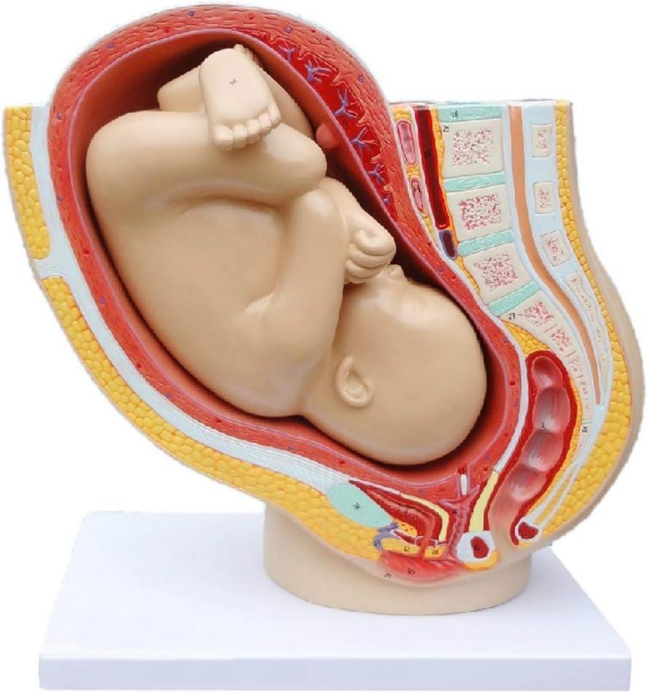
Kirkcaldy High School



BGE Science

Medical Science

Reproduction

Name:_____

Class:_____

Teacher:_____

Expectations and Outcomes Learner Evaluation

Topic: Reproduction

Experience and Outcomes	Date Completed (dd/mm/yy)	Evaluation How happy are you with it? (☺ ? ☹)
I can state the name of the main parts of the male and female reproductive systems.		
I can describe the functions of the main parts of the male and female reproductive systems.		
I can list changes that happen to boys during puberty.		
I can list changes that happens to girls during puberty.		
I can list changes that happen to both boys and girls during puberty.		
I can state the definition of fertilisation.		
I can name the male and female parts involved in fertilisation.		
I can describe how a foetus develops.		
I can describe the growth rate of the embryo in the womb.		
I can discuss questions to ask before having a baby.		
I can state different methods of contraception.		
I can discuss traits that are common and uncommon.		
I can understand how an individual inherits their traits.		

Date: _____

Reproduction

Starter

1. List the three parts of an animal cell.

   _____

2. What is the name of the **male** reproductive cell?

   _____

3. What is the name of the **female** reproductive cell?

   _____

Learning Intentions

- I am learning about the parts of the body used in repdocution.

Success Criteria

☐ I can state the name of the main parts of the male and female reproductive systems.

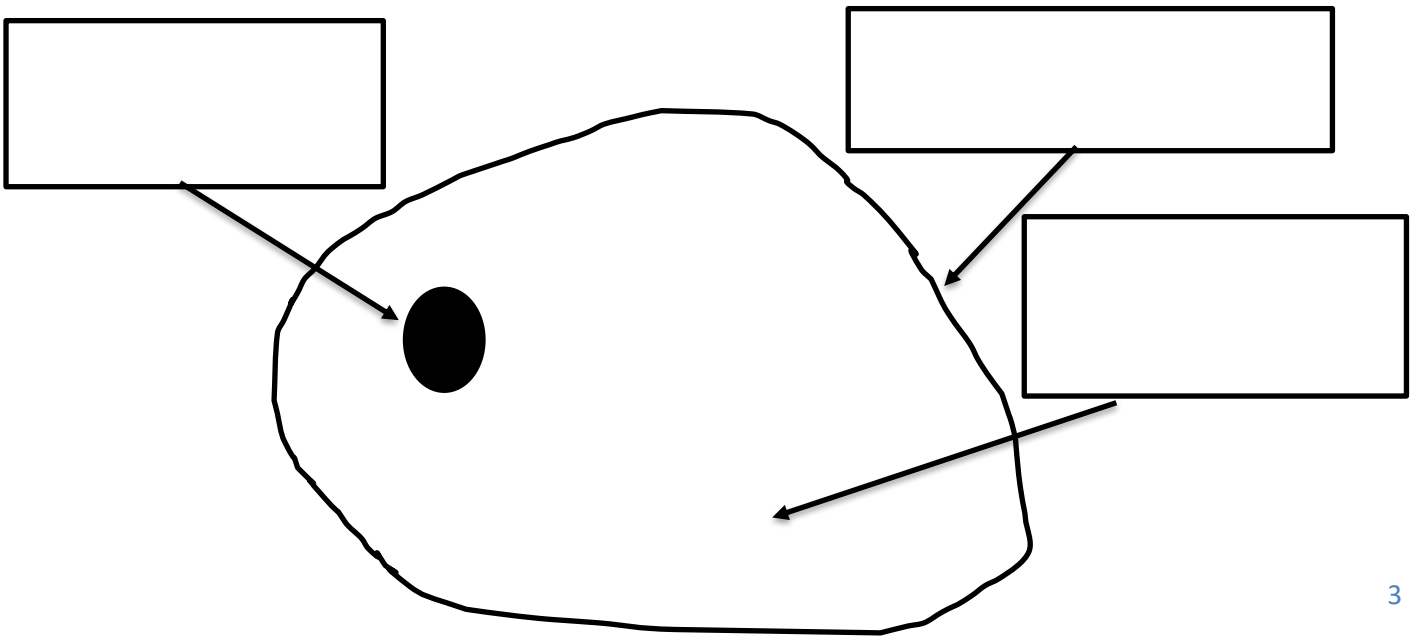
☐ I can describe the functions of the main parts of the male and female reproductive systems.

