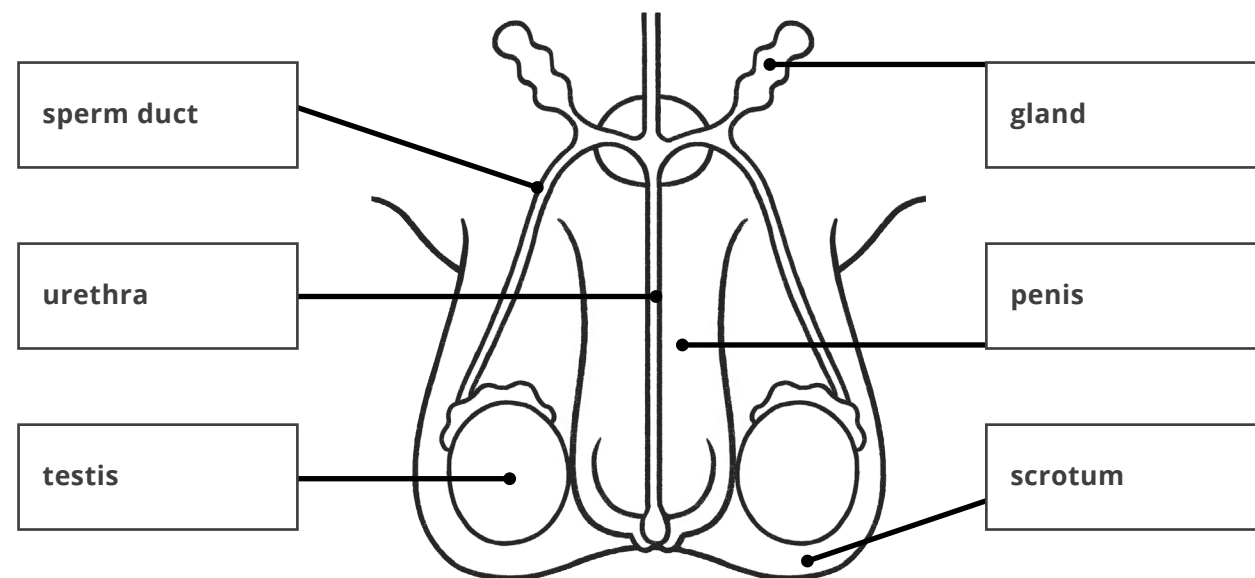


Human Reproduction Revision Mat **Answers**

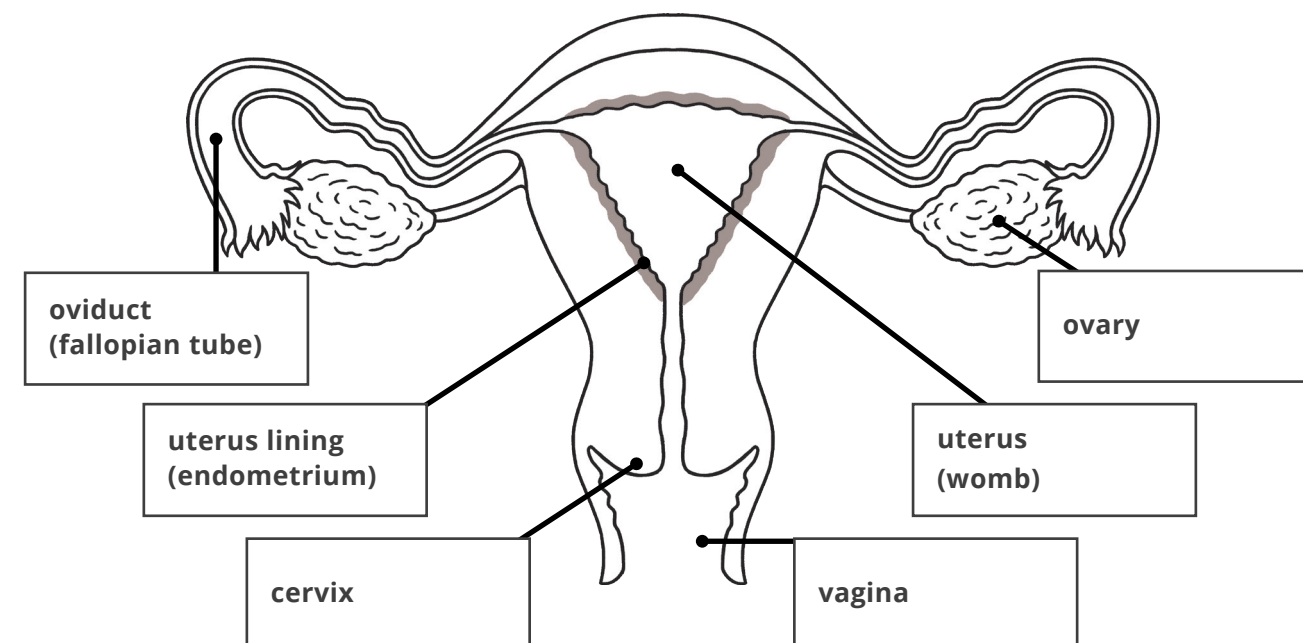
Male Reproductive System

Label the parts of the male reproductive system.



Female Reproductive System

Label the parts of the female reproductive system.



Sperm Cells



Name the part of the male reproductive system where sperm cells are produced.

testis

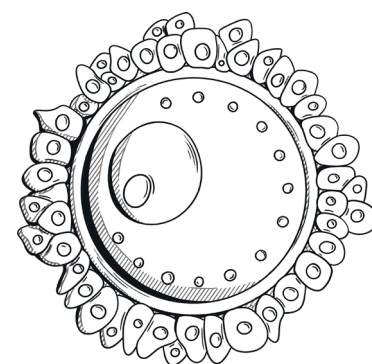
Explain how a sperm cell is adapted to its function.

