

**THEME: THE HUMAN BODY**

**TOPIC: THE REPRODUCTIVE SYSTEM**

## **Growth and development in human beings**

### **What is growth?**

- **Growth** is the increase in size of an organism.

### **Signs of growth**

- Increase in weight/mass
- Increase in height
- Appearance of masculine and feminine features.

### **What is development?**

- This is the increase in maturity of an organism.

## **Puberty and adolescence**

### **What is adolescence?**

- This is the period of growth from childhood to adulthood.
- This is the period during when a child grows into an adult.

### **Who is an adolescent?**

- This is a person undergoing adolescence.
- Childhood stage from 0- 12 years
- Adolescence stage from 13- 18 years
- Adulthood stage from 18 years and above.

### **What is puberty?**

- This is a period in which reproductive organs become sexually mature.
- This is a period when a person experiences sexual maturation.

Changes in adolescents at puberty are called **sex characteristics**

**There are two types of body changes/sex characteristics namely;**

- Primary sex characteristics
- Secondary sex characteristics

### **Primary sex characteristics/changes**

- These are changes that affect primary sex organs.
- They are directly responsible for reproduction.

### **Examples of primary sex characteristics/changes**

<b>In boys</b>	<b>In girls</b>
<ul style="list-style-type: none"><li>• Enlargement of penis and testes</li><li>• Production of sperms/semen</li><li>• Experiencing of wet dreams</li></ul>	<ul style="list-style-type: none"><li>• Menstruation</li><li>• Ovulation</li><li>• Thickening of the uterus</li></ul>

### **Primary sex characteristic in both girls and boys**

- Production of mature gametes
- Enlargement of reproductive organs.

### **Secondary sex characteristics**

- These are changes which give a person a male or female appearance.
- They are not directly responsible for reproduction.
- They distinguish a girl from a woman and a boy from a man.

### **Examples of secondary sex characteristics**

<b>In boys</b>	<b>In girls</b>
<ul style="list-style-type: none"><li>• Growth of beards</li><li>• Deepening of voice</li><li>• The body becomes muscular</li><li>• Broadening of the chest</li></ul>	<ul style="list-style-type: none"><li>• Development of breasts</li><li>• Soft and attractive voice</li><li>• Smooth and nice looking face</li><li>• Widening of hips.</li></ul>

### **Secondary sex characteristics in both girls and boys**

- Sweat glands become active
- Appearance of pimples on the face
- Growth of pubic hair
- Growth of armpit hair

- Body odour

### **Psychological/emotional changes**

- These are changes that take place in the mind.
- They are the same in both girls and boys.

### **Examples of psychological/emotional changes in girls and boys.**

- They are interested in the opposite sex
- They become moody/ mood swings
- They have increased demands
- They reject rules/They become disobedient.
- They become self conscious.
- They develop temper/become angry quickly
- They need freedom or independence

### **Social changes**

- These are changes in human interactions and relationships.

### **Examples of social changes in adolescents**

- They form peer groups
- They make friendship/relationship outside the family

### **Problems faced by the adolescents/effects of adolescence changes.**

- Early pregnancy in girls
- Imprisonment
- Contraction of HIV/AIDS
- Sexually Transmitted Diseases
- Rejection in the society
- Committing crimes
- School drop out
- Conflicts
- Miscarriage/abortion

### **Reproduction**

- **Reproduction** is the process of giving rise to new offsprings.
- This is the ability of organisms to multiply and increase in number
- This is the process by which organisms produce their own kind

### **Importance of reproduction**

- It helps organisms to remain in existence
- It helps organisms to multiply and increase in number
- It prevents extinction of species of organisms

### **Type of reproduction**

- Asexual reproduction
- Sexual reproduction

### **Asexual reproduction**

- This doesn't involve fusion of gametes.

### **Name examples of asexual reproduction**

- Cell division/Binary fission
- Budding

### **Sexual reproduction**

- This involves fusion of gametes.

### **What is a gamete?**

- This is a reproductive cell.

### **Examples of gametes**

- Sperms
- Ova/eggs

### **What are gonads?**

- These are glands that produce gametes.