Tick me at the end if ***you can*** …

Revision: Animal Cells

Use your knowledge of animal cells from the 'Body Systems' topic to complete the boxes below, labelling each part of a basic animal cell.

Extension task: write down the job of each part of the animal cell.



Sperm and Egg
Your teacher will show you a diagram of a sperm and egg cell.

- Draw labelled diagrams of a sperm cell and egg cell in the box then answer the questions below.

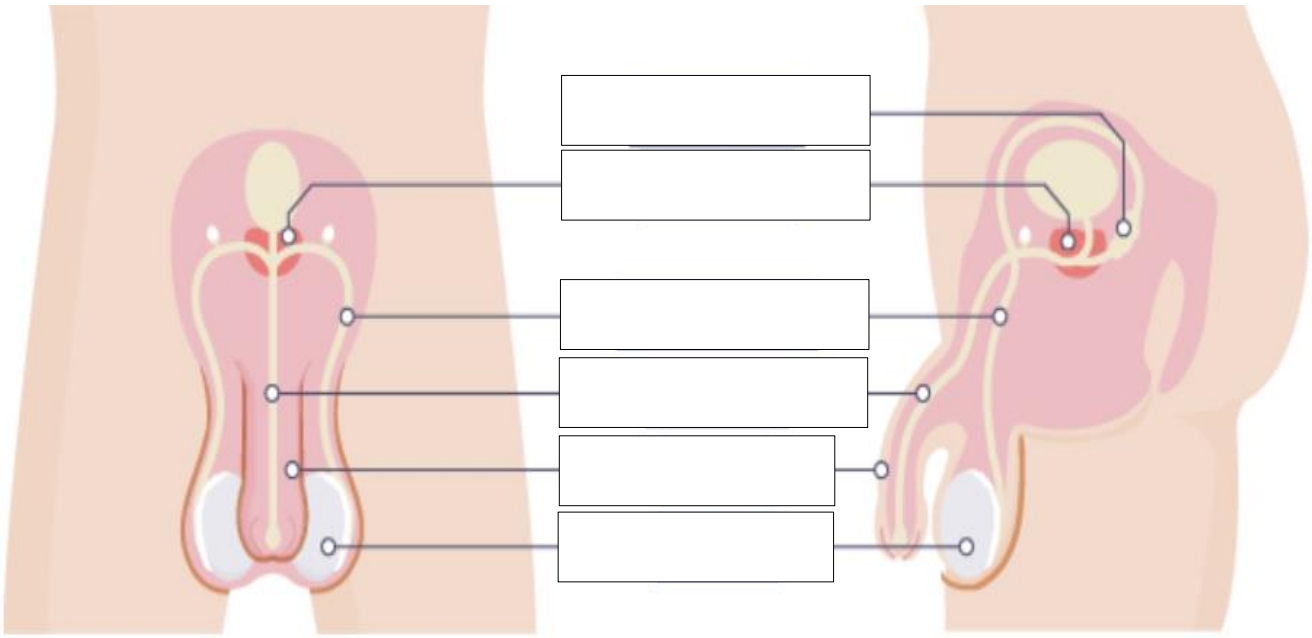
1. Why does a sperm cell have a tail?

_____

2. Why is an egg cell larger than a sperm cell?

_____

The Male Reproductive System
Label the parts of the male reproductive system below.

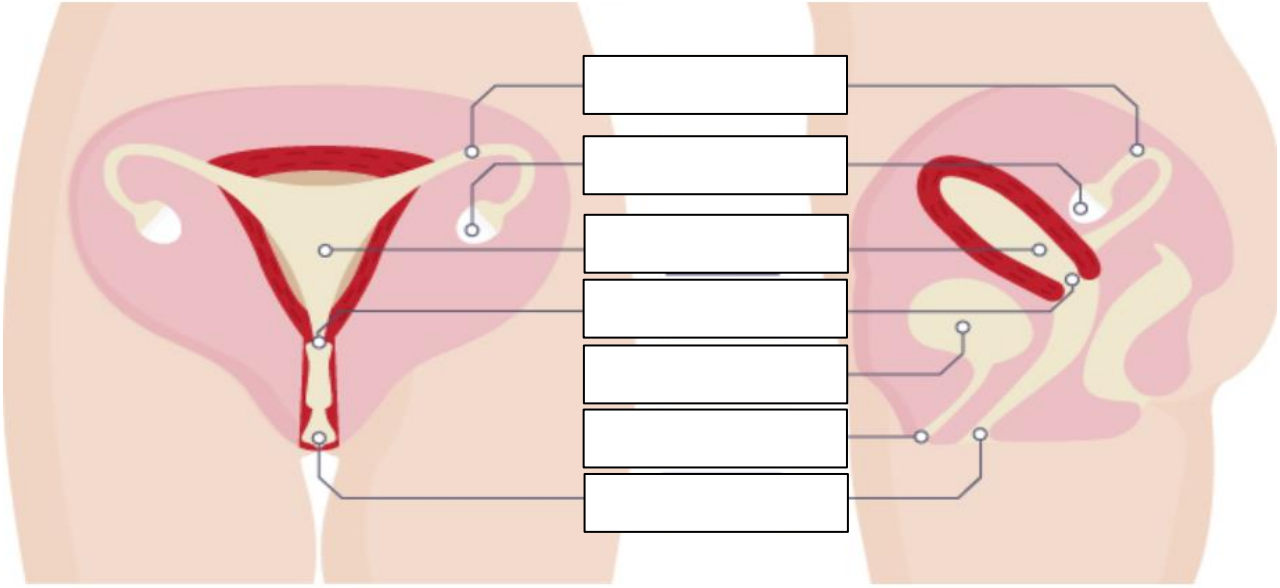


Complete the table, using the word bank to help.

Structure	Function
	Carries sperm from the testes to the penis
	Produce sperm for reproduction
	The organ from which semen and urine leaves the body.

