

Home learning activities

Subject
Science
Year Group
Year 7
Unit of work / Knowledge organiser
Plant and Human Reproduction
Activities
<ul style="list-style-type: none"> • Read through the sections of the 'Knowledge Organiser' on 'Plant and Human Reproduction'. Pick out 5 key facts (from the left-hand side) on both pages and write these out. Write out each of the key words (right-hand side) from both pages, together with their meanings. • Describe, in your own words, the main differences between plant and human reproductive systems. • Describe the meanings of 'pollination' and 'fertilisation' in your own words, without looking at your earlier notes. • Complete the 'Match and Draw', 'True or False' and 'Anagrams' activities on the 'Test Yourself 1' pages; the answers are provided, but do not look at these until you have tried the work yourself (be strict with yourself here). • Complete the 'Label Me', 'Missing Vowels' and 'What Happens?' activities on the 'Test Yourself 2' pages; again, the answers are provided, but do not look at these until you have tried the work yourself. • Complete the exam question on 'Cells and Reproduction' (easier) or 'Human Pregnancy and Birth' (harder) depending upon your level of confidence with the work. Use the mark scheme (once you have tried the question) to mark your answers carefully.
Where do you complete the work?
In Study Books.
What to do if you finish the work? (Extension activity)
<ul style="list-style-type: none"> • Make sure you have completed the previous two weeks of work on 'Ecosystems' and then complete the 'mini project' on 'Ecosystems'.

These websites might help:

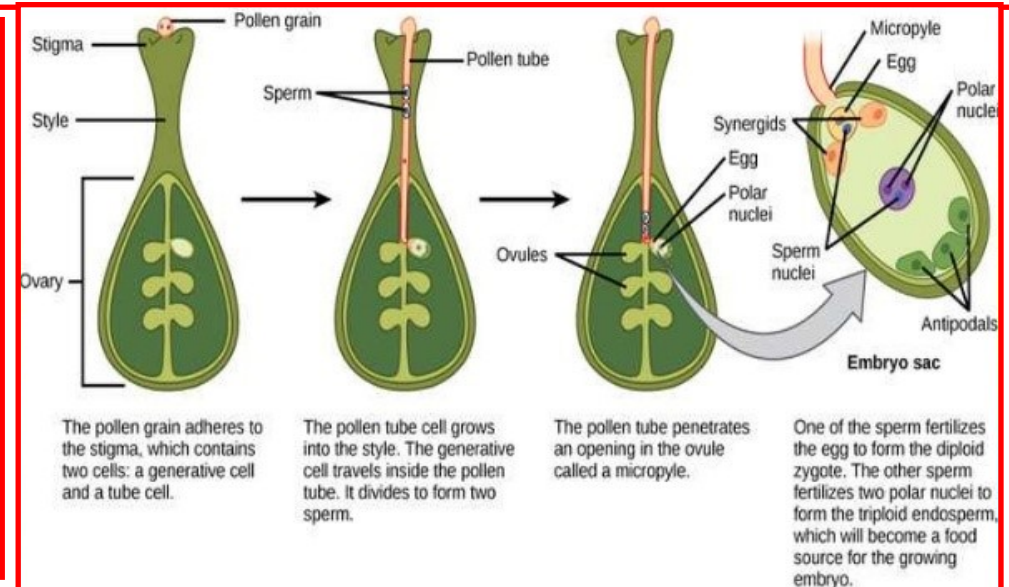
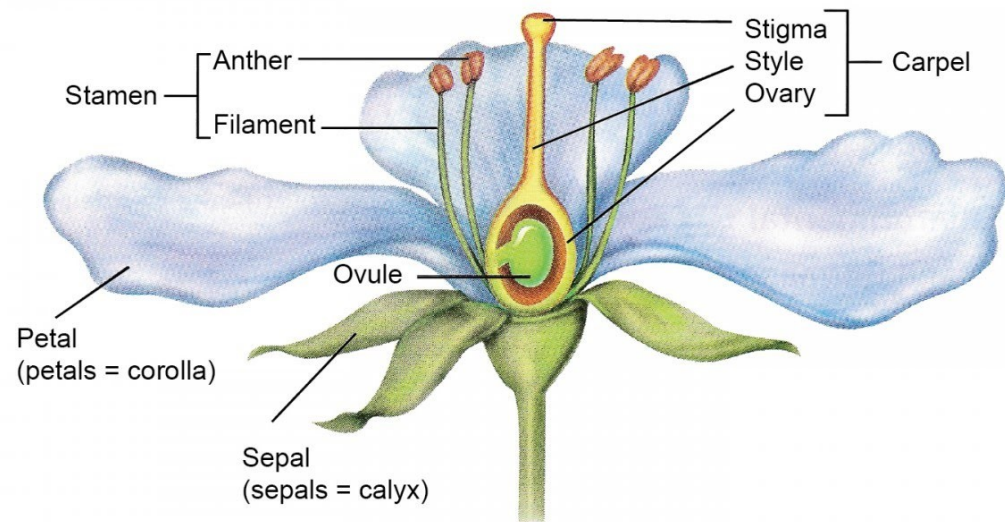
- BBC Bitesize -> Secondary -> KS3 -> Science -> Biology -> Reproduction

