●●●○○ Level 3 · Science S3.4

Growing up: puberty and reproduction

Bodies change during puberty, and this book explains how and why in plain words.

Follow the human life cycle, the changes of puberty and the feelings that come with them. Name the parts of the reproductive systems, learn how periods work and how to stay comfortable, see how a baby starts, grows and is born, and learn how to stay clean and safe.

YOU ARE READY FOR THIS BOOK IF

You can name the main organs of the body and say what one does.

One step up	S4.4 Health, disease and immunity
This book	**S3.4 Growing up: puberty and reproduction**
One step down	S2.3 Bones, muscles, teeth and food

Contents

S3.4.1 The human life cycle

S3.4.2 Changes in puberty

S3.4.3 Feelings and growing up

S3.4.4 Reproductive systems

S3.4.5 The menstrual cycle

S3.4.6 Fertilisation and pregnancy

S3.4.7 Birth and caring for a baby

S3.4.8 Staying healthy and safe

Key words, A to Z

Written and drawn by attnom. Free to read, print and share.

S3.4.1 CHAPTER 1

The human life cycle

How does a person change from a baby to an elder, and is a bird the same?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** A person just gets bigger. The body keeps the same shape all through life.
- ☐ **B** A person goes through stages in order: baby, child, adolescent, adult and elder.
- ☐ **C** People and birds start in the same way, inside an egg with a hard shell.

IF THIS FEELS HARD, READ THIS FIRST

- Level 2, How plants grow, S2.1.8. A plant has a life cycle too, from seed to plant and back to seed.
- Level 3, Cells, S3.1.1. Making young, called reproduction, is one of the signs of life.

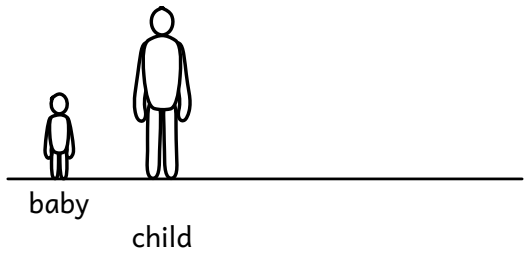
BY THE END YOU CAN

- Put the stages of human life in order, from baby to elder
- Compare the human life cycle with the life cycle of a bird

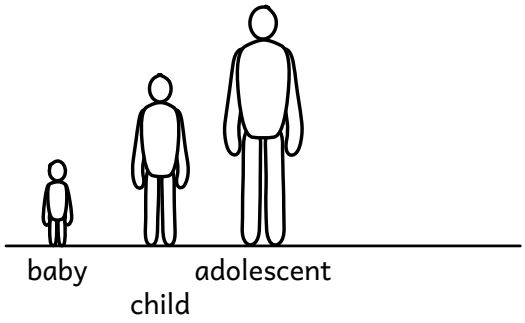
Every living thing starts life, grows, and can have young of its own. Then it grows old and dies. These stages, in order, make a **life cycle**.

DRAW IT FIRST

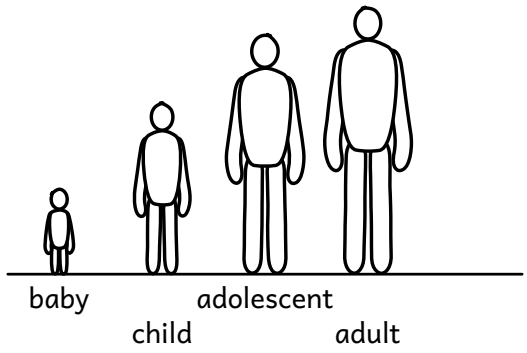
Draw the stages of a human life



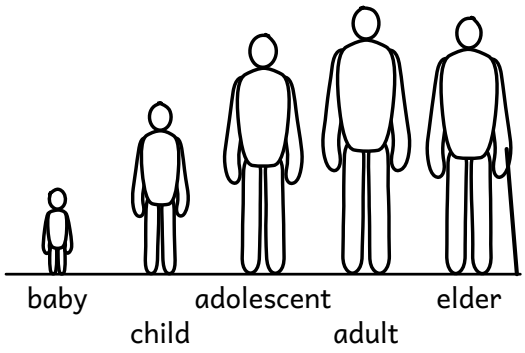
1 Draw a baby, small with a big head. Next to it, draw a taller child.



2 Draw an adolescent, taller again and growing fast.



3 Draw an adult, who has stopped growing taller.



4 Draw an elder, a little shorter than the adult, with a stick.

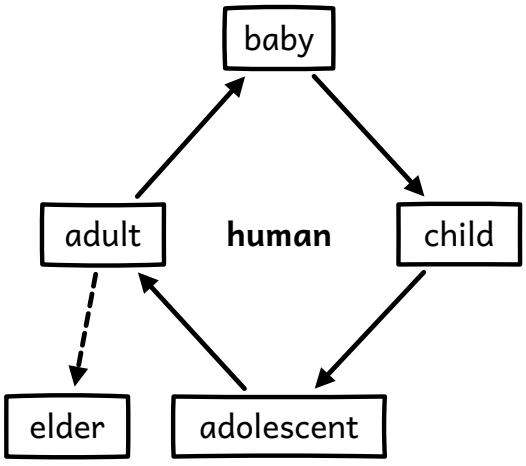
A baby feeds on milk and cannot walk. A child learns to walk, talk and do more alone. An ***adolescent*** is no longer a child, but not yet an adult. This is when the body changes in puberty.

An adult has stopped growing taller and is old enough to have children. An **elder** is an adult who has grown old. The body slows down, and it may get a little shorter.

stage	what happens
baby	feeds on milk
child	learns to talk
adolescent	puberty
adult	fully grown
elder	grown old

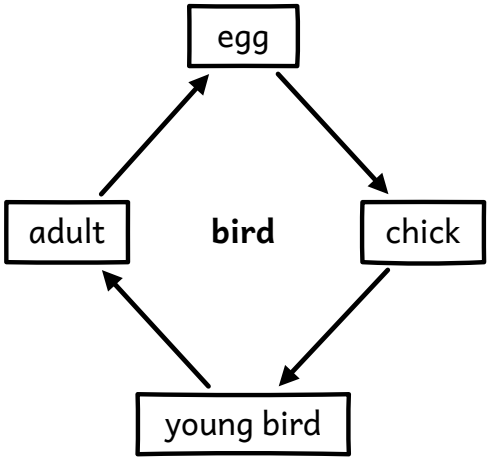
The five stages of a human life, in order.

Look at the heads in the drawing. A baby's head is about a quarter of its length. An adult's head is about an eighth of their height. The legs grow the most. So a body changes shape as it grows, not only size.



The ring goes from adult back to baby, because many adults have children. Each new baby starts the cycle again. Growing old, as an elder, is the last part of one life.

A bird has a life cycle too. A hen lays eggs with a hard shell. If an egg was fertilised, a young bird grows inside it, outside its mother's body. When it is ready, it breaks the shell and comes out. This is called hatching, and the bird that **hatches** is a chick.



The life cycle of a bird. The adult lays eggs, and the cycle starts again.

SEE IT THREE WAYS

As a picture

what	human	bird
grows in	mother	egg
comes out	born	hatches

In words

A human baby grows inside its mother and is born. A chick grows inside an egg, outside its mother, and hatches. Both grow up, and both can have young when they are adult.

In symbols

hen: egg → chick in about 21 days.
human: a pregnancy of about 40 weeks.

TRY IT

Make a life line of your family

You need: paper, a pencil, a ruler or a straight stick.

1. Draw a long straight line across the paper. Mark five stages along it: baby, child, adolescent, adult, elder.
2. Think of the people you live with or know well. Decide which stage each person is in.
3. Write each name under its stage. Put yourself on the line too.

What you will see: Most families have people at several stages. Everyone moves along the same line, one stage after another, at their own speed.

If you cannot try it, this is what happens.

stage	who
baby	Ana
child	Kofi
adolescent	Mei
adult	Ravi and Lucía
elder	Joseph

A WRONG IDEA MANY PEOPLE HAVE

~~A baby is just a small adult.~~

Why it feels right: A baby has the same parts as an adult: a head, arms, legs and a heart.

The test that breaks it: Look at the drawing. The baby's head is a quarter of its length, and the adult's is an eighth. A baby cannot walk, and its body has not been through puberty.

What is true: A body changes shape as it grows. Puberty changes it again, from a child's body to an adult's.

KEY WORDS

life cycle
the stages of a life, in order, from the start to having young.

adolescent
a person who is no longer a child but not yet an adult.

elder
an adult who has grown old.

hatches
breaks out of an egg.

BACK TO YOUR GUESS

The answer is B: A person goes through stages in order: baby, child, adolescent, adult and elder.

A person goes through five stages in order. The body changes shape as well as size. A bird has stages too, but it starts inside an egg with a shell, outside its mother.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. Which list puts the stages of human life in order?

   A baby, child, adolescent, adult, elder

   B baby, adolescent, child, adult, elder

   C child, baby, adult, adolescent, elder

   Answer at the back of the book.

2. Which stage comes just before adult?

   A Child

   B Elder

   C Adolescent

   Answer at the back of the book.

3. In the human life cycle, an arrow goes from adult back to baby. Why?

   A An adult turns back into a baby.

   B Adults can have babies, and each new baby starts the cycle again.

   C The elder stage leads to new babies.

   Answer at the back of the book.

4. Where does a chick grow before it hatches?

   A Inside an egg with a shell, outside its mother

   B Inside its mother's body, like a human baby

   C In the nest, with no egg at all

   Answer at the back of the book.