Word bank: Penis, sperm duct, testes

Female Reproductive System
Label the parts of the female reproductive system below.



Complete the table, using the word bank to help.

Structure	Function
	Produces eggs.
	Transports the egg from the ovary to the uterus.
	The site of foetus development.
	Allows entry of sperm during sexual reproduction and exit of baby at birth.

Word bank: Vagina, oviduct, ovary, uterus

Date: _____

Puberty

Starter

1. List three changes which happen during puberty.

_____

Learning Intentions

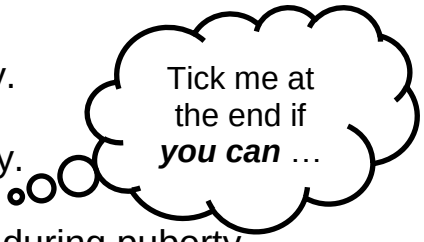
- I am learning about what happens to the human body during puberty.

Success Criteria

☐ I can list changes that happen to boys during puberty.

☐ I can list changes that happens to girls during puberty.

☐ I can list changes that happen to both boys and girls during puberty.



Puberty

You will be working in groups to sort the statements below into 3 categories on the table over the page:

1. Changes that happen to **boys** during puberty
2. Changes that happen to **girls** during puberty
3. Changes that happen to **both** during puberty

The testes begin to produce sperm cells.	**Voice becomes deeper**	**Growth of pubic hair.**
Growth hormones released causing growth of body and reproductive organs.	**Hips widen (often but not always) and breasts develop.**	**Oestrogen and progesterone hormones are released by the ovaries.**
Production of testosterone by the testes	**Increase in erections**	**Ovaries begin to release egg cells**
Foreskin detaches from the glans.	**Changes in moods and emotions.**	**Increased interested in sex**

Changes in boys	Changes in girls	Changes in both boys and girls

Body Story - Teen Dreams

Make notes on Teen Dreams in the space below.

_____

_____

_____

_____

_____

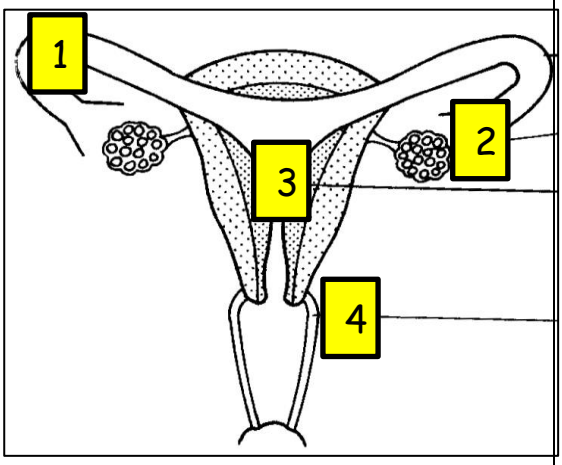
_____

Date: _____

Fertilisation

Starter

1. Name the parts 1-4 of the female reproductive system.



_____

_____

_____

_____

2. What is the function of parts 1 and 3?

_____

_____

Learning Intentions

- I am learning about fertilisation.

Tick me at the end if ***you can*** …

Success Criteria

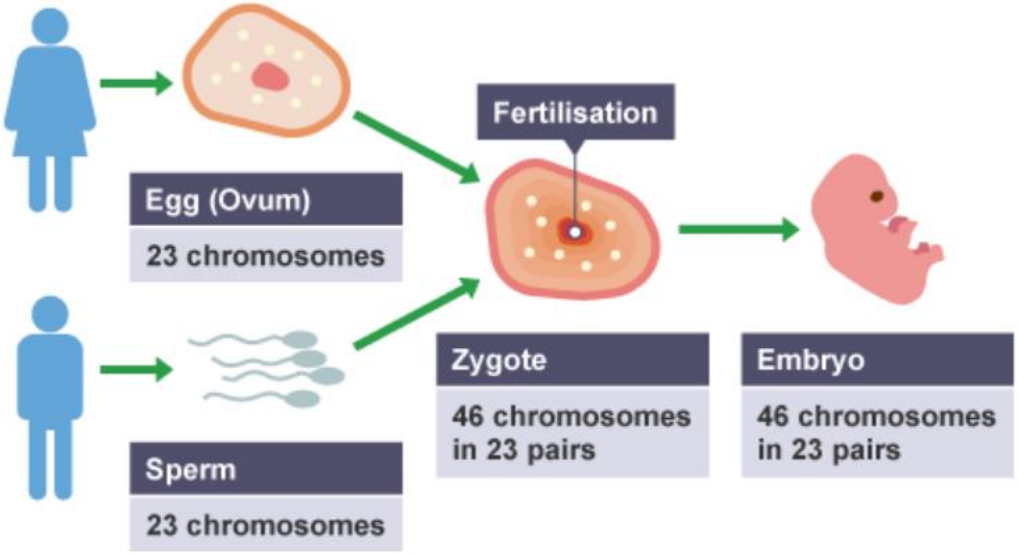
☐ I can state the definition of fertilisation

☐ I can name the male and female parts involved in fertilisation

---

Fertilisation

- Fertilization occurs when the _____ _____ and the _____ _____ joins, this produces a new cell called a _____.
- The zygote then matures into an _____.



An Everyday Miracle part 1 (up to 17:53)

Answer the questions to part 1 as you watch the video.

1. How many times a minute does the baby's heart beat?

2. How many babies are born each day?

3. How many times smaller is the sperm compared to the egg?

4. What will we condense a year into?

5. What are the names of the couple in the video?

6. How many days a year does a woman have a chance of becoming pregnant?

7. What is the name of the organ that releases eggs?

8. How many times in a woman's life will ovulation happen?

9. What distance does the sperm have to travel in the man?

10. What is the first "mortal danger" that the sperm face?

11. Where does the sperm meet the egg?

12. What does the dividing egg look like?

13. What happens to the lining of the uterus?

Date: _____

Pregnancy

Starter

1. Describe what happens during fertilisation.

   _____

   _____

2. What does a zygote develop into?

   _____

Learning Intentions

- I am learning about pregnancy.