If you are struggling with your work or if you have finished.

Please email your classroom teacher directly using the email list found in the Home Learning section of the website.

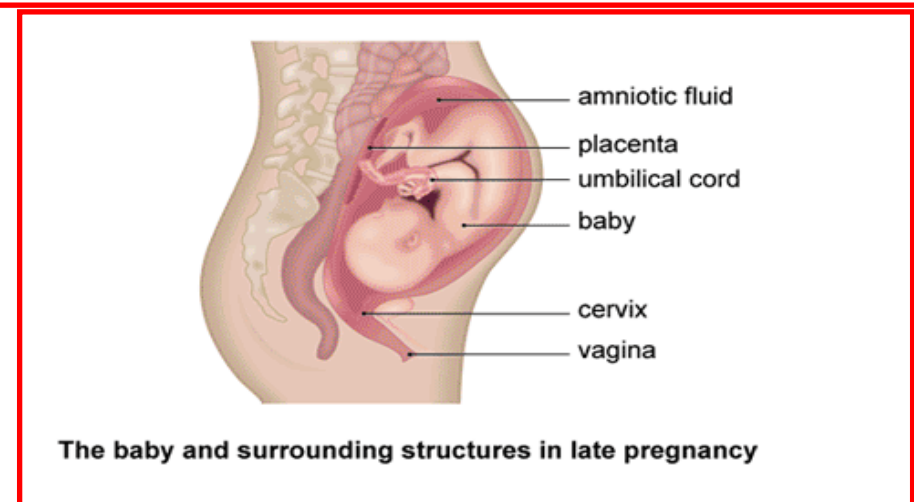
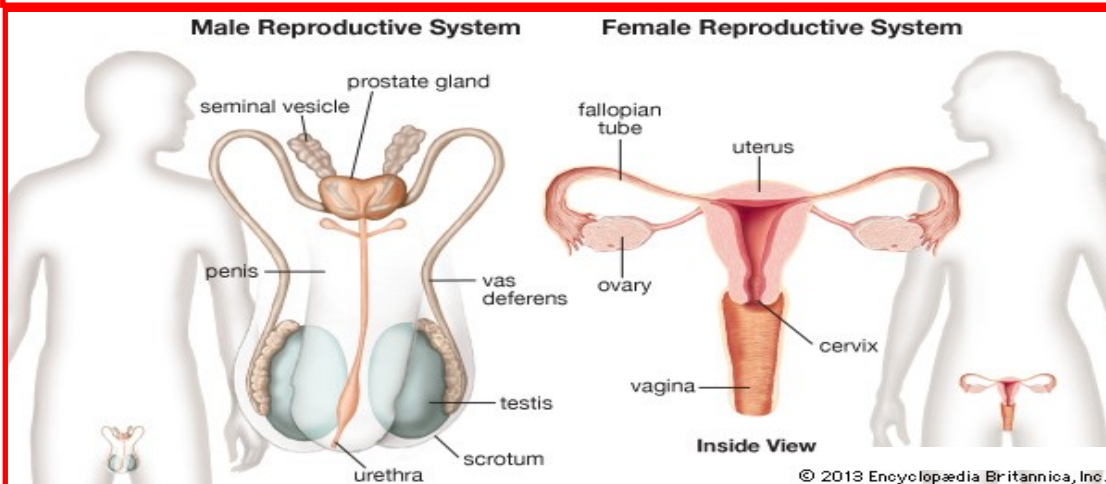
Y7: Plant Reproduction