5. How is the human life cycle like a bird's?

   A Both start inside an egg with a hard shell.

   B Both young feed on milk.

   C Both grow up in stages, and adults of both have young.

   Answer at the back of the book.

6. Is a baby's head a bigger part of its body than an adult's head is?

   A The same: a baby is a small adult

   B Bigger: about a quarter for a baby, and about an eighth for an adult

   C Smaller: babies have small heads

   Answer at the back of the book.

7. A hen sits on her eggs for about 21 days before they hatch. How many weeks is that?

   Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

A human life goes baby, child, adolescent, adult, elder. Adults can have children, so the cycle goes on. A chick grows in an egg with a shell, outside its mother, and hatches.

Draw: Draw the human life cycle as a ring of four boxes, with elder as a branch from adult.

S3.4.2 CHAPTER 2

Changes in puberty

What is puberty, and what will change in my body?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** Puberty starts at the same time for everyone in a class.
- ☐ **B** Only girls go through puberty.
- ☐ **C** Puberty is a time of body changes, and it starts at different times for different people.

IF THIS FEELS HARD, READ THIS FIRST

- Level 3, Body systems, S3.3.6. Hormones travel round the body in the blood.

BY THE END YOU CAN

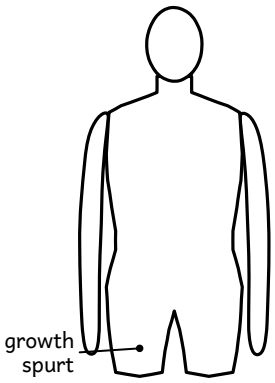
- Describe the body changes of puberty in girls and in boys
- Explain that puberty starts at different times for different people

Puberty is the time when a child's body changes into an adult's body. It happens in the adolescent stage. It takes a few years from start to end.

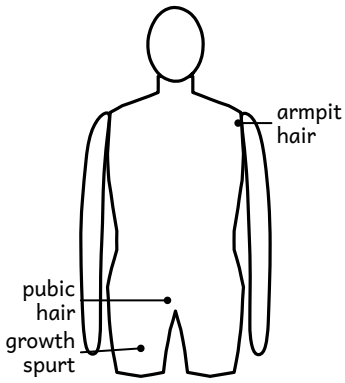
Puberty starts with **hormones**. A hormone is a chemical messenger. It is made in one part of the body and carried in the blood to other parts. There it tells them to change.

DRAW IT FIRST

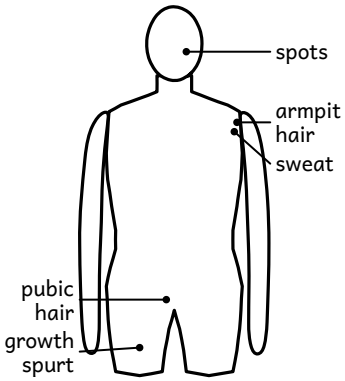
Draw the changes that come to everyone



1 Draw a person standing. In puberty the bones grow fast: a growth spurt.



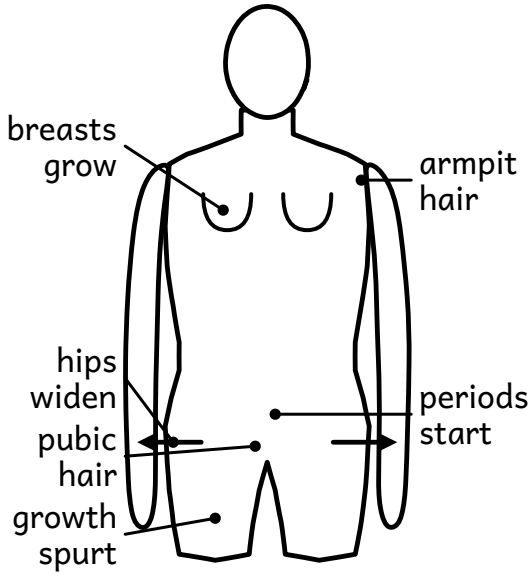
2 Hair grows under the arms and on the pubic area, just above the genitals.



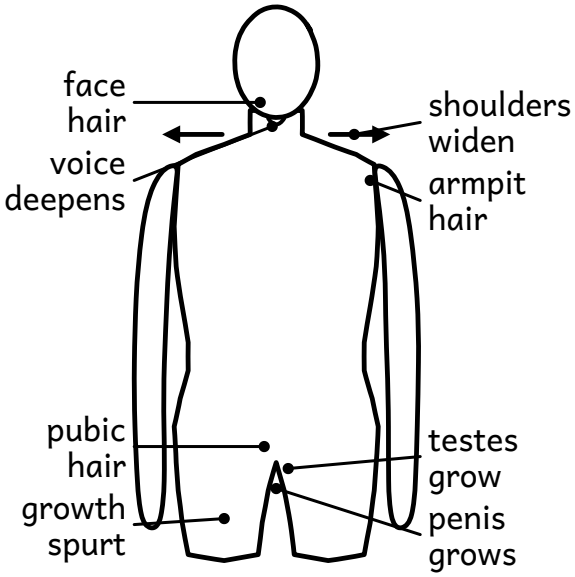
3 You sweat more, and many people get spots on the face.

Some changes come to everyone. You grow fast for a while. This is a **growth spurt**. Hair grows under the arms. It also grows on the pubic area, the skin just above the **genitals**. The genitals are the sex organs on the outside of the body.

You sweat more, and sweat can start to smell. Many people get spots on the face and back. These spots are called acne. Your feelings change too. The next chapter is about feelings.



Changes for girls. The breasts grow and the hips get wider. Periods start. A later chapter explains periods.



Changes for boys. The testes and the penis grow, the voice gets deeper, and hair grows on the face. The shoulders get wider.

Boys start to have **erections**. An erection is when the penis fills with blood and gets stiff for a while. It can happen for no reason at all. Some boys have **wet dreams**. Semen is a fluid with sperm in it. A wet dream is when semen comes out of the penis during sleep. Both are a normal part of growing up.

Some changes can look worrying, but they are normal. Breast buds can feel tender, and one breast often grows faster than the other. Many boys' chests swell a little

for a while, then flatten again. One testis usually hangs lower than the other. A boy's voice may crack, jumping high and low, before it settles deeper.

From puberty, girls may find a little clear or white fluid in their underwear. It is called discharge. It comes from the vagina and keeps it clean, and it is normal.

Many people touch their own genitals in private. This is common and normal, and it does no harm to the body. It is a private matter, and nobody should make you feel ashamed of your body. A child's genitals are private. No older person may touch them. A health worker who explains why and asks first is different. So is a carer washing a baby. Chapter 8 says what to do if someone does.

A few people are born with a body that is not the usual female or male pattern. Sometimes it is only the parts inside. This is a natural difference. A health worker can explain it.

Puberty starts at different times for different people. It can start some years earlier or later than for a friend. There is no right time. Each body has its own timetable.

Doctors know the usual spans. In girls, the breasts usually start to grow between about 8 and 13 years. The first period most often comes between about 10 and 15 years. In boys, the testes usually start to grow between about 9 and 14 years. So for many girls puberty starts a little earlier than for boys.

change	starts at
breasts grow	8 to 13 years
first period	10 to 15 years
testes grow	9 to 14 years

The usual spans, from medicine. They are wide on purpose: anywhere inside them is normal.

The changes then take a few years. Most girls have finished by about 14 to 16 years. Most boys have finished by about 16 to 18 years. Anywhere inside these wide spans is normal.

Be safe. See a health worker if a girl has no breast growth by about 13 years. See one if she has no period by about 15 years. See one if a boy has no growth of the testes by about 14 years. See one too if changes start very

early. That means before about 8 years in a girl, or 9 years in a boy. Most often all is well, and a check makes sure.

friend	changes so far
Amina	many
Ravi	a few
Mei	a few
Kofi	none yet

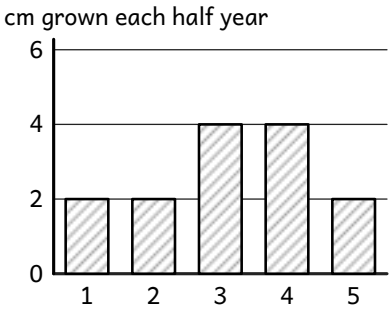
Four friends in one class. All four are normal. Kofi's changes will come on his own timetable.

SEE IT THREE WAYS

With things

Mei marked her height on a door frame every half year. In the middle of puberty the marks moved apart faster.

As a picture



In words

For a while, Mei grew twice as fast. That is her growth spurt. Then her growth slowed down again.

In symbols

148 cm − 144 cm = 4 cm

TRY IT

Measure your height on a door frame

You need: a door frame, a pencil, a flat book, a tape measure, or a string and a ruler.

1. Stand straight with your back to the door frame, with no shoes on. Ask someone at home to lay a book flat on your head and mark under it.
2. Measure from the floor to the mark. Write the height and the date beside it.
3. Do it again every few months, on the same frame. Work out how much you grew each time.

What you will see: Over time the marks move apart. In a growth spurt they move apart faster.

If you cannot try it, this is what happens.

mark	height in cm
1	140
2	142
3	144
4	148
5	152
6	154

A WRONG IDEA MANY PEOPLE HAVE

~~If my body has not changed yet, something is wrong with me.~~

Why it feels right: Friends of the same class may already look older, and it is natural to compare.

The test that breaks it: Ask any adults you trust when their own changes came. Their answers will be spread out, some early and some late.

What is true: Puberty starts at different times for different people. Starting later, or earlier, is normal.