Tick me at the end if ***you can*** …

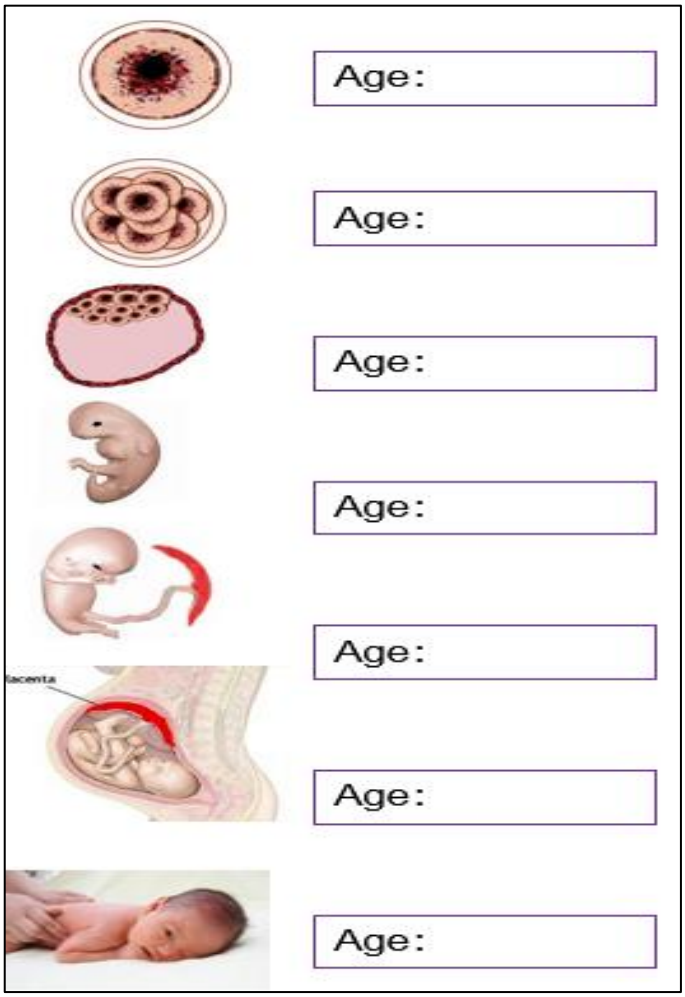
Success Criteria

☐ I can explain how a foetus develops.

☐ I can describe the stages of pregnancy.

Stages of Pregnancy

When the sperm and the egg join, the cell formed is called a _____.
Between 1 and 8 weeks, the baby is called an _____.
After 8 weeks, it is called a _____.



An Everyday Miracle part 2 (17:53 to 37:09)

Answer the questions to part 2 as you watch the video.

1. What blood-sucking animal is the developing embryo compared to?

2. What time did Phillipa take the pregnancy test?

3. What is the round ball?

4. Where does work start?

5. What are millions of cells becoming?

6. What is the work fuelled by?

7. What does the 12 week foetus weigh?

8. What is the most common complaint?

9. When do most women feel better by?

10. What was ultrasound developed for?

11. When will the foetus have started to develop senses?

12. Where do we translate the signals from our sense?

13. What allows mother and foetus to live together?

14. What is the message Phillipa hears from her body?

Date: _____

Stages of Pregnancy

Starter

- Describe **three** of these key words:

Fertilisation	*Sperm*
Egg	*Oviduct*
Uterus	*Ovary*
Embryo	*Zygote*
Foetus	*Pregnancy*
Puberty	*Testes*

_____

_____

_____

Learning Intentions

- I am learning about the stages of pregnancy.

Success Criteria

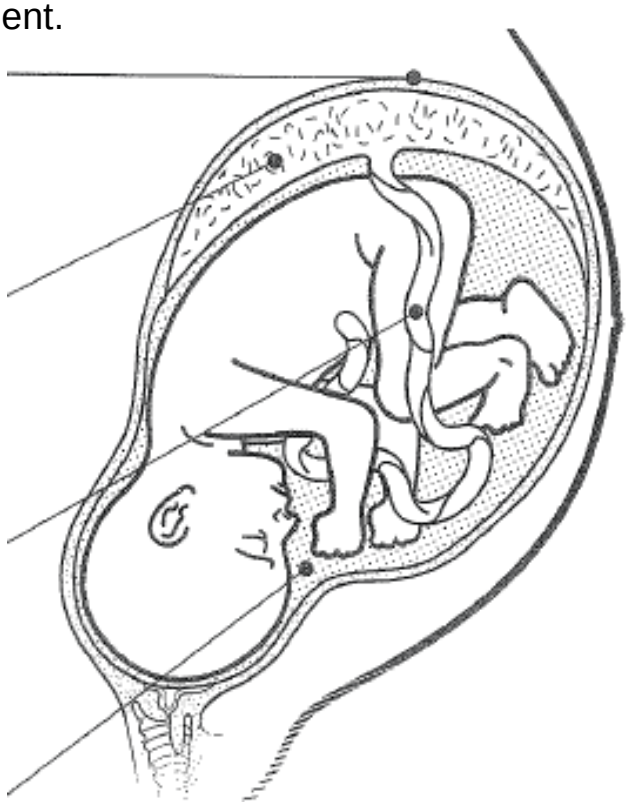
Tick me at the end if ***you can*** …

☐ I can describe how a foetus develops.

☐ I can describe the growth rate of the embryo in the womb.

Pregnancy

Label the parts involved in foetal development.