Know the facts		Key words	
1	Plants have adaptations to disperse seeds using wind, water or animals.	14	Pollen: Contains the plant male sex cells (gamete) found on the stamens.
2	Plants reproduce sexually to produce seeds, which are formed following fertilisation in the ovary.	15	Ovules: Female sex cells in plants found in the ovary.
3	Flowers contain the plant's reproductive organs.	16	Pollination: Transfer of pollen from the male part of the flower to the female part of the flower on the same or another plant.
4	Pollen can be carried by the wind, pollinating insects or other animals.	17	Fertilisation: Joining of a nucleus from a male and female sex cell.
5	The 1 st step involved in plant reproduction is that pollen from anther is deposited onto the stigma.	18	Seed: Structure that contains the embryo of a new plant.
6	The 2 nd step is that a tubule from the pollen grows down the stigma into the ovary.	19	Fruit: Structure that the ovary becomes after fertilisation, which contains seeds.
7	The 3 rd step is that DNA transfers into the ovules.	20	Carpel: The female part of the flower, made up of the stigma where the Pollen lands, style and ovary.
8	Wind dispersed seeds are light and can have "wings".	21	Anther: Produces pollen.
9	Animal dispersed seeds may have hard coats to withstand the digestive system when swallowed. This hard coat is then excreted.	22	Filament: Holds up anther.
10	Animal dispersed seeds may be adapted to stick to animals to catch on their coats or fur.	23	Stigma: Where pollen is deposited.
11	Water pollinated seeds are light and float.	24	Style: Supports the stigma.
12	Explosive dispersal seeds are contained in pods that release these.	25	Ovary: Contains ovules (female sex cells).
13	Plant breeders use knowledge of pollination to carry out selective breeding.	26	Petal: Brightly coloured to attract insects.



Y7: Human Reproduction

Know the facts		Key words	
1	The menstrual cycle prepares the female for pregnancy and stops if the egg is fertilised by a sperm.	16	Gamete: The male gamete (sex cell) in animals is a sperm, the female an egg.
2.	The developing foetus relies on the mother to provide it with oxygen and nutrients via the placenta and umbilical cord; to remove waste and protect it against harmful substances.	17	Fertilisation The process where the nucleus of a sperm cell joins with the nucleus of an egg cell.
3	The menstrual cycle lasts approximately 28 days.	18	Ovary: Organ which contains eggs.
4	Oxygen, glucose, antibodies pass to the foetus and carbon dioxide and urea pass to the mother in the umbilical cord.	19	Testes: Organs where sperm are produced.
5	Low fertility in males may be caused by low sperm count and/or poor motility of the sperm.	20	Oviduct, or fallopian tube: Carries an egg from the ovary to the uterus and is where fertilisation occurs.
6	Alcohol passes from the mother's blood to the baby through the placenta.	21	Uterus, or womb: Where a baby develops in a pregnant woman.
7	Chemicals from cigarettes and drugs from the mother's blood can pass to the baby through the placenta.	22	Menstruation: Loss of the lining of the uterus during the menstrual cycle
8	Contraception describes ways in which an egg and sperm are prevented from fusing.	23	Reproductive system: All the male and female organs involved in reproduction.
9	Fertility treatments can be used to increase the chance of fertilisation and implantation.	24	Penis: Organ which carries sperm out of the male's body.
10	Ovulation is when the egg is released during the menstrual cycle, around day 14.	25	Vagina: Where the penis enters the female's body and sperm is received.
11	Implantation is the process where an embryo attaches to the lining of the uterus	26	Foetus: The developing baby during pregnancy.
12	sperm duct carries sperm from the testes to the penis	27	Placenta: Organ that provides the foetus with oxygen and nutrients and removes waste substances.
13	Gestation is the time it takes for a baby to develop in the uterus (40 weeks).	28	Amniotic fluid: Liquid that surrounds and protects the foetus.
14	puberty is the physical changes that take place during adolescence	29	Umbilical cord: Connects the foetus to the placenta.
15	Gametes are reproductive cells. The male gamete is a sperm cell and the female gamete is an egg cell.	30	Ovulation: The release of an egg from an ovary