KEY WORDS

puberty
the time when a child's body changes into an adult's body.

hormones
chemical messengers, carried in the blood, that tell parts of the body to change.

growth spurt
a time of growing much faster than before.

genitals
the sex organs on the outside of the body.

erections
times when the penis fills with blood and gets stiff.

wet dreams
times when semen comes out of the penis during sleep.

BACK TO YOUR GUESS

The answer is C: Puberty is a time of body changes, and it starts at different times for different people.

Puberty changes a child's body into an adult's. It comes to everyone, girls and boys, but each body starts on its own timetable.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. Which changes happen to girls in puberty?

   A The breasts grow, the hips widen and periods start

   B The voice gets much deeper and a beard grows

   C Nothing changes until adult life

   Answer at the back of the book.

2. Which changes happen to boys in puberty?

   A Periods start

   B The testes and penis grow, and the voice deepens

   C They stop growing taller

   Answer at the back of the book.

3. Which changes come to both girls and boys?

   A The breasts grow and the hips widen

   B Wet dreams

   C Hair under the arms and on the pubic area, more sweat, and a growth spurt

   Answer at the back of the book.

4. Joseph's friends' voices have changed, but his has not. What does this mean?

   A Something is wrong with Joseph.

   B Puberty starts at different times. Joseph's body will change on its own timetable.

   C Joseph will never go through puberty.

   Answer at the back of the book.

5. What starts the changes of puberty?

   A Eating more food

   B Doing a lot of sport

   C Hormones, chemical messengers carried in the blood

   Answer at the back of the book.

6. Ravi wakes up and finds a little sticky fluid in his bed. It came from his penis while he slept. What is it?

   A A wet dream. It is normal in puberty.

   B A sign of an illness that he must hide

   C Urine, because he wet the bed

   Answer at the back of the book.

7. Mei's height mark was at 144 cm. Half a year later it was at 148 cm. How much did she grow?

   Answer at the back of the book.

8. **From an earlier chapter**

   Which stage of life is puberty part of?

   A Baby

   B Adolescent

   C Elder

   Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

Hormones start puberty. Girls: breasts grow, hips widen, periods start. Boys: testes and penis grow, voice deepens, face hair. Everyone: body hair, sweat, spots, a growth spurt. It starts at different times. No time is wrong.

Draw: Draw a person and label three changes that come to everyone.

S3.4.3 CHAPTER 3

Feelings and growing up

Why do my feelings change so much, and who can I talk to?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** Feeling up and down in puberty means something is wrong with you.
- ☐ **B** Changing moods are a normal part of puberty, partly because of hormones.
- ☐ **C** Only girls have changing feelings in puberty.

IF THIS FEELS HARD, READ THIS FIRST

- Level 3, Body systems, S3.3.1. The brain is the organ where feelings happen.

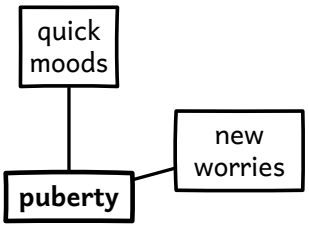
BY THE END YOU CAN

- Explain that changing moods and feelings in puberty are normal
- Name trusted adults you can ask about growing up

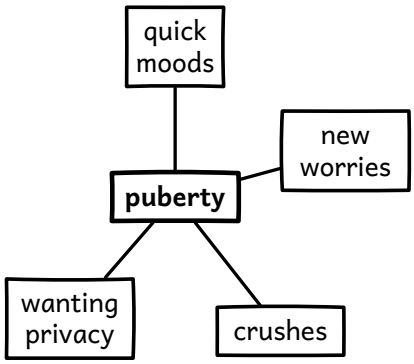
Puberty changes how you feel, as well as how you look. Your **mood** is how you feel inside at one time. In puberty, moods can change quickly. You may feel happy, then cross, then sad, all in one day. This is normal.

DRAW IT FIRST

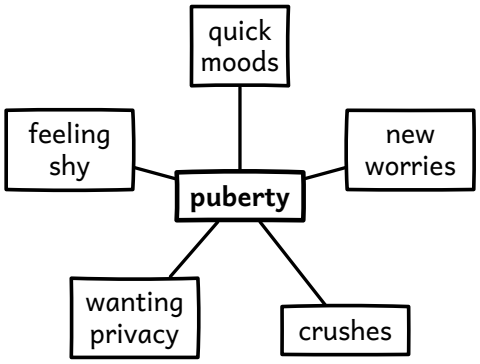
Draw the feelings puberty can bring



1 Write puberty in the middle. Add quick moods and new worries.



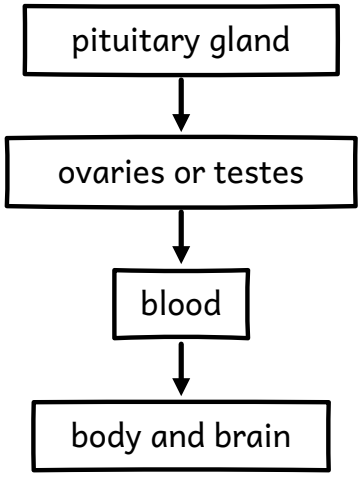
2 Add crushes and wanting privacy.



3 Add feeling shy. Every one of these is normal.

The pituitary gland is a small gland under the brain. Puberty starts when it sends a hormone in the blood to the ovaries or the testes. They then make more hormones.

Part of the reason is hormones. The same chemical messengers that change your body also act on your brain. Other reasons are new worries, new friends, and wanting more say in your own life.



The pituitary gland starts it. Hormones from the ovaries or the testes travel in the blood. They reach the body and the brain, and can change how you feel.

Many people start to have strong feelings for someone. This is a **crush**. Some people have a crush on a boy, some on a girl, and some on nobody. All of these are normal. A crush is a feeling. You choose what, if anything, to do about it.

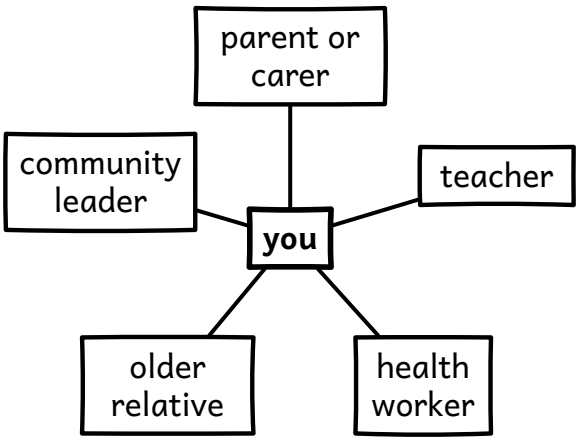
You may want more **privacy**: time and space to be on your own. That is fine. Other people want it too, so knock before you go into a room.

feeling	what can help
cross	take a walk
worried	talk to someone
sad	rest, do a hobby
shy	all bodies change

Most hard feelings pass. Sleep, food, exercise and talking all help.

Sometimes sad or worried feelings do not pass. They may last for weeks, or stop you sleeping, eating or enjoying things. You may think about hurting yourself. Then tell a trusted adult or a health worker now. If one adult does not help, ask another.

You do not have to work out growing up alone. A **trusted adult** is a grown up who listens to you, keeps you safe and helps you. You can ask them anything about your body or your feelings.



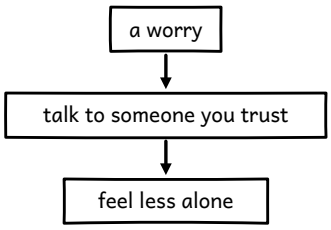
Trusted adults by their role. A faith leader you trust is a community leader too. Choose people who listen and keep you safe.

SEE IT THREE WAYS

With things

Tariq felt worried that his body was changing later than his friends'. He asked a health worker at the clinic. She told him there is no right time, and he felt better.

As a picture



In words

A worry kept inside often grows. Said out loud to a trusted adult, it usually gets smaller.

TRY IT

Keep a feelings diary for a week

You need: paper, a pencil.

1. Draw a table with a row for each day and two columns: morning and night.
2. Each evening, draw a face in each box for how you felt. Write one word next to it.
3. At the end of the week, look for patterns. Did sleep, food or friends change how you felt?

What you will see: Your moods go up and down. Most people find they feel better after good sleep, a meal or time outside.

If you cannot try it, this is what happens.

day	morning	night
1	happy	cross
2	tired	happy
3	worried	calm

A WRONG IDEA MANY PEOPLE HAVE

~~Asking about growing up is embarrassing, so it is better to keep quiet.~~

Why it feels right: Bodies and feelings can feel private, and you may worry that the adult will laugh.

The test that breaks it: Ask a health worker or a teacher one question. They are asked these questions all the time, and they answer them calmly.

What is true: Every adult went through puberty too. A trusted adult is glad you asked.

KEY WORDS

mood
how you feel inside at one time.

crush
strong feelings for someone.

privacy
time and space to be on your own.

trusted adult
a grown up who listens to you, keeps you safe and helps you.

BACK TO YOUR GUESS

The answer is B: Changing moods are a normal part of puberty, partly because of hormones.

Moods that go up and down are normal in puberty, for girls and for boys. Hormones are part of the reason, and new worries and friendships are the rest.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. Amina feels happy in the morning and cross by midday, for no clear reason. What is most likely?

   A She is ill and must see a doctor at once.

   B Mood changes are normal in puberty, partly because of hormones.

   C Something is wrong with her.

   Answer at the back of the book.

2. Which of these is a trusted adult you could ask about growing up?

   A A stranger who sends you messages online

   B Nobody. These things must stay secret.