Stages of pregnancy

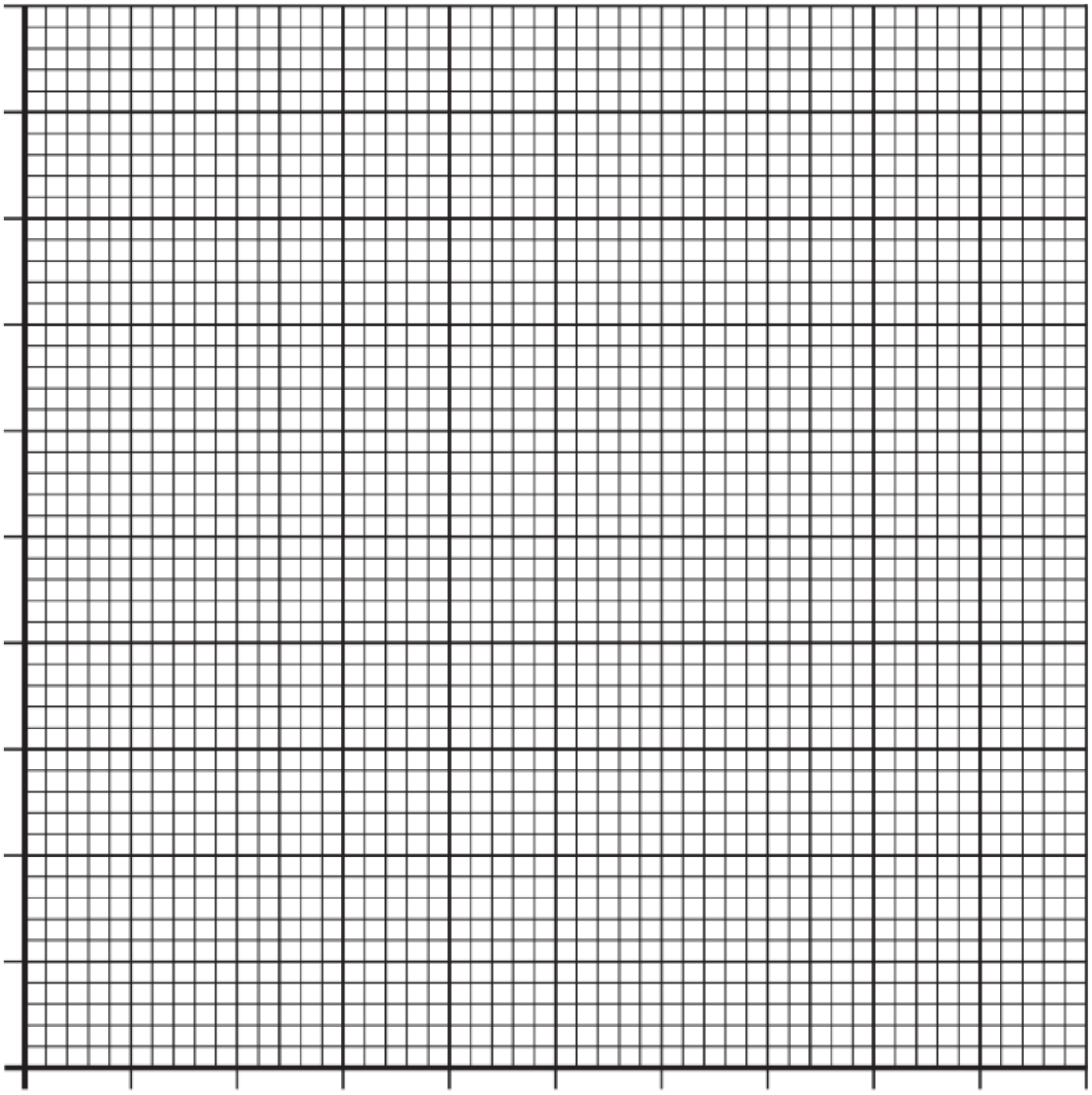
Pregnancy in humans lasts 9 months (40 weeks). It is split into three parts of 3 month each. Each part is called a _____.

First Trimester	Second Trimester	Third Trimester
At this Stage the Baby is known as an Embryo. Week 3 - Implantation Occurs Week 4 - Brain, Heart, Spine, Nervous and Circulatory Systems form. Week 7 - Facial Features, Limbs, Digestive and Respiratory Systems Form. Week 12 - Embryo is now about 8 cm in size.	At this Stage the Baby is known as a Foetus. Week 12 - All Vital Organs are now Formed. The Foetus can now hear Sounds and control its limbs, it can kick and even suck its thumb. Week 17 - The Gender of the Foetus can now be seen. Week 24 - Foetus is now about 32 cm in size.	At this Stage (24 Weeks) if born prematurely, the Baby could survive. Week 24 to 36 - The Third Trimester is about growth, the Foetus will double in size. Week 33 - The Foetus can hear the Outside World, learning to recognise its mother's voice. The Foetus can now see, its pupils reacting to light. Week 37 to 40 - Foetus is now about 50 cm in size.

Growth rate of the embryo in the womb

Use the table below to plot a line graph.

Time (weeks)	Length (cm)
4	0.4
6	0.9
8	1.8
10	3
16	15
20	22
22	28
26	38
30	43
34	48
36	53



An Everyday Miracle part 3 (37:09 to end)

Answer the questions to part 3 as you watch the video.

1. What has happened to Phillipa's spine?

2. What is the most dramatic change?

3. When is Phillipa and Jeff's baby due at this point?

4. What is the most difficult task the body has to tackle?

5. Why is the baby not ready for the world?

6. How early was Phillipa's baby?

7. How far apart are Phillipa's contractions?

8. What does the head act as?

9. Where does the baby's head face during birth?

10. How should birth be viewed?

11. Where is the last baby shown from?

Date: _____

Contraception

Starter

What are some important questions to ask yourself before having a baby?

For example:

When is the right time in our lives to have a baby?