Human Reproduction Test Yourself 1

Match and Draw

Draw a line to match the organ with its function.

Ovaries

A ring of muscle at the entrance to the uterus, keeps the baby in place.

Oviducts

A tube that carries urine from the bladder to outside the body.

Urethra

Carry an egg to the uterus.

Cervix

Contains egg cells.

Twins: True or False?

- Identical twins can be of different sexes. _____
- Identical twins are produced from one egg and one sperm. _____
- Identical twins must be of the same sex. _____
- Non-identical twins have the same genetic information. _____
- Non-identical twins are produced from one egg and one sperm. _____

Anagrams

Rearrange the following to show words connected to reproduction.

Billicaum dorc _____

Spein _____

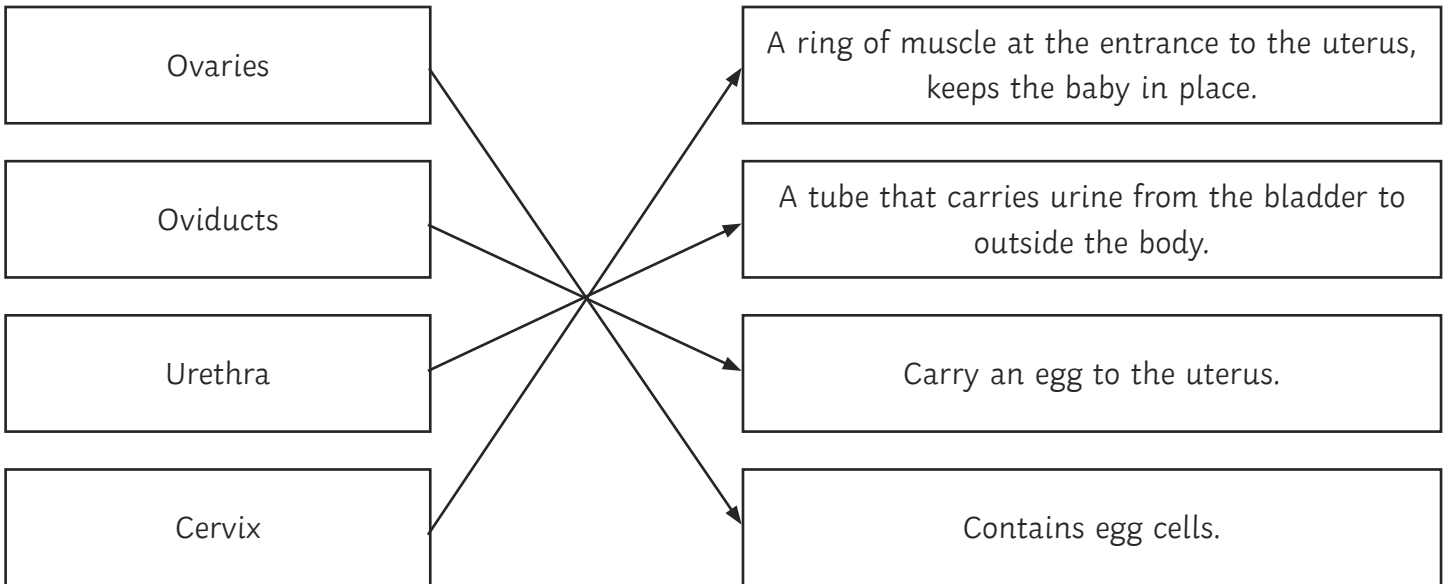
Tapclaen _____

Yavro _____

Human Reproduction Test Yourself 1 - Answers

Match and Draw

Draw a line to match the organ with its function.