### **Examples of gonads**

- Testes
- Ovaries

The male gametes in human beings are called **sperms**

The male gonads in human beings are called **testes**

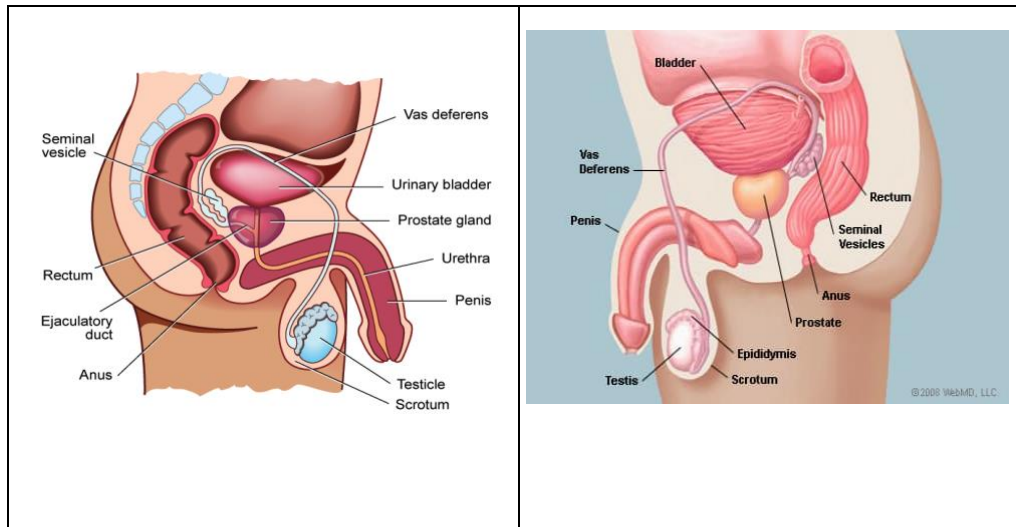
The female gametes in human beings are called **ova**.

The female gonads in human beings are called **ovaries**

### **Reproductive system**

- This is a group of body organs involved in reproduction.

### **Parts of the male reproductive system**



### **Functions of each part**

#### **1. Scrotum**

- It protects the testes from harm.
- It regulates temperature around the testes

#### **2. Testes**

- They produce sperms
- They produce a male hormone called **testosterone**
- ❖ **Testosterone** controls male secondary sex characteristics.
- It helps to improve sex drive

#### **3. Penis**

- It deposits sperms into the vagina during sexual internal.
- It is used to pass out urine.

#### **4. Epididymis**

- It stores sperms

- It is where sperms nature from.
- It carries sperms to the sperm ducts

### **5. Sperm duct (vas deferens)**

- Transports/delivers sperms to the urethra

### **6. Urethra**

- It is a passage of urine and sperms

### **7. Prostate gland**

- It controls/regulates urine flow
- It produce seminal fluids

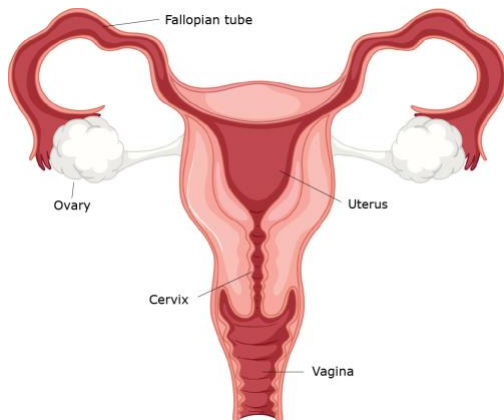
### **8. Seminal vesicle**

- It produces a fluid that forms semen.

### **9. Foreskin**

- It covers and protects the head of the penis.

## **Parts of the female reproductive system**



## **Functions of each part**

### **1. Vagina**

- It is where sperms are deposited/ It receives sperms during mating.
- It acts as a birth canal/ It is a passage of the baby during birth.
- It receives a penis during sexual intercourse

### **2. Cervix**

- It separates the vagina from the uterus
- It prevents the foetus from coming out before it is time.
- It closes the uterus during pregnancy

### 3. Uterus/womb

- It is where implantation occurs
- It is where the embryo develops until birth.

### 4. Oviduct/fallopian tube

- It is where fertilization takes place
- It transports fertilized eggs (ova) from the ovary to the uterus.

