even more faster example the use of mosquito net and anti malaria drugs have reduced the case of malaria. Most deadly diseases have been reduced through immunization and other preventive measures.

**4. DEFENCE**: Satellite helps in locating crime and monitoring what is going on in our society in order to protect our society the construction of weapons also helps in fighting crime and preventing external aggression.

**Energy Generation**

Knowledge of science and technological development helps in generating energy like hydroelectric power, nuclear power, solar power etc.

**Implication of bad scientific practices**

1.In agriculture, the use of fertilizer can cause water pollution which may reduce aquatic life. It can also destroy the wildlife and ecosystem. Therefore application of science in agriculture should be ethically done according to the international best practice.

1.Communication: the communication device like internet browsing has negatively used to perpetrate social crimes such as:

i. Fraud.

ii.Impersonation.

iii.Crime.

iv.Terrorism.

-Pornography

-Development of nuclear bomb leading to terrorism and unreasonable war.

-Industrial use of computer has reduced man power and may even lead to unemployment.

-Pollution occurs in so many areas as a result of energy generation and tapping of mineral resources.

**ASSIGHNMENTS.**

1.Which of these is not a right application of science? A. health improvement B.employment generation C. reduce diseases D.death

2.State two adverse of wrong application of science in our country

**WEEK5-Simple Machine**

A machine is defined as any arrangement that enables work to be done easily.

Types of machine

There are different types of simple machines ; lever, pulley, wheel and axle, inclined plane, screw and jack and hydraulic press .A machine is made of three important parts namely; pivot or fulcrum, effort and load.

The **effort** is a part of the machine where force is applied on the machine.

The **pivot** or fulcrum is the turning point of a machine or it is the joining part or link between the effort and the load.

**Load** is the force, weight or resistance to be overcome by a machine

**LEVERS** are simple machines that have unique arrangement of the three important parts that is effort, load and pivot There are three classes of levers ; first class lever, second class lever and third class lever .The arrangement of the three important parts can be used to recognize which type of lever.

1. First class lever, the pivot is between the load and the effort. Examples are scissors, plier ,see-saw ,claw hammer .

2. Second class lever, the load is between the effort and pivot. Examples are wheel barrow, nutcrackers, nail, clippers, bottle openers.

3.Third class lever are those levers which have their effort between the pivot and the load. Examples are human forearm, laboratory tong and fishing rod.

INCLINED PLANE-is a simple machine used to objects to a higher or tower place. It is heavier to push a heavy object up a slope to a greater height than to lift the object up to the height.

PULLEYS- is a simple machine that changes the direction or amount of force. It is a wheel with a groove along its rim, and a movable rope around its wheel.

A WEGDE- is a simple machine that works on the principles of an inclined plane. Wedges are used for cutting and piercing. Examples are knives, pin blades or axes.

EFFICIENCY-The efficiency of a machine is expressed as the ratio of energy output to the energy input. The efficiency is always expressed in percentage, therefore

EFFICIENCY= energy output 100

Energy input

Maintenance of machine.

1.By oiling , greasing use of ball bearing to reduce friction.

2.By regular removal of dirt from the machine

3.Checking of engine oil regularly.

4.Checking all machine to detect any fault.