_____

_____

Learning Intentions

Tick me at the end if ***you can*** …

- I am learning about contraception.

Success Criteria

☐ I can discuss questions to ask before having a baby.

☐ I can state different methods of contraception.

Contraception

Your teacher will give you cards to sort into the most important and least important questions to ask before having a baby.

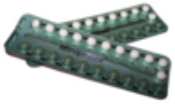
Contraception

- The chances of pregnancy are reduced by using _____.
- Some contraceptives are worn/used by the man and some by the woman.
- Some contraceptives can also reduce the chances of catching a _____ _____ _____ (STD).

Methods of Contraception

Use the word bank below to complete the Methods of Contraception table.

Word bank:
Cap, Natural or "Rhythm", Injection or Implant, Pill, Condoms, IUD (Inter-uterine device)

	Used by Men/Women	Thin "glove" of rubber that fits over the penis or inside the vagina.	Offers some protection against STDs	
	Used by Women	A tablet taken daily that contains hormones.	Offers no protection against STDs	
	Used by Women	Tiny plastic or copper device inserted inside the womb.	Offers no protection against STDs	
	Used by Women	An injection or capsule placed under the skin that contains hormones.	Offers no protection against STDs	
	Used by Women	A rubber "dish" that fits over the cervix.	Offers no protection against STDs	
	Used by Women	Diary of when a woman is most likely NOT to get pregnant.	Offers no protection against STDs	

Date: _____

Genetics & Inheritance

Starter

Generate a question to match the answer given below.

1. Answer: Egg and Sperm

   _____

2. Answer: Testes and ovaries

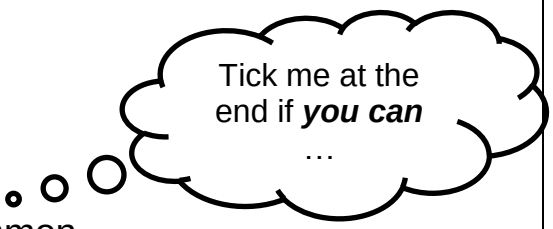
   _____

3. Answer: The process by which a sperm's nucleus fuses with that of an egg forming a zygote.

   _____

Learning Intentions

- I am learning about genetics and inheritance.



Success Criteria

☐ I can discuss traits that are common and uncommon.

☐ I can understand how an individual inherits their traits.

My Traits activity

1. You will now be split into groups of 4
2. Each of you must complete the '**An Inventory of My Traits Survey**' to determine your unique combination of traits
3. Once you have completed the survey, you must tally your group information on the **data table**
4. You must then use this data to draw a bar graph of your results

Extension: Create a whole class bar chart

An Inventory of My Traits - Survey

What combination of these traits do you have?

Complete the survey to find out.

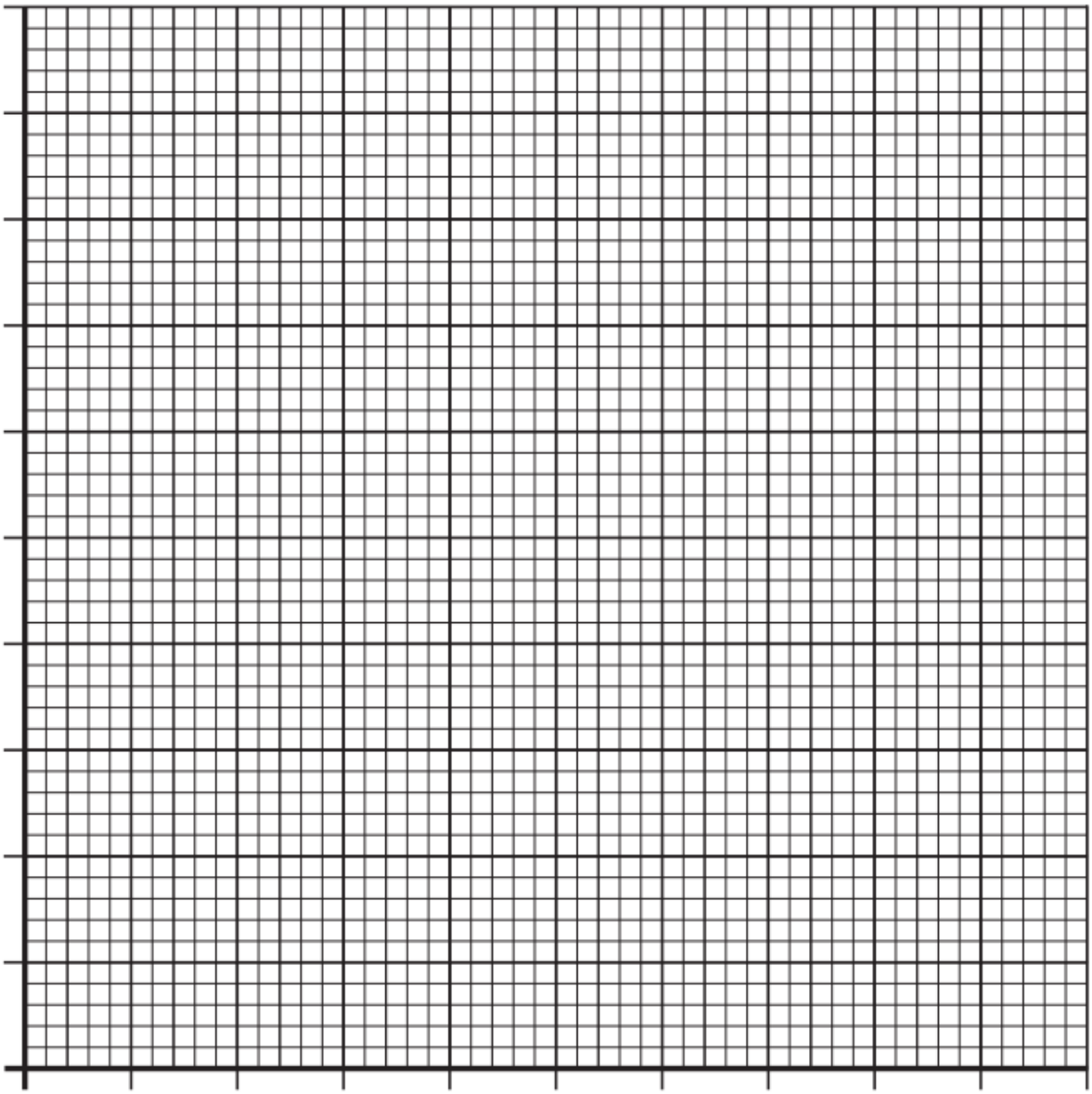
1.	I have detached earlobes	☐ Yes	☐ No
2.	I can roll my tongue	☐ Yes	☐ No
3.	I have dimples	☐ Yes	☐ No
4.	I am right-handed	☐ Yes	☐ No
5.	I have freckles	☐ Yes	☐ No
6.	I have naturally curly hair	☐ Yes	☐ No
7.	I have a cleft chin	☐ Yes	☐ No
8.	I cross my left thumb over my right when I clasp my hands together	☐ Yes	☐ No
9.	I can see the colors red and green (I am not color blind)	☐ Yes	☐ No
10.	I have allergies	☐ Yes	☐ No
11.	The hairline on my forehead is straight.	☐ Yes	☐ No

