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Glue on this side

# Human Reproduction

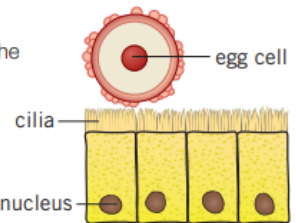
1	I can name and describe the functions of some tissues and organs in the human reproductive systems
2	I can describe the stages of pregnancy and birth
3	I can describe the stages of the menstrual cycle
4	I can explain how gametes are involved in fertilisation
5	I can discuss the impact of maternal lifestyle on the foetus
6	I can list some changes that happen in the body during puberty

	Keyword	Definition
1	egg cell	The female sex cell.
2	embryo	A ball of cells that forms when the fertilised egg divides.
3	foetus	The developing baby during pregnancy (from eight weeks after fertilisation).
4	gamete	The male gamete (sex cell) in animals is a sperm, the female gamete is an egg.
5	menstruation	Loss of the lining of the uterus during the menstrual cycle.
6	ovary	Organ that contains eggs.
7	ovulation	Release of an egg during the menstrual cycle.
8	puberty	The physical changes that take place during adolescence.
9	sperm cell	Male sex cell containing male genetic material.
10	testicles (testes)	Organ where sperm and testosterone are produced.

# Fertilisation, implantation and gestation

- Egg cells and sperm cells are also called **gametes**, and each contains half the genetic information needed to form a complete organism.

**Egg cells**  
An egg is released by the ovaries every month  
The egg cell is moved along the oviduct towards the uterus by **cilia**



**Sperm cells**  
**Sperm cells** are produced in the testicles/testes  
Sperm are mixed with nutrients and fluid from the glands to form **semen**  
During sexual intercourse a man will release semen into the vagina (**ejaculation**)

If a sperm meets the egg **fertilisation** may happen

The fertilised egg may then **implant** in the uterus lining and form an **embryo** (ball of cells)

- During **gestation** the developing **fetus** needs nutrients from the mother, these are passed through the **placenta** which is connected to the fetus by the **umbilical cord**
- Nutrients are passed from the mother to the baby and waste products are passed back from the baby to the mother
- The baby is protected from bumps to the mother by the **amniotic sac** which acts as a shock absorber

Just a dot

1 week – cells beginning to specialise

3 mm long

4 weeks – spine and brain forming, heart beating

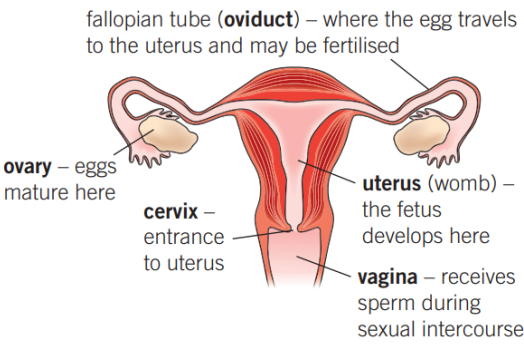
3 cm long

9 weeks – tiny movements, lips and cheeks sense touch, eyes and ears forming

7 cm long

12 weeks – fetus uses its muscles to kick, suck, swallow, and practise breathing

# Reproductive systems



fallopian tube (**oviduct**) – where the egg travels to the uterus and may be fertilised

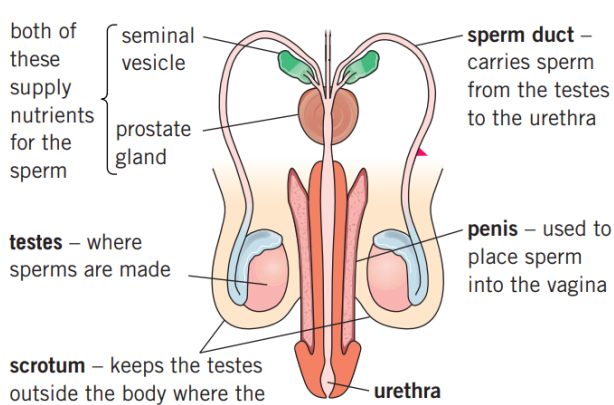
ovary – eggs mature here

uterus (womb) – the fetus develops here

cervix – entrance to uterus

vagina – receives sperm during sexual intercourse

both of these supply nutrients for the sperm



seminal vesicle

prostate gland

sperm duct – carries sperm from the testes to the urethra

testes – where sperms are made

penis – used to place sperm into the vagina

urethra

scrotum – keeps the testes outside the body where the temperature is a few degrees cooler and better for development of sperm

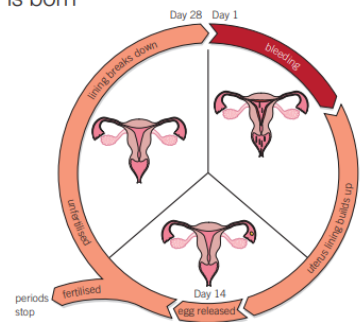
Prior Knowledge From KS2:  
*From KS2 you already know that living things produce offspring of the same kind, but they are not identical to their parents.  
The changes as humans develop from birth to old age.  
A lifecycle shows the different stages in an organism's life from birth to old age.*