   C A teacher or a health worker you know

   Answer at the back of the book.

3. Why can hormones change how you feel?

   A They are carried in the blood to the brain, as well as to the body.

   B They are germs that make you ill.

   C They are foods that make you grow.

   Answer at the back of the book.

4. Tariq is worried that his body is changing later than his friends'. What is the best thing to do?

   A Keep it to himself and wait.

   B Talk to a trusted adult, such as a parent or a health worker.

   C Take a medicine a friend gives him.

   Answer at the back of the book.

5. Lucía wants to be alone in her room more than before. Is this normal?

   A Yes. Many people want more privacy in puberty.

   B No. It means she is unhappy with her family.

   C No. Only adults need privacy.

   Answer at the back of the book.

6. Kofi has a crush on someone in his class. What is true?

   A He must tell the whole class.

   B Crushes only happen to girls.

   C A crush is a normal feeling, and he chooses what, if anything, to do.

   Answer at the back of the book.

7. **From an earlier chapter**

   Which change of puberty comes to both girls and boys?

   A Periods

   B A growth spurt

   C A deeper voice and a beard

   Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

Moods can change fast in puberty, partly because of hormones. Worries, crushes and wanting privacy are normal. A trusted adult listens and keeps you safe: a parent or carer, a teacher, a health worker.

Draw: Draw yourself in the middle with lines to three adults you trust.

S3.4.4 CHAPTER 4

Reproductive systems

What are the parts of the reproductive system, and what does each one do?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** The ovaries hold eggs, the testes make sperm, and a baby grows in the uterus.
- ☐ **B** The uterus makes the eggs, and a baby grows in the ovaries.
- ☐ **C** In a girl, urine and periods leave the body through the same opening.

IF THIS FEELS HARD, READ THIS FIRST

- Level 3, Body systems, S3.3.1. The reproductive system is one of the organ systems of the body.
- Level 3, Cells, S3.1.5. Eggs and sperm are cells with special jobs.

BY THE END YOU CAN

- Label the main parts of the male and female reproductive systems
- State the job of the testes, ovaries and uterus

The **reproductive system** is the organ system that makes new life. A female system and a male system are different. Each makes a special cell. One cell from each is needed to start a baby.

DRAW IT FIRST

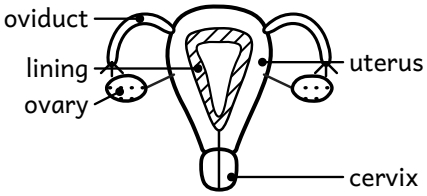
Draw the female reproductive system



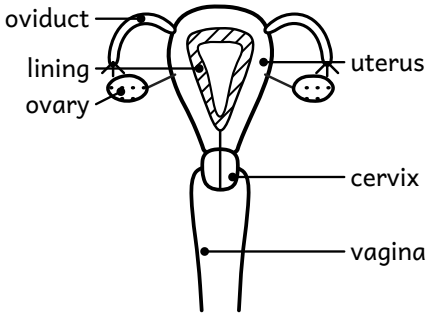
1 Draw two ovaries, one on each side, low in the abdomen.



2 Draw an oviduct from above each ovary. Its open end is fringed.



3 Join both oviducts to the top of the uterus. Draw the cervix at its bottom.



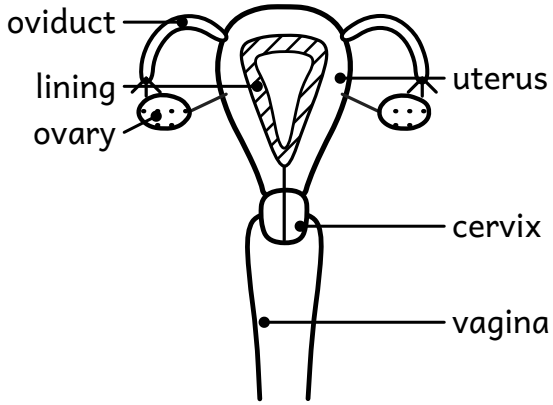
4 Draw the vagina, from the cervix down to the outside of the body.

The two **ovaries** hold hundreds of thousands of eggs. From puberty, about once a month, one ovary lets go of one egg. Only about 400 are ever let go.

Each **oviduct** is a narrow tube, also called an egg tube or a fallopian tube. It carries the egg from the ovary to the uterus.

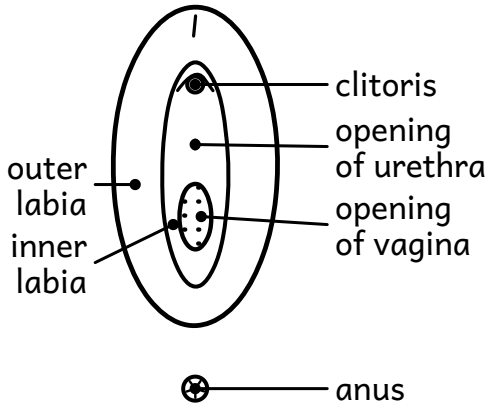
The **uterus**, or womb, is a hollow organ with a thick wall of muscle. A baby grows in it. It has a soft lining inside. The cervix is the narrow neck at the bottom of the

uterus. The vagina is a stretchy tube from the cervix to the outside of the body.



The female reproductive system. It lies low in the abdomen, inside the bones of the hips.

Outside, between the legs, is the vulva. It has two pairs of skin folds, the outer labia and the inner labia. Inside them, from the front, is the clitoris. Next is the small opening of the urethra, then the opening of the vagina.

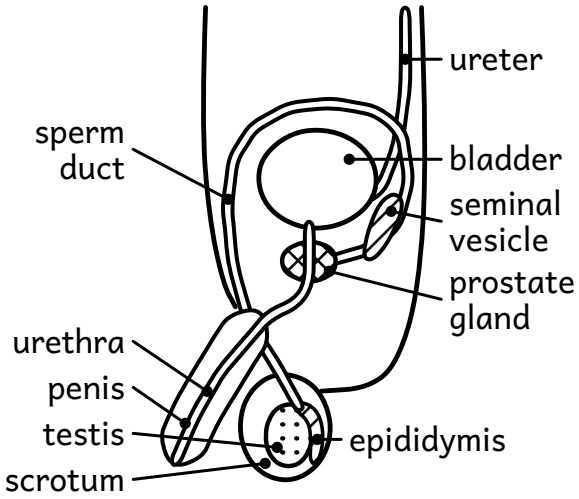


Urine leaves through the opening of the urethra. Period blood leaves through the opening of the vagina. They are two different openings.

A male has two **testes**. One is called a testis. They hang outside the body in a bag of skin, the scrotum. From puberty on, the testes make sperm, millions every day. The sperm are stored in the epididymis, a coiled tube on the back of each testis. Sperm are made best a little cooler than the inside of the body. That is why the testes hang outside.

Each **sperm duct** carries sperm from the epididymis, up and round the bladder, to the urethra. It is also called the vas deferens. On the way, glands add a fluid. These glands are the seminal vesicles and the prostate gland. Sperm and this fluid together are semen.

The bladder stores urine, which comes down from each kidney in a tube called the ureter. The urethra is a tube from the bladder through the penis to its tip. It carries urine out of the body. At other times it carries semen. It never carries both at once.



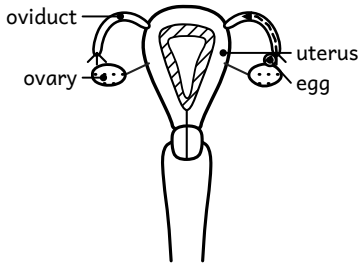
The male reproductive system, seen from the side. Only one testis shows, because the other is behind it.

part	job
ovary	holds eggs
oviduct	carries the egg
uterus	baby grows here
testis	makes sperm
sperm duct	carries sperm
penis	carries semen

The main parts and their jobs.

SEE IT THREE WAYS

As a picture



In words

An ovary lets go of an egg. The open end of the oviduct catches it, and the oviduct carries it toward the uterus.

In symbols

ovary → oviduct → uterus

TRY IT

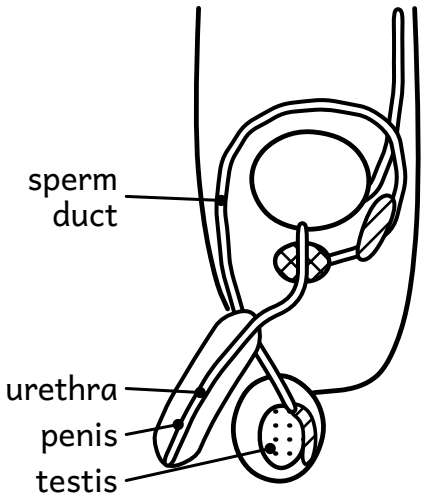
Label the systems from memory

You need: paper, a pencil.

1. Copy the outline of the female system and the male system onto paper, with no labels.
2. Close the book. Label as many parts as you can, and write one job next to each.
3. Open the book and check. Fix any you missed, then try again tomorrow.

What you will see: Most people need two or three tries. Saying each name as you write it helps you remember it.

If you cannot try it, this is what happens.



A WRONG IDEA MANY PEOPLE HAVE

~~A girl passes urine and her period through the same opening.~~

Why it feels right: The two openings are small and close together, between the legs.

The test that breaks it: Look at the drawing of the vulva. The opening of the urethra is in front of the opening of the vagina, and apart from it.

What is true: Urine leaves through the urethra. Period blood leaves through the vagina. They are two different openings.