The head of the sperm cell is covered with an acrosome, which releases enzymes to help the sperm cell penetrate the egg cell membrane.

The sperm cell has a tail that allows it to move towards the egg cell to fertilise it.

The midpiece contains many mitochondria to release energy for movement.

Egg Cells



Name the part of the female reproductive system where egg cells mature and are released.

ovary

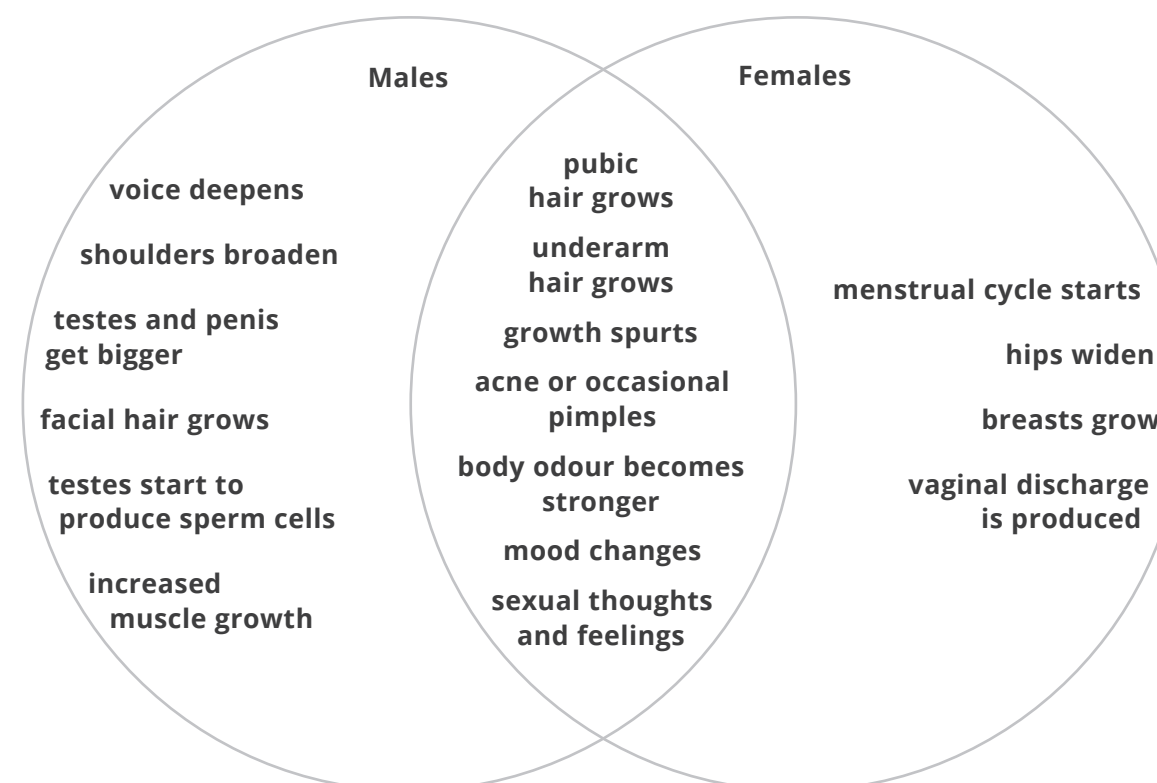
Explain how an egg cell is adapted to its function.