An Inventory of My Traits - Data Table

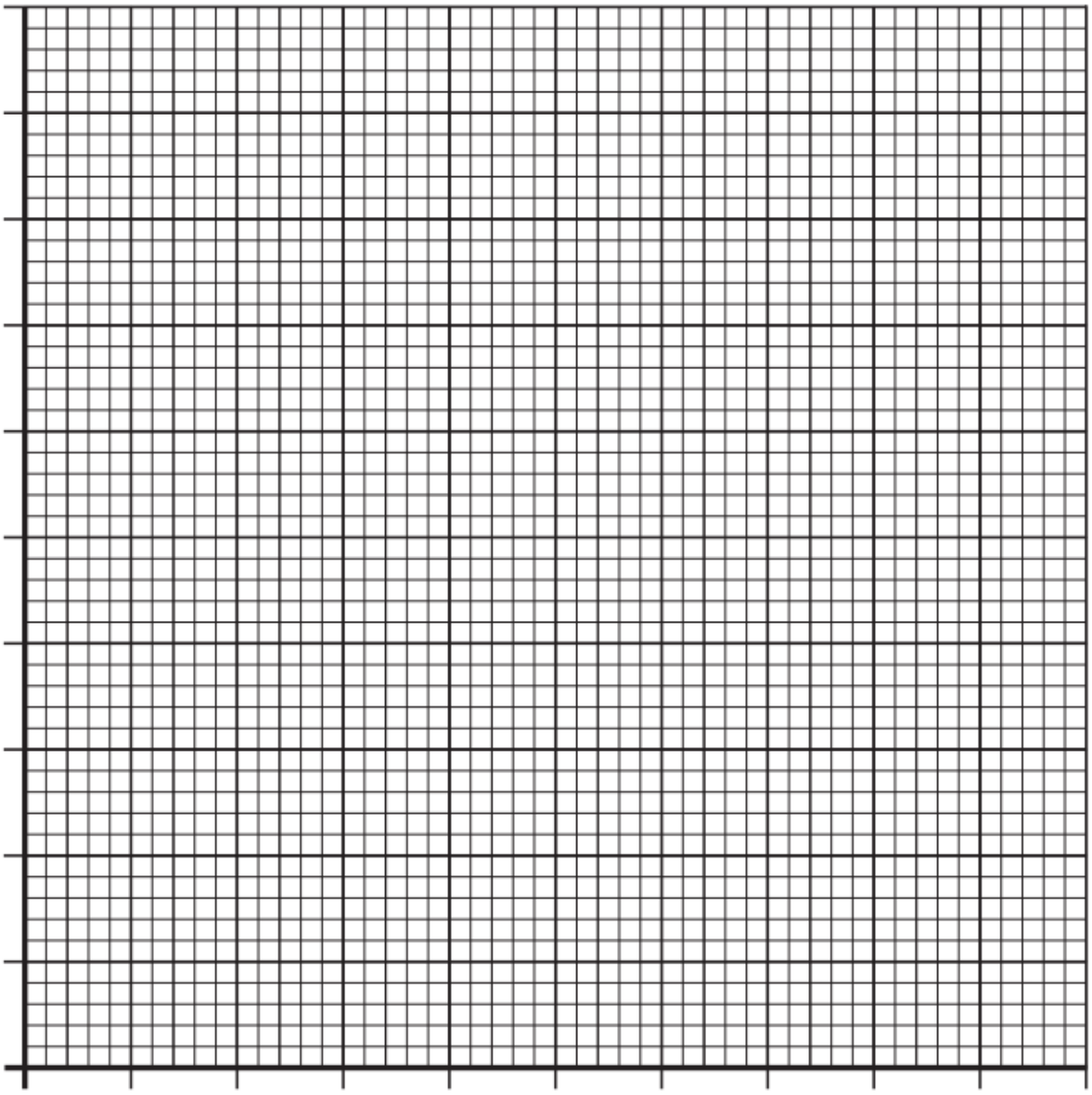
How many people in your group have each trait?

Fill in the data table below by counting the number of people who marked "yes" and the number of people who marked "no" for each trait.