KEY WORDS

reproductive system
the organ system that makes new life.

ovaries
two organs that hold the eggs. One is an ovary.

oviduct
a tube that carries an egg from an ovary to the uterus. It is also called a fallopian tube.

uterus
the hollow organ, also called the womb, where a baby grows.

testes
two organs in the scrotum that make sperm. One is a testis.

sperm duct
a tube that carries sperm from a testis to the urethra. It is also called the vas deferens.

BACK TO YOUR GUESS

The answer is A: The ovaries hold eggs, the testes make sperm, and a baby grows in the uterus.

The ovaries hold the eggs and the testes make sperm. A baby grows in the uterus. Urine and periods leave a girl's body through two different openings.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. Which part makes sperm?

   A The testes

   B The bladder

   C The prostate gland

Answer at the back of the book.

2. What is the job of the ovaries?

    A A baby grows in them.

    B They hold eggs and let go of one about once a month.

    C They make urine.

    Answer at the back of the book.

3. Where does a baby grow?

    A In the stomach

    B In an ovary

    C In the uterus

    Answer at the back of the book.

4. Which tube carries sperm from a testis toward the urethra?

    A The sperm duct

    B The oviduct

    C The vagina

    Answer at the back of the book.

5. What is the cervix?

    A The opening where urine leaves

    B The narrow neck at the bottom of the uterus

    C An egg tube

    Answer at the back of the book.

6. Why do the testes hang outside the body, in the scrotum?

    A There is no room for them inside.

    B So that urine can pass through them.

    C Sperm are made best a little cooler than inside the body.

    Answer at the back of the book.

7. Where do urine and period blood leave a girl's body?

   A Through the same opening

   B Urine through the urethra, period blood through the vagina

   C Both through the anus

   Answer at the back of the book.

8. **From an earlier chapter**

   What is a hormone?

   A A chemical messenger carried in the blood

   B A part of the reproductive system

   C A kind of sperm

   Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

Ovaries hold eggs. Oviducts carry eggs to the uterus, where a baby grows. The cervix opens into the vagina. Testes in the scrotum make sperm. Sperm ducts carry sperm to the urethra, which runs through the penis.

Draw: Draw the female system from the front and label six parts.

S3.4.5 CHAPTER 5

The menstrual cycle

What is a period, why does it happen, and how do I look after myself?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** A period is bleeding from a wound inside, so it means you are ill.
- ☐ **B** A period is urine with blood in it.
- ☐ **C** A period is the lining of the uterus leaving the body when no baby has started.

IF THIS FEELS HARD, READ THIS FIRST

- Level 3, Body systems, S3.3.3. Foods with iron help the body make new blood.

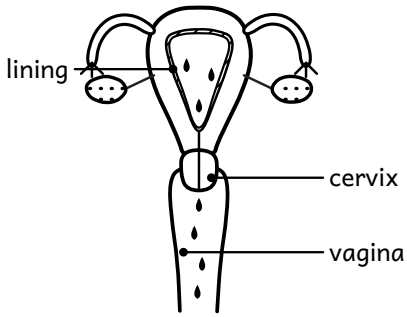
BY THE END YOU CAN

- Explain what happens in a monthly period and why
- Describe simple ways to stay clean and comfortable during a period

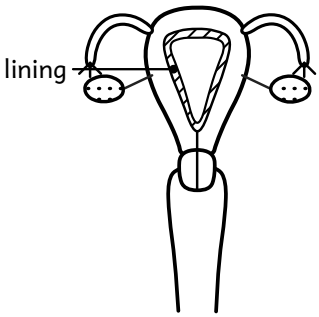
From puberty, a girl's body goes through a cycle about once a month. It is called the **menstrual cycle**. Its job is to get the uterus ready, in case a baby starts.

DRAW IT FIRST

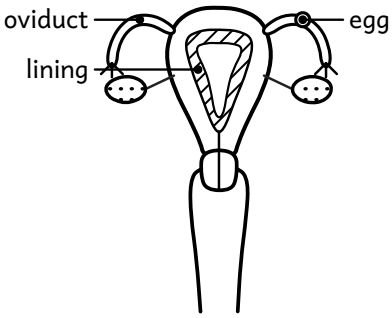
Draw the uterus through one cycle



1 Days 1 to 5: the old lining breaks down and leaves through the vagina as blood. This is a period.



2 Next, the lining builds up again, thick and soft.



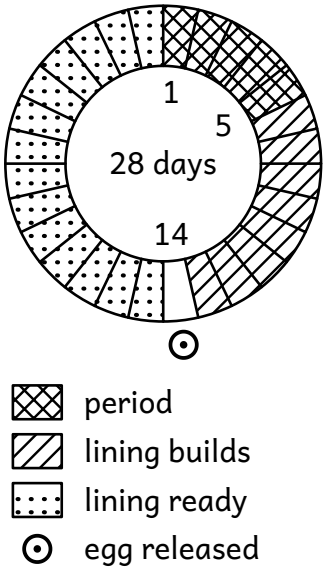
3 About day 14, an ovary lets go of an egg. It moves along the oviduct toward the uterus.

If no sperm meets the egg, no baby starts. The lining is not needed, so it breaks down. It leaves through the cervix and the vagina as blood, a little at a time. Then a new cycle starts.

A **period** is the days when the lining leaves the body. Most periods last about 2 to 7 days. Only a little blood is lost, often a few spoonfuls. That is about 30 to 40 mL in

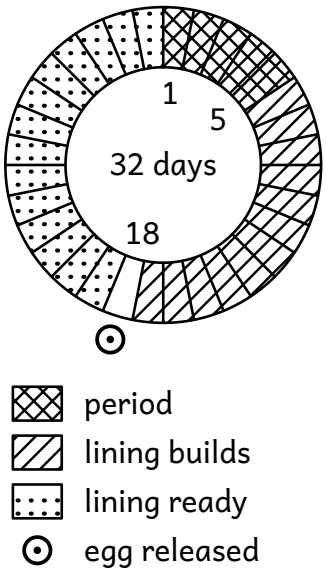
all. It can look like more.

Letting go of an egg is called **ovulation**. It happens about 14 days before the cycle ends. In a 28 day cycle that is about day 14.



A 28 day cycle. Day 1 is the first day of a period. The egg is let go about day 14.

Not every cycle is 28 days. Anything from about 21 to 35 days is common. In the first year or two after periods start, cycles are often not regular. That is normal.



A 32 day cycle. The egg is let go about day 18, because 32 − 14 = 18.

SEE IT THREE WAYS

With things

Ana marks the first day of each period on a calendar. Her periods start every 28 days.

As a picture

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

period

In words

Her period is days 1 to 5. Her egg is let go about day 14. Her next period should start on the day after day 28.

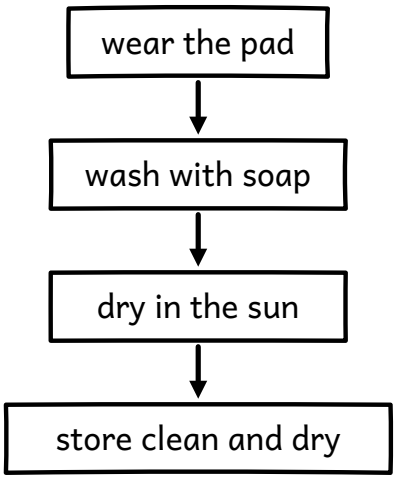
In symbols

28 − 14 = 14

A few habits keep you clean and comfortable. A **pad** is a soft pad worn in the underwear to soak up the blood. A cloth pad is washed with soap and water, then dried in the sun. Sunlight helps to kill germs. A bought pad is used once, then wrapped and put in a bin.

A menstrual cup, where you can get one, is another way. It is a small soft cup worn inside the vagina. It is emptied every few hours, washed, and boiled between periods.

A tampon is a small roll of soft cotton worn inside the vagina. Change it every 4 to 8 hours, and never leave one in for longer. A forgotten tampon can cause a rare but serious illness.

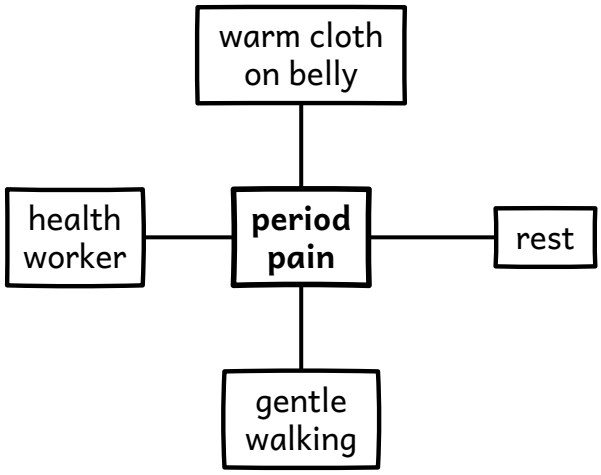


Caring for a cloth pad. Dry it fully, because a damp pad grows germs.

Change a pad every 4 to 8 hours, or sooner when the flow is heavy. Wash your body with water every day. Wash your hands before and after you change a pad.

Period pain is common. It is a cramp low in the belly. Warmth helps: hold a cloth soaked in warm water, or a bottle of warm water, on the belly. Rest and gentle walking help too. A painkiller from a health worker or a pharmacist, taken as the packet says, also helps.

Your first period may start at school or away from home. Tell a trusted adult, such as a teacher. Fold a clean cloth into your underwear until you have a pad.



Things that help with period pain. A health worker can help when the pain is bad.