Twins: True or False?

- Identical twins can be of different sexes. **False**
- Identical twins are produced from one egg and one sperm. **True**
- Identical twins must be of the same sex. **True**
- Non-identical twins have the same genetic information. **False**
- Non-identical twins are produced from one egg and one sperm. **False**

Anagrams

Rearrange the following to show words connected to reproduction.

Billicaum dorc - **Umbilical cord**

Spein - **Penis**

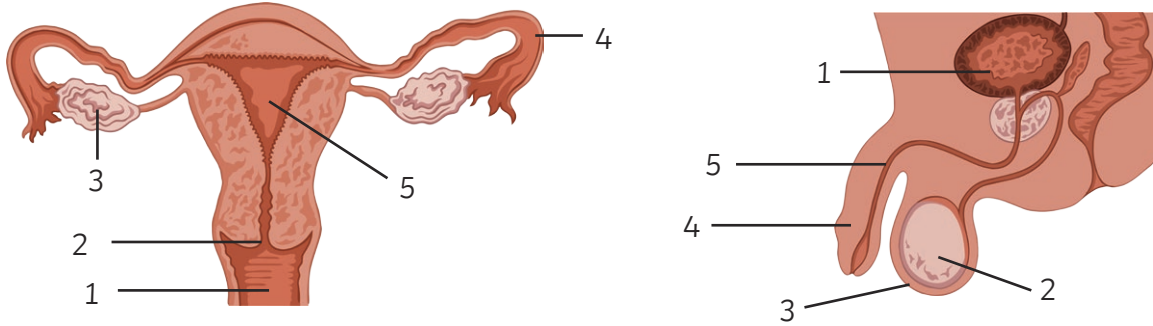
Tapclaen - **Placenta**

Yavro - **Ovary**

Human Reproduction Test Yourself 2

Label Me

Below is a diagram of the male and female reproductive system, label parts 1-5.



Female	Male
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Missing Vowels

Complete the words.

t-st-s _____

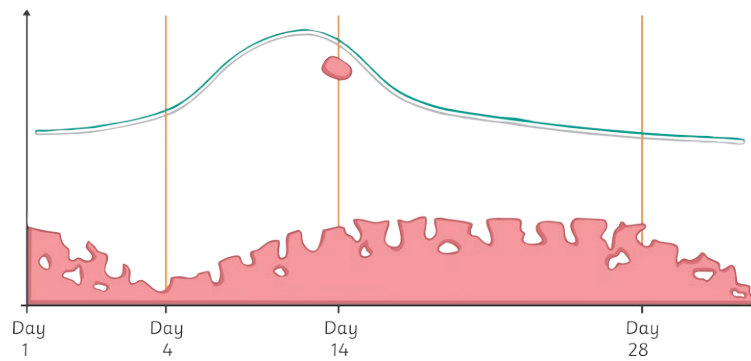
scr-t-m _____

s-m-n _____

p-n-s _____

What Happens?

Below is a diagram showing what happens during the menstrual cycle.



1. What happens at day 1 of the menstrual cycle?

2. What happens between day 4 and 14?

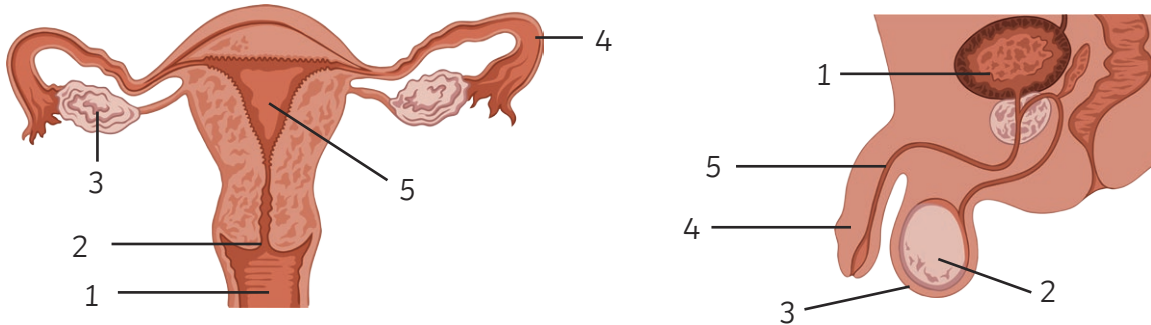
3. What happens to the lining of the uterus if an egg isn't fertilised?