The large size of the egg cell increases the chance of it being fertilised by a sperm cell. It also means it has space for lots of nutrients to support the developing embryo after fertilisation.

The egg cell membrane changes after fertilisation to ensure that only one sperm cell enters the egg.

Puberty

Complete the Venn diagram to show the physical and emotional changes that take place during puberty in males, in females, and in both.



Human Reproduction Revision Mat **Answers**

Human Reproduction

f

Describe the stages in the process leading up to pregnancy. You should include all of the key words in the box below.

egg cell	ejaculation	embryo
fertilisation	implantation	ovary
oviduct	ovulation	penis
sperm cell	uterus	zygote

- **Once a month, an egg cell matures in the ovary and is released. This is called ovulation.**
- **The egg cell travels down the oviduct towards the uterus.**
- **During sexual intercourse, semen is released from the penis into the vagina. This is called ejaculation.**
- **Sperm cells travel through the female reproductive system to meet the egg cell in the oviduct.**
- **One sperm cell penetrates the egg cell membrane and enters the cytoplasm. The egg cell membrane changes so no more sperm can enter.**
- **The nucleus of the sperm cell fuses with the nucleus of the egg cell in a process called fertilisation. The fertilised egg cell is called a zygote.**
- **The zygote continues to travel down the oviduct, dividing many times along the way to form a ball of cells called an embryo.**
- **The embryo attaches to the lining of the uterus. This is called implantation. The female is now pregnant.**

The Menstrual Cycle

g

Use the diagrams to describe each stage in the menstrual cycle.

Day 1-5	Day 5-14
The lining of the uterus breaks down and passes out of the vagina. This is known as menstruation or ‘having a period’.	An egg cell starts to mature in the ovary. The lining of the uterus begins to build up again.
Day 14	Day 14-28
An egg cell is released from the ovary. This is known as ovulation.	The egg cell travels along the oviduct towards the uterus. The uterus lining remains thick awaiting the arrival of a fertilised egg cell.

Describe what happens to the menstrual cycle if an egg cell is fertilised by a sperm cell.

The fertilised egg cell (zygote) will implant in the lining of the uterus. The uterus lining remains thick and periods stop.

Describe what happens if an egg cell is **not** fertilised by a sperm cell.

The uterus lining breaks down again and the cycle repeats.

Development of a Baby

h

In which part of the female reproductive system does a baby develop?

uterus (womb)

Which part of the female reproductive system keeps the baby in place during pregnancy?

cervix

What is the average length of gestation in humans?

40 weeks (9 months)

What is the difference between an embryo and a foetus?

An embryo is a baby in the early stages of development up to the end of the eighth week after conception. More than eight weeks after conception, the developing baby is called a foetus.

Effect of Maternal Lifestyle

i

Explain how substances can pass from the mother to the developing baby.

Substances can pass from the mother’s blood to the baby’s blood across the placenta. The placenta is an organ that attaches to the wall of the uterus. The baby’s blood then travels along blood vessels in the umbilical cord, which connects the baby to the placenta.

Give **two** lifestyle factors that may lead to low birthweight and premature birth.

1. **smoking cigarettes**
2. **drinking alcohol**