Be safe. Use warm water, never hot, so it cannot burn you. See a health worker if periods are very heavy. Very heavy means soaking a pad in an hour or two. It also means bleeding for more than 7 days, or feeling dizzy. See one for very bad pain or bleeding between periods. See one if periods stop for 3 months after being regular. See one if there is no period by about 15 years. See one too if periods have not come about three years after the breasts started to grow.

TRY IT

Mark a cycle on a home made calendar

You need: paper, a pencil, a ruler.

1. Draw a grid of 7 columns and 4 rows. Number the boxes from 1 to 28.
2. Pretend a period starts on day 1 and lasts 5 days. Shade days 1 to 5.
3. Work out 28 − 14 = 14. Draw a small egg on day 14. Write next to day 28: next period starts tomorrow.

What you will see: The period, the egg and the next period sit in the same places in every 28 day cycle. A real cycle may be a few days shorter or longer.

If you cannot try it, this is what happens.

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

period

A WRONG IDEA MANY PEOPLE HAVE

~~You should not wash, bathe or do sport during a period.~~

Why it feels right: Some people were told this. It can also feel as if moving will make more blood come.

The test that breaks it: Washing takes away the blood and the smell, and keeps germs down. Many sports players play during their periods.

What is true: Washing with water every day keeps you clean and healthy. Gentle exercise can ease period pain.

KEY WORDS

menstrual cycle

the cycle, about once a month, that gets the uterus ready for a baby.

period
the days when the lining of the uterus leaves the body as blood.

ovulation
when an ovary lets go of an egg.

pad
a soft pad worn in the underwear to soak up period blood.

BACK TO YOUR GUESS

The answer is C: A period is the lining of the uterus leaving the body when no baby has started.

A period is the old lining of the uterus leaving the body as blood. It happens because no baby started that month. It is healthy, not an illness.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. What is a period?

   A Bleeding from a cut inside the body

   B The lining of the uterus leaving the body as blood

   C Urine with blood in it

   Answer at the back of the book.

2. Why does the lining of the uterus build up in each cycle?

   A To store food for the girl

   B To clean the inside of the uterus

   C To be ready in case a fertilised egg settles in it

   Answer at the back of the book.

3. In a 28 day cycle, about which day is an egg let go?

   A Day 1

   B Day 14

   C Day 28

   Answer at the back of the book.

4. What is a good way to care for a cloth pad?

   A Rinse it and wear it again while it is still damp

   B Wash it with soap and water and dry it in the sun

   C Hide it to dry in a dark corner

   Answer at the back of the book.

5. Which helps period pain?

   A Warmth on the belly and rest

   B Nothing helps. You just have to bear it.

   C Not eating at all

   Answer at the back of the book.

6. When should Mei see a health worker about her periods?

   A Every time she has a period

   B Never. Periods are private.

   C If her periods are very heavy or very painful

   Answer at the back of the book.

7. Kofi's sister has a 30 day cycle. About which day is her egg let go?

   Answer at the back of the book.

8. **From an earlier chapter**

Which part of the body lets go of an egg?

A The uterus

B An ovary

C The cervix

Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

Each cycle the lining of the uterus builds up. An egg is let go about 14 days before the cycle ends. No baby starts, so the lining leaves as blood: a period. Pads, washing, warmth and rest help.

Draw: Draw a cycle wheel of 28 days and mark the period and the egg.

S3.4.6 CHAPTER 6

Fertilisation and pregnancy

How does a baby start, and how does it grow inside the mother?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** A baby starts when one sperm joins with one egg.
- ☐ **B** A baby starts from the egg alone. The sperm only gives it food.
- ☐ **C** A tiny baby, with all its parts, is already inside the egg from the start.

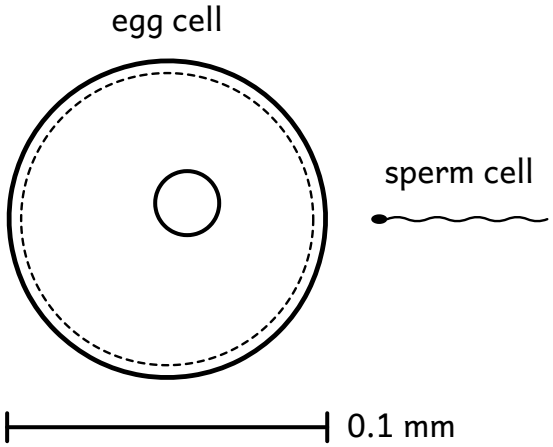
IF THIS FEELS HARD, READ THIS FIRST

- Level 3, Cells, S3.1.5. The egg and the sperm are cells with special jobs.
- Level 3, Cells, S3.1.3. The nucleus of a cell holds its instructions.
- Level 3, Body systems, S3.3.6. Blood carries food and oxygen round the body.

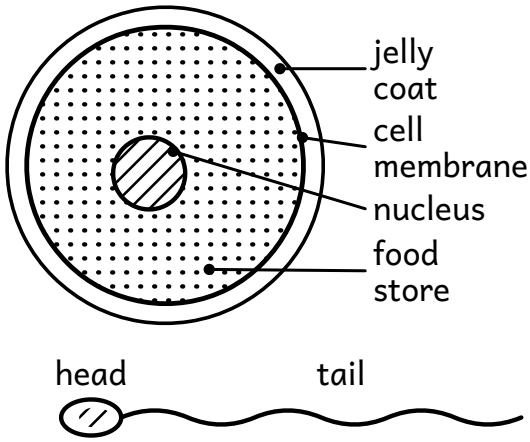
BY THE END YOU CAN

- Explain how a sperm and an egg join to make a new cell
- Describe how a baby grows in the uterus over about nine months

The egg and the sperm are special cells, called **sex cells**. Each has a nucleus with half the instructions for a new person. Joined together, they make a full set.



True sizes. The egg is about 0.1 mm across, about the smallest dot an eye can see. It is about 20 times as wide as a sperm's head is long.

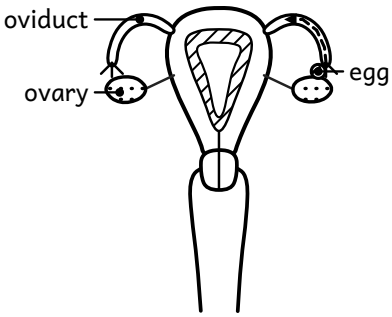


The egg has a big food store for the first days. The sperm has a tail to swim with. Here the sperm is drawn much bigger than it is.

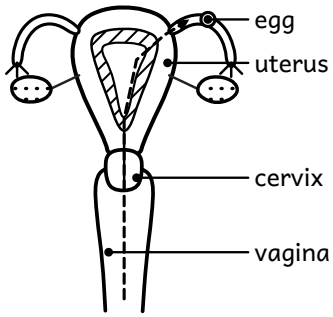
Sexual intercourse, or sex, is when an erect penis goes into the vagina. Semen comes out of the penis into the vagina. Both people must freely agree. A child cannot agree to sex, and sex with a child is always wrong. It is never the child's fault.

DRAW IT FIRST

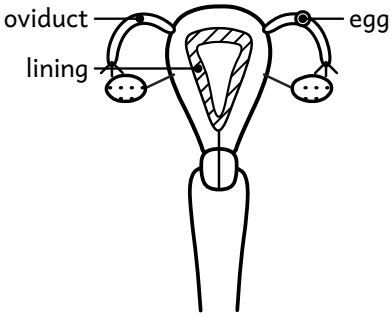
Draw how the sperm meets the egg



1 An ovary lets go of an egg. It moves into the oviduct.

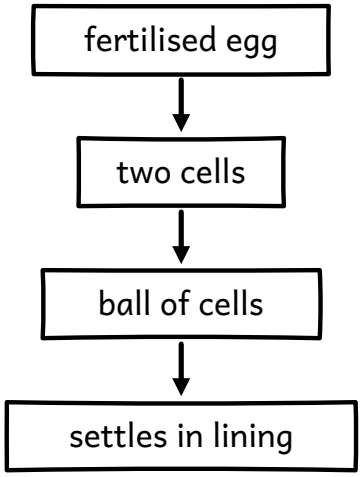


2 Sperm swim from the vagina, through the cervix and the uterus, into the oviducts.



3 In the oviduct, one sperm may join the egg. The lining of the uterus is thick and ready.

Millions of sperm set off, but only a few hundred reach the egg. The head of one sperm gets into the egg. Then the egg changes, so that no other sperm can get in. The nucleus of the sperm joins the nucleus of the egg. This is **fertilisation**.

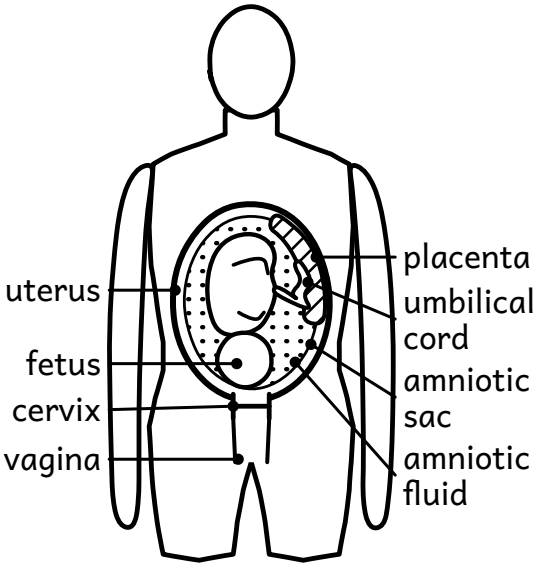


The fertilised egg divides again and again as it moves down the oviduct. About a week later, the ball of cells settles in the soft lining.