4. If a woman starts menstruating on the 2nd May, on what date is her next period due?

Human Reproduction Test Yourself 2 - Answers

Label Me

Below is a diagram of the male and female reproductive system, label parts 1-5.



Female	Male
1. Vagina	1. Bladder
2. Cervix	2. Testicles
3. Ovary	3. Scrotum
4. Oviduct	4. Penis
5. Uterus	5. Urethra

Missing Vowels

Complete the words.

t-st-s - testes

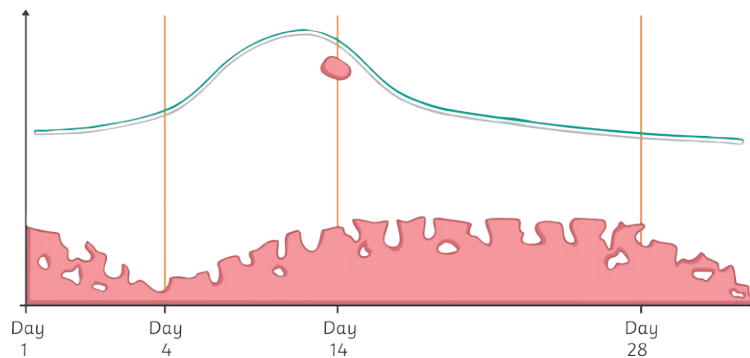
scr-t-m - scrotum

s-m-n - semen

p-n-s - penis

What Happens?

Below is a diagram showing what happens during the menstrual cycle.



1. What happens at day 1 of the menstrual cycle?

The lining of the uterus breaks down and menstruation occurs.

2. What happens between day 4 and 14?

The uterus lining builds up.

3. What happens to the lining of the uterus if an egg isn't fertilised?

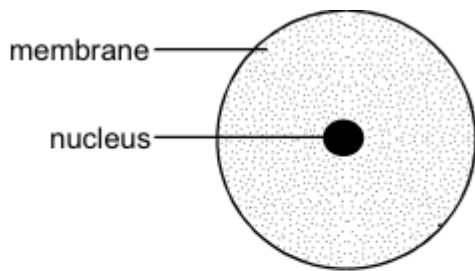
It breaks down again.

4. If a woman starts menstruating on the 2nd May, on what date is her next period due?

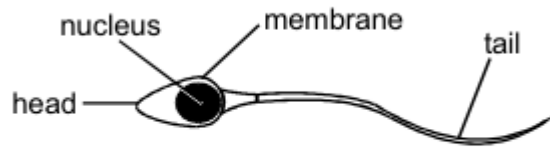
28 days later, 30th May.

Exam Question – Cells and Reproduction (Easier)

Q1. The diagrams below show a human ovum (egg) and a human sperm.



human ovum (egg)



human sperm

not to scale

(a) What are eggs and sperm?
Tick the correct box.

animals cells organs

1 mark

(b) Which part does a sperm use to swim towards an egg?

.....

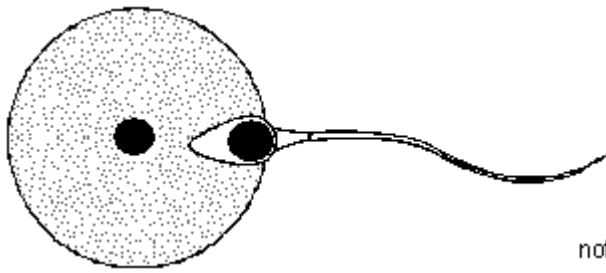
1 mark

(c) Give the name of the male reproductive organ where sperm are made.