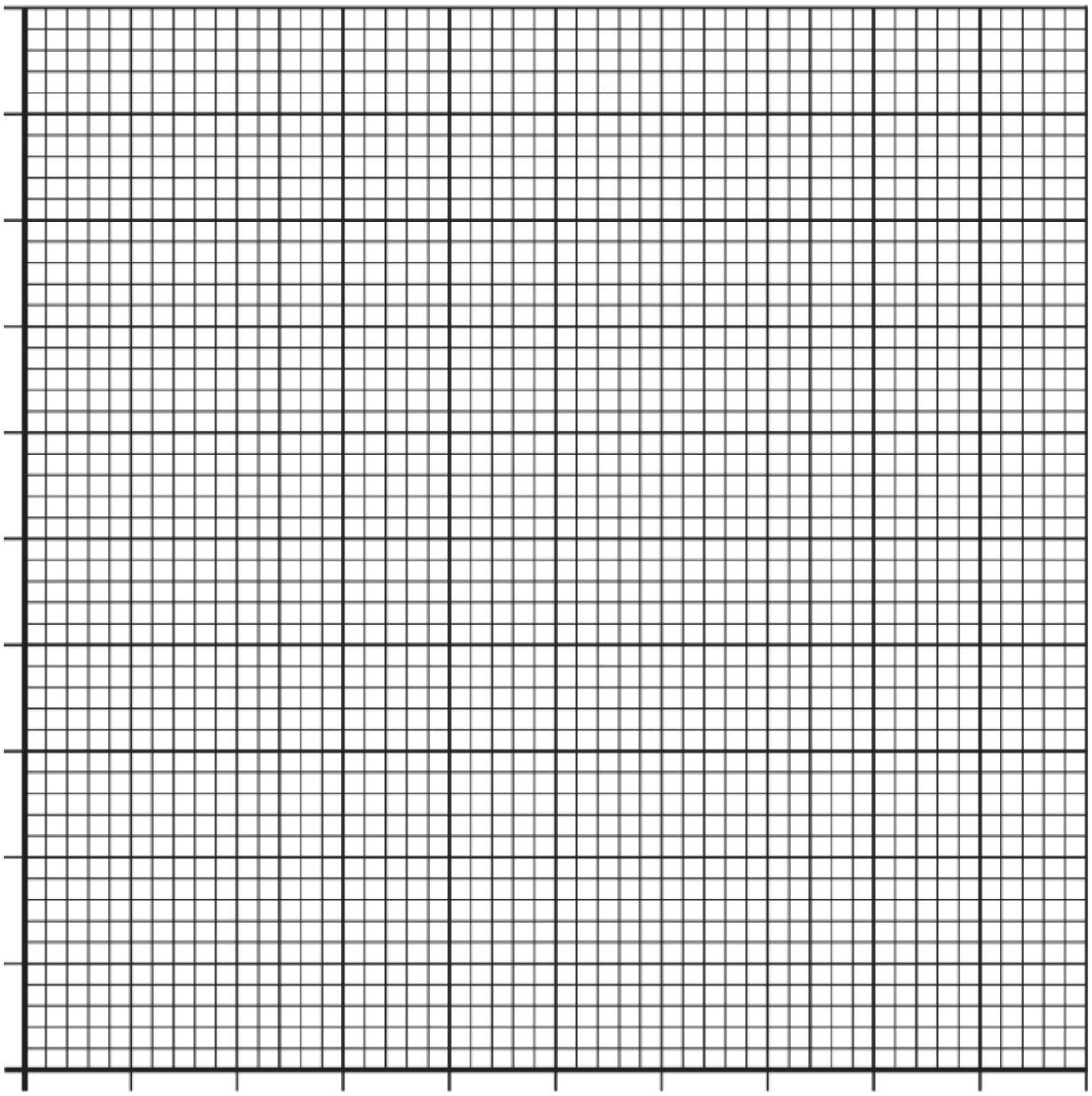
Trait	Yes	No
Detached earlobes		
Tongue rolling		
Dimples		
Right-handed		
Freckles		
Naturally curly hair		
Cleft chin		
Cross left thumb over right		
See the colors red and green		
Allergies		
Have a straight hairline		



Extra Graph Paper



Extra Graph Paper



Extension Tasks

Word Search

Reproduction

C O J F A U T E R U S E Y T R E B U P I J R Y C
V A W N U J O H X L E S O P Z H I I Q T F I P O
J H F W O U V O Q C W G H J L I N M P U R S E L
T Y V T T U K R X I Z Q N C P K V P U U W Y N T
E O I Y T B D M F I Q I O Z T V A L Z O B V I R
S B F A U J U O E T I Q I Y D O A A B F G D S C
T V Z H B G E N M H Z J T F M L J N F E C H H F
E V W S J S H E H G O Q A E T A G T K R L J F A
S X D X L D L Q Q E S N U L G R V A V T M Q R Z
L E V Y O T T P Y C C N R C D H H T B I H O J I
B Q O V A R Y I H Y K L T Y K R R I C L A N O F
U C G B F L F S Z M G L S C S Y R O K E E M A Z
L B A N K K A S F L D Z N L F N T N Q N E L X C
X L U O U U V W R I Y M E A M J M L R O N Z F P
H W B I Y P B O Q J U M M U W U Z B F T E K L T
N O I T A S I L I T R E F R O H M A Z Q E X A G
X C H A T J Z Z E W S O M T P B D E Y A P C U K
V D J L N Z P B K T Y J G S X E I A X C M Q X F
B G Y U H Y E M B R Y O X N P A R W I R R G E A
B O R V R N I O M R E P S E J J L P V K B G S B
J S K O V E R G A E I G N M H H P G R J J E D V
C X E T H E W U V Y L R V K K Y U W E V W I D B
N M C V H B C P D Y S R L R K J F E C O Q K Y A
L J S E T E M A G O E E D Q N I D W U D N V U I

fertilisation embryo implantation fertile ovulation menstruation
menstrual cycle hormone puberty ovary cervix uterus
testes penis sexual sperm egg gametes

Draw a comic strip on one of the topics. Ask your teacher for ideas.