A girl can become pregnant the first time she has sex. She can even become pregnant before her first period. That is because an egg is let go about two weeks before the period comes.

Pregnancy can be prevented. The ways to do this are called contraception. Sex can also pass on infections, such as HIV. The book Health, disease and immunity explains both, and a health worker can advise you.

Settling in the lining starts a **pregnancy**. While a woman is pregnant, she has no periods, because the lining is needed. A pregnancy lasts about 40 weeks, which is about nine months. It is counted from the first day of the mother's last period. The baby itself grows for about 38 weeks. In the first weeks it is called an embryo. From about 10 weeks of pregnancy it is called a fetus.

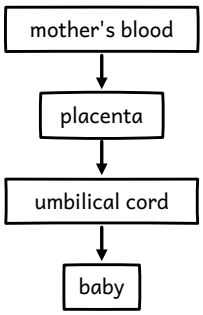


A baby late in pregnancy. It floats in fluid, inside a bag called the amniotic sac. The fluid cushions it from bumps.

The **placenta** grows on the wall of the uterus. The **umbilical cord** joins the baby to it. In the placenta, food and oxygen pass from the mother's blood into the baby's blood. Waste, such as carbon dioxide, passes the other way. The two bloods stay apart and do not mix.

SEE IT THREE WAYS

As a picture

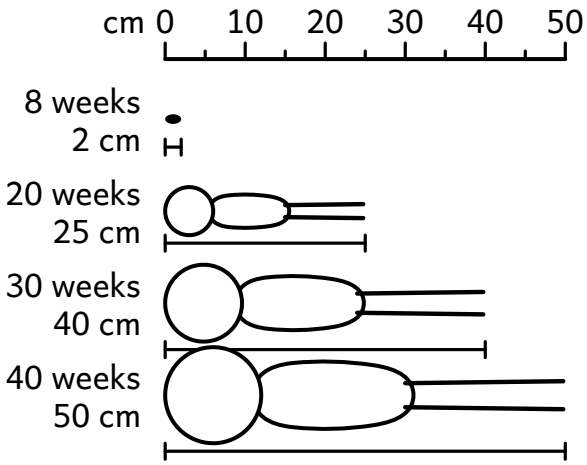


In words

Food and oxygen go from the mother's blood, through the placenta and along the cord, to the baby. Waste goes back the other way.

In symbols

40 weeks × 7 = 280 days



How long the baby is, from head to heel, at four stages. The weeks are counted from the mother's last period. Every baby is a little different.

TRY IT

Make a size line of a growing baby

You need: paper, a pencil, a ruler.

Be safe: Take care if you use scissors.

1. Tear or cut strips of paper 2 cm, 25 cm, 40 cm and 50 cm long. Join sheets if you need to.
2. Write on each strip how many weeks it shows: 8, 20, 30 and 40 weeks.
3. Lay the strips side by side, shortest first. Compare the gaps between them.

What you will see: The baby gets longer fastest in the middle weeks. Near the end it grows less in length, but it puts on most of its weight.

If you cannot try it, this is what happens.

weeks	length
8	2 cm
20	25 cm
30	40 cm
40	50 cm

A WRONG IDEA MANY PEOPLE HAVE

~~A baby in the uterus eats and breathes through its mouth.~~

Why it feels right: After birth a baby feeds through its mouth and breathes air.

The test that breaks it: Look at the drawing. The baby floats in fluid, with no air and no food round it.

What is true: Before birth, food and oxygen come from the mother's blood, through the placenta and the cord.

KEY WORDS

sex cells
the egg and the sperm, each with half the instructions for a new person.

sexual intercourse
when an erect penis goes into the vagina. Both people must freely agree.

fertilisation
when the nucleus of a sperm joins the nucleus of an egg.

pregnancy
the time a baby grows in the uterus, about 40 weeks counted from the last period.

placenta
the organ on the wall of the uterus where food and oxygen pass to the baby.

umbilical cord
the cord that joins the baby to the placenta.

BACK TO YOUR GUESS

The answer is A: A baby starts when one sperm joins with one egg.

A baby starts when one sperm joins one egg. Each brings half the instructions. The new cell then divides again and again, and the parts of the baby form over many weeks.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. What is fertilisation?

   A Many sperm join one egg.

   B The nucleus of one sperm joins the nucleus of one egg.

   C The egg settles in the lining.

   Answer at the back of the book.

2. Where do a sperm and an egg usually meet?

   A In the vagina

   B In an ovary

   C In an oviduct

   Answer at the back of the book.

3. How does a baby in the uterus get oxygen?

   A It breathes air through its mouth.

   B From the mother's blood, through the placenta and the cord

   C It needs no oxygen until it is born.

   Answer at the back of the book.

4. How long does a pregnancy usually last?

   A About 40 days

   B About 4 weeks

   C About 40 weeks

   Answer at the back of the book.

5. What does the amniotic fluid do?

   A It cushions the baby from bumps.

   B It feeds the baby.

   C It carries oxygen to the baby.

   Answer at the back of the book.

6. Why does a pregnant woman have no periods?

   A The lining is needed, because the baby is growing in it.

   B Her ovaries have stopped for ever.

   C The blood goes to her stomach instead.

   Answer at the back of the book.

7. A pregnancy lasts about 40 weeks. How many days is that?

   Answer at the back of the book.

8. At 30 weeks a baby is about 40 cm long. At 40 weeks it is about 50 cm long. How much longer does it grow?

   Answer at the back of the book.

9. **From an earlier chapter**

   What happens to the lining of the uterus if an egg is not fertilised?

   A It stays thick for ever.

   B It breaks down and leaves the body as a period.

   C It turns into an egg.

   Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

One sperm joins one egg in the oviduct: fertilisation. The new cell divides and settles in the lining. The baby grows for about 40 weeks. The placenta and the cord bring it food and oxygen.

Draw: Draw a baby in the uterus with the placenta, the cord and the fluid.

S3.4.7 CHAPTER 7

Birth and caring for a baby

How is a baby born, and what does a new baby need?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** The muscles of the uterus squeeze and push the baby out through the vagina.
- ☐ **B** The baby comes out through the belly button.
- ☐ **C** Every baby has to be taken out through a cut in the belly.

IF THIS FEELS HARD, READ THIS FIRST

- Level 3, Body systems, S3.3.8. Alcohol, tobacco and medicines act on the body, and on a baby too.
- Level 3, Body systems, S3.3.3. A mother needs a good mix of foods for herself and the baby.

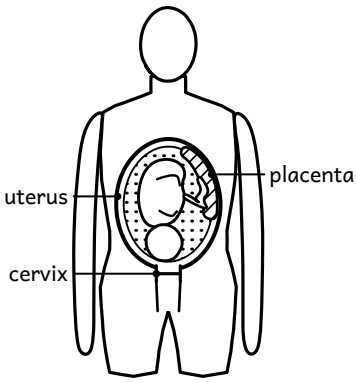
BY THE END YOU CAN

- Describe how a baby is born and fed
- Explain why good food and health care matter in pregnancy

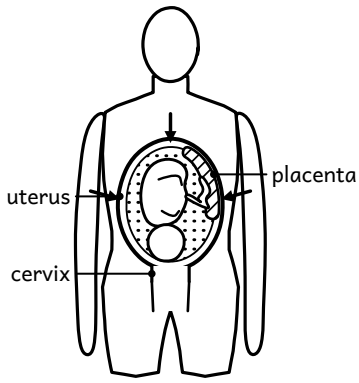
After about 40 weeks the baby is ready to be born. Birth is also called **labour**, because it is hard work for the mother.

DRAW IT FIRST

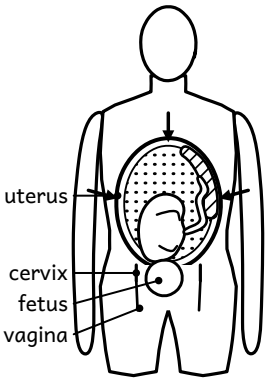
Draw how a baby is born



1 Before birth the baby lies head down. The cervix is closed.

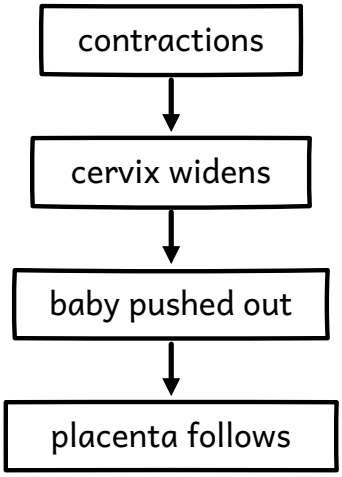


2 The muscles of the uterus squeeze, again and again. The cervix slowly widens.



3 The cervix is wide open. The baby is pushed down, head first, into the vagina and out.

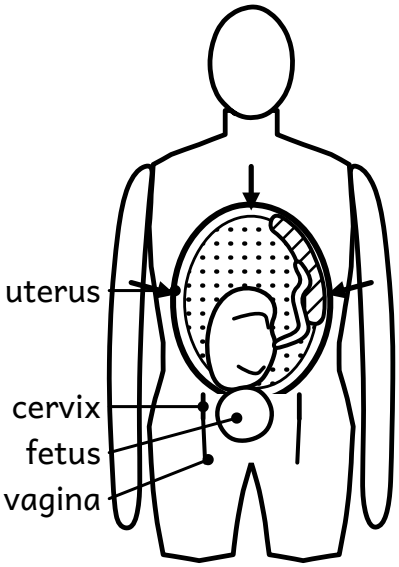
The uterus is a strong muscle. In labour it squeezes in waves called **contractions**. They slowly widen the cervix. Then they push the baby out through the vagina, most often head first. The vagina stretches to let the baby through.