.....

1 mark

(d) The diagram below shows a sperm joining with an egg.



What is this process called?
Tick the correct box.

fertilisation	<input type="checkbox"/>	growth	<input type="checkbox"/>
nutrition	<input type="checkbox"/>	respiration	<input type="checkbox"/>

1 mark
Maximum 4 marks

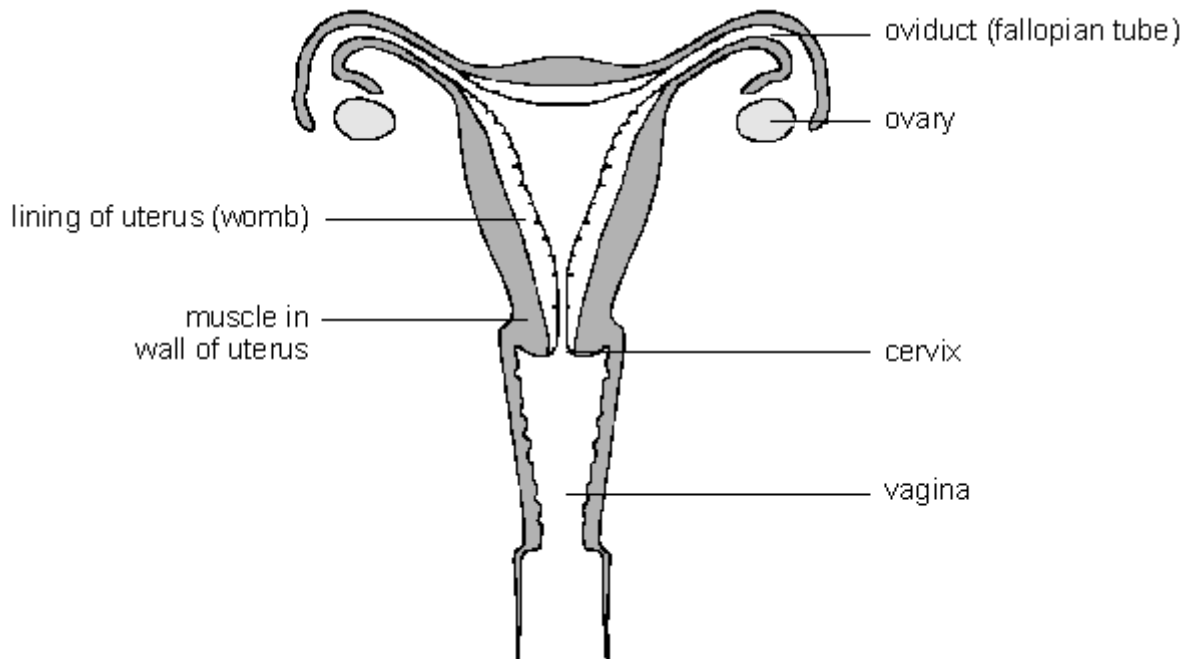
Mark Scheme – Cells and Reproduction (Easier)

- M1.** (a) cells ✓
if more than one box is ticked, award no mark 1 (L3)
- (b) tail 1 (L3)
- (c) testis **or** testicle
accept plurals 1 (L4)
- (d) fertilisation ✓
if more than one box is ticked, award no mark 1 (L3)

[4]

Exam Question – Human Pregnancy and Birth (Harder)

Q1. The diagram shows a section through the human female reproductive system.



(a) (i) How often are eggs normally released in the female reproductive system?

.....

1 mark

(ii) In which labelled part is an egg normally fertilised by a sperm?

.....

1 mark

(b) Fill the **two** gaps in the sentences below.