Why?  
*Knowing where we came from and how the next generation will arise is extremely important.  
Biology at KS3 supports the PSHE curriculum too.*





Future Learning:  
*GCSE will bring further study in more detail with the specific role of hormonal control of the female reproductive system. STD and methods of contraception will be looked at in more detail too. The medical advances of IVF and embryonic genetic screening and the ethical issues that this brings will be studied to.*

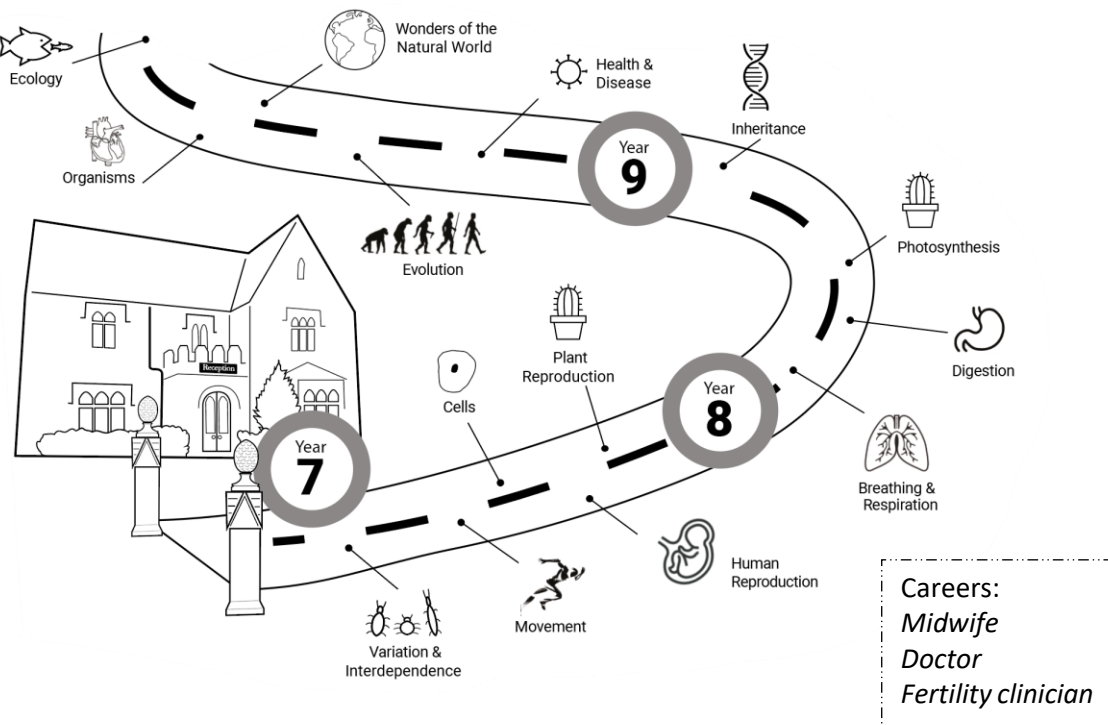
# The menstrual cycle

- The **menstrual cycle** is the process in which an egg is released from an ovary and leaves through the vagina
- Day 1: blood from the uterus lining leaves through the vagina, which is known as a **period**
- Day 5: the bleeding stops and the uterus lining starts to re-grow
- Day 14: an egg is released from one of the ovaries during **ovulation**
- If the egg is **fertilised** than the menstrual cycle stops until the baby is born



# Homework Menu Grid

Topic	1 Point	2 Points	4 Points	6 Points	10 Points
 <b>Reproductive organs</b>	Draw or print out a picture of the male and female reproductive system and label the main parts.	Pick three parts of the male and female reproductive system, describe their functions.	Produce revision notes to describe the function of each part of the reproductive system. You could make flash cards, a poster for your wall, or something else that will support your revision.	How would you describe the structure of either the male or female reproductive system to an alien? Write a short script	Make up an answer to a six-mark exam question on Reproductive systems, include mistakes in it, get a friend to find the mistakes.
 <b>Puberty</b>	Write an old-style tweet that describe how hormones influence puberty. (140 characters)	Summarise the changes that happen during puberty to males and females as a Venn diagram.	Write four true or false questions about puberty.	Make up a crossword about the main reproductive organs in humans.	Write a letter to a teenage magazine reassuring teenager about the changes happening to them during puberty. Use as many key words in your letter as you can.
 <b>Fertilisation</b>	Draw and label a diagram of a sperm and egg cell.	Write definitions for the keywords you have learnt in this topic so far.	Write a poem that compares fertilisation in plants to fertilisation in humans.	Make a comic strip of fertilisation. Make it as funny as you like but include the main stages in fertilisation.	Research what is meant by 'in vitro fertilisation'. Produce a fact file
 <b>Gestation and development of a foetus</b>	What does a foetus need from the mother in order to develop?	Describe how an ultrasound works.	Produce an information poster for a doctors surgery, aimed at pregnant women. Include information on why smoking and alcohol during pregnancy effects foetal development.	Research the gestation lengths of other animals such as mice and elephants. How do these differ to humans?	Compose a song or write a poem describing the development of a foetus over the 36 weeks.



Careers:  
**Midwife**  
**Doctor**  
**Fertility clinician**