Birth, in order. It can take many hours.

After the baby, the placenta comes out too. It is called the **afterbirth**. The cord is tied and cut. This does not hurt the baby, because the cord has no nerves. The short piece left on the baby dries and falls off. It leaves the belly button.

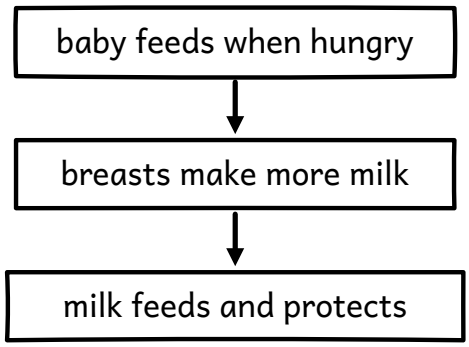
Sometimes a baby cannot be born safely through the vagina. Then doctors deliver it through a cut in the abdomen and the uterus. This is called a caesarean birth. The mother is given medicine so that she feels no pain.



Contractions push down on the baby from the top of the uterus. The head goes first, through the open cervix and the vagina.

Breast milk is made in the mother's breasts after the birth. It carries the mother's antibodies, which help protect the baby from illness. Where possible, breast milk alone is all the food and drink a baby needs for about six months.

A new baby feeds whenever it is hungry, often 8 to 12 times in a day and night. Feeding with formula milk is another way when it is needed.



Feeding at the breast. The more the baby feeds, the more milk the breasts make.

Be safe. Formula milk is made exactly as the packet says. Boil the water and use it within about 30 minutes, while it is still hot. Hot water kills germs in the powder. Cool the bottle before the feed. Wash and boil bottles. Too much or too little powder can make a baby ill.

need	why
milk	food and water
warmth	gets cold fast
sleep	to grow
clean hands	stops germs
talk, play	to learn

What a new baby needs. Everyone at home can help.

Care starts before birth. What the mother eats, drinks and breathes reaches her blood. From there, much of it crosses the placenta to the baby. Good food helps the baby grow. **Health checks** in pregnancy find problems early, when they are easier to treat.

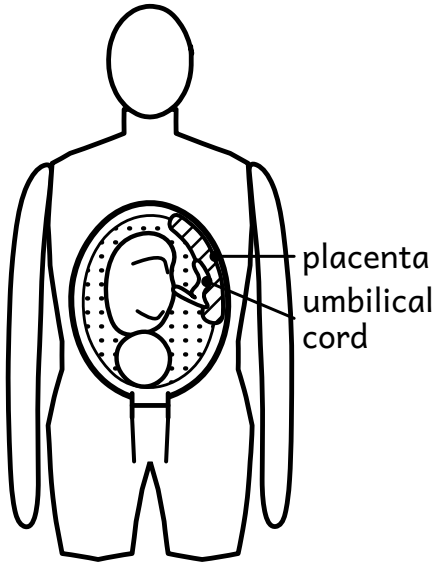
Alcohol, tobacco smoke and some medicines also cross the placenta. They can harm the baby, so a pregnant woman avoids them. She takes only the medicines a health worker says are safe.

helps	harms
good food	alcohol
checks	smoke
rest	some medicines

Much of what reaches the mother's blood reaches the baby.

SEE IT THREE WAYS

As a picture



In words

Food and oxygen pass from the mother's blood, through the placenta and along the cord, to the baby. So can alcohol and smoke.

TRY IT

Plan one day of feeds for a new baby

You need: paper, a pencil, a ruler.

1. Draw a line for one whole day. Mark it in hours from 0 to 24.
2. Suppose a new baby feeds every 3 hours, day and night. Mark a feed at 0, then every 3 hours.
3. Count the feeds. Then ask an adult at home how they looked after a new baby.

What you will see: That makes 8 feeds in a day, at night as well. Many babies feed even more often, 8 to 12 times. Looking after a new baby is a job for more than one person.

If you cannot try it, this is what happens.

feed	time
1	0:00
2	3:00
3	6:00
4	9:00
5	12:00
6	15:00
7	18:00
8	21:00

A WRONG IDEA MANY PEOPLE HAVE

~~**A baby comes out through the belly button.**~~

Why it feels right: The belly button is in the middle of the belly, where the baby seems to be.

The test that breaks it: The belly button is where the cord was joined. It is closed, and it does not lead into the uterus.

What is true: Most babies are born through the vagina. Sometimes doctors make a cut in the abdomen, but not at the belly button.

KEY WORDS

labour
the work of giving birth.

contractions
waves of squeezing by the muscle of the uterus.

afterbirth
the placenta, when it comes out after the baby.

breast milk
milk made in the mother's breasts to feed a baby.

health checks
visits to a health worker to see that mother and baby are well.

BACK TO YOUR GUESS

The answer is A: The muscles of the uterus squeeze and push the baby out through the vagina.

Most babies are born through the vagina, pushed out by the strong muscles of the uterus. Sometimes doctors make a cut in the abdomen instead, but never at the belly button.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. What pushes the baby out at birth?

   A The baby kicks its way out.

   B The muscles of the uterus, squeezing in contractions

   C The mother's stomach

   Answer at the back of the book.

2. What must happen to the cervix before the baby can be born?

   A It must widen.

   B It must close tight.

   C The baby breaks through it.

   Answer at the back of the book.

3. What comes out after the baby?

   A Nothing else

   B The uterus

   C The placenta, called the afterbirth

   Answer at the back of the book.

4. Why is breast milk good for a new baby?

   A It has the food and water the baby needs and helps protect it from illness.

   B It is only water.

   C A baby cannot drink milk until its teeth grow.

   Answer at the back of the book.

5. Why should a pregnant woman not drink alcohol?

   A It is fine, because the placenta blocks everything.

   B Alcohol crosses the placenta and can harm the baby.

   C It only matters after the birth.

   Answer at the back of the book.

6. Ravi's aunt is pregnant. Which helps her baby most?

   A Eating less, so the baby stays small

   B Smoking fewer cigarettes each day

   C Good food and health checks

   Answer at the back of the book.

7. A new baby feeds every 3 hours, day and night. How many feeds is that in 24 hours?

   Answer at the back of the book.

8. **From an earlier chapter**

   What does the umbilical cord do?

   A It joins the baby to the placenta.

   B It holds the baby still in the uterus.

   C It carries the baby's urine out of the mother.

   Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

In labour the uterus squeezes, the cervix widens and the baby is pushed out through the vagina. The placenta follows. Breast milk feeds and protects a baby. Good food and health checks help a pregnancy.

Draw: Draw four boxes in order: contractions, cervix widens, baby pushed out, placenta follows.

S3.4.8 CHAPTER 8

Staying healthy and safe

How do I keep my body clean, and what do I do if a touch feels wrong?

YOUR GUESS

Pick one before you read on. It is fine to be wrong.

- ☐ **A** If someone touches you in a way that feels wrong, it is your fault, so keep it secret.
- ☐ **B** Only a stranger could ever touch you in a wrong way.
- ☐ **C** Your body belongs to you. You can say no, and you should tell an adult you trust.

IF THIS FEELS HARD, READ THIS FIRST

- Level 3, Cells, S3.1.8. Bacteria are living things with one cell. Some live on your skin.

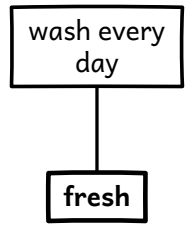
BY THE END YOU CAN

- Explain how washing and clean clothes help during puberty
- Name who to tell if a touch ever feels wrong

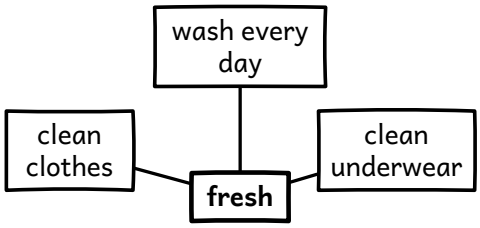
In puberty you sweat more. New sweat glands start to work under the arms and around the genitals. Fresh sweat has very little smell. The smell comes when **bacteria** living on the skin feed on the sweat.

DRAW IT FIRST

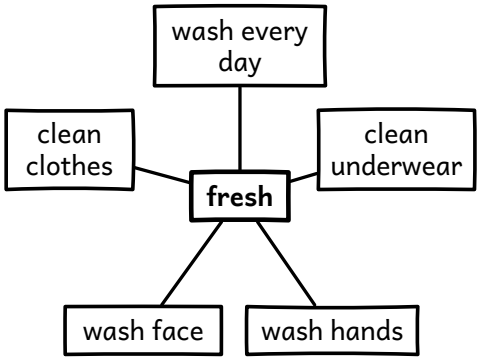
Draw the habits that keep you fresh



1 Write fresh in the middle. Add wash every day.



2 Add clean underwear and clean clothes.



3 Add wash hands and wash face.

Wash your whole body every day with water, and soap where you have it. Wash well under the arms. Wash the genitals and the bottom with plain water. Soap is not needed between the labia, and it can sting there.

From puberty, a little clear or white fluid from the vagina is normal. It keeps the vagina clean, so never wash inside the vagina. See a health worker if it smells bad, itches or changes colour.

After using the toilet, girls wipe from front to back. This keeps germs from the anus away from the vagina and the urethra. Boys with a foreskin pull it back only as far

as it goes easily. They wash under it with water. Then they pull it forward again. Never force it.