### 5. Ovaries

- Produce ova (eggs)
- Produce female hormones e.g. estrogen, progesterone

### Importance of estrogen hormone

- Controls female secondary sex characteristics.
- Regulates menstrual cycle
- Help in development of breasts.

### Copulation

- This is the act of having sexual intercourse.

### Ovulation

- This is the release of a mature egg/ovum from the ovary.

### Menstruation

- This is the monthly discharge of blood and tissues from the uterus.
- It is caused by rupture of the uterus walls
- The first menstrual period called **menarche** starts in girls between **9-16**
- The last menstrual period called **menopause** and ends at **45** years

## Examples of menstrual hygiene products

- Sanitary pads
- Menstrual cups
- Tampons

## Fertilization

- This is the fusion of a male and female gametes to form a zygote.

### Types of fertilization

- Internal fertilization
- External fertilization.

Humans undergo **internal fertilization**.

Fertilization in humans takes place in the **fallopian tube/oviduct**

During sexual intercourse, the penis releases sperms into the vagina.

The sperms swim in semen to the oviducts/fallopian tubes

## Implantation

- This is the attachment of the zygote to the walls of the uterus.

## Pregnancy

- This is the period in which the embryo is developing.

### Gestation period

- This is the period from fertilization to birth.
- ❖ The pregnancy/gestation period in humans is **9 months**.

## Conception

- This is the process of becoming pregnant.
- This is the successful fusion of a sperm and an ovum.

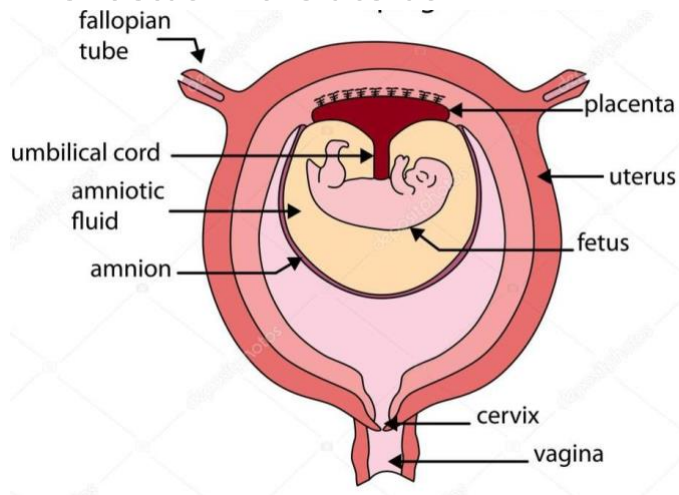
### Signs of pregnancy

- Breasts grow bigger/ Enlargement of breasts
- Menstruation stops



- The abdomen grows bigger/ enlargement of the abdomen
- Morning sickness
- Frequent urination
- Vomiting/nausea
- Secretion of milk from breasts
- Food cravings

### **The foetus in the uterus**



### **Functions of each part**

#### **1. Placenta**

- It provides nutrients and oxygen to the foetus.
- It produces hormones for the foetus
- It stores waste products from the foetus

### **Problems that may occur during pregnancy**

- Vomiting
- Morning sickness
- Constipation
- Heartburn

- Lower back pain/backache
- Anaemia/lack of enough blood
- Swelling of body parts e.g. hands, feet and face
- ❖ **Teenage pregnancy** is pregnancy in adolescent girls.
- ❖ **A young parent** is an adolescent who produces a baby under the age of 18 years.

### **Causes of teenage pregnancy**

- Sexual violence
- School drop out
- Forced early marriage I'm b

### **Effects/dangers of early marriage**

- Contraction of STDS
- Damage of sexual organs
- Dismissal from school

### **How to prevent teenage pregnancy**

- Abstain from sex
- Get advice, counseling and guidance
- Avoid moving alone at night
- Reject gifts for sex.
- Avoid joining bad peer groups
- Menstruation period stops
- Breasts grow bigger/enlarge
- The stomach/abdomen grows bigger/enlarges
- Frequent urination
- Morning sickness
- Vomiting/nausea
- Secretion of milk from breasts

### **Requirements of a pregnant woman/mother**

- Balanced diet

- Vaccination against tetanus using T.T vaccine
- Antenatal services/care
- Regular physical exercises
- Good hygiene