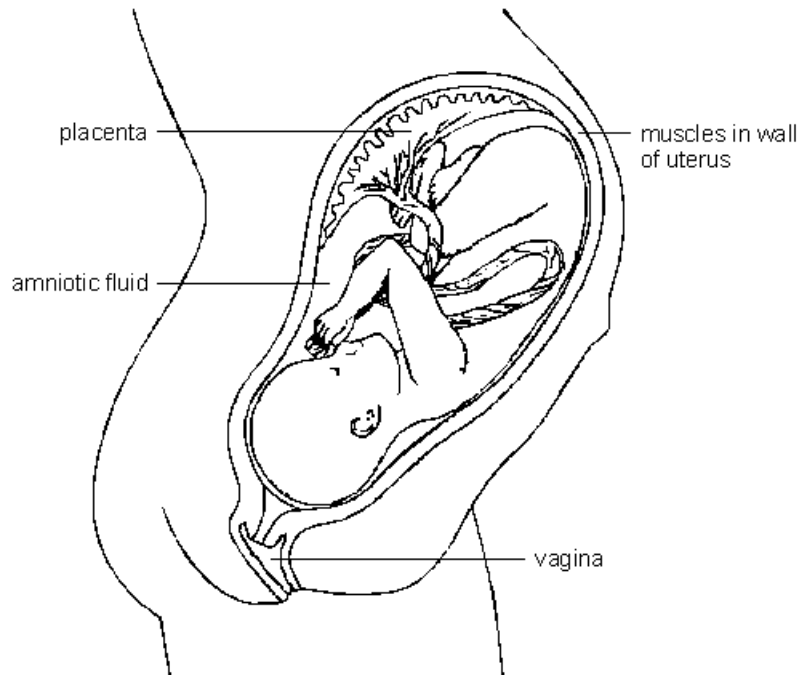
A fertilised egg divides into a tiny ball of cells called an embryo.

The embryo attaches to the lining of the uterus. Here the embryo grows to become an unborn baby, called a

It takes about months for a baby to develop inside its mother.

2 marks

(c) The diagram below shows a baby growing in its mother's uterus.



(i) What is the function of the amniotic fluid?

.....

1 mark

(ii) Through which part can harmful substances, such as nicotine, pass from the mother's blood to the baby's blood?

.....

1 mark

(iii) Give **one other harmful** substance which may be passed from the mother's blood to the baby's blood.

.....

1 mark

(d) When the baby is born it is pushed out of the mother's body. What happens in the wall of the uterus to push the baby out?

.....

1 mark

Maximum 8 marks

Mark Scheme – Human Pregnancy and Birth (Harder)

- M1.**
- (a) (i) any **one** from
- every month **or** once a month
 - every four weeks
 - every 28 days
accept answers from 26 days to 30 days
- 1 (L5)
- (ii) oviduct **or** fallopian tube
- 1 (L6)
- (b) foetus
- 1 (L5)
- 9
- answers must be in the correct order*
- 1 (L5)
- (c) (i) any **one** from
- it cushions the baby
 - it protects the baby against shocks **or** bumps
accept 'it protects the baby'
 - it absorbs shocks
*do **not** accept 'keeps it warm' or 'keeps it moist'*
- 1 (L6)
- (ii) placenta
- 1 (L5)
- (iii) alcohol
- accept 'drugs' or a named drug*
accept a named toxin
*accept 'viruses' **or** a named virus **or** a named viral disease*
- 1 (L5)
- (d) muscles contract
- accept 'contractions'*
- 1 (L6)

Ecosystems – Mini Project

Watch an episode of your choice: <https://www.bbc.co.uk/iplayer/episodes/p07dzjwl/seven-worlds-one-planet>

Task	Description
1	Classification: Make a leaflet on vertebrates and invertebrates for the Year 6s when they visit the school
2	Habitats: Think of a habitat – or find one in your garden – describe the environmental conditions
3	Adaptations: Find a picture of an animal and label its adaptations for survival in it's habitat
4	Competition: Write 20 questions for a quiz on this topic
5	Predator/Prey: Design the ultimate predator – label its adaptations and explain its ideal environment
6	Food chains and webs: Create a mind map on this area
7	Pyramids: Use BBC bitesize to do revision for this topic so far: Food chains and weds , complete the revision, have a go at the activity then complete the test.
8	Pollution: Research How does Pollution affect food chains? And bring your information ready for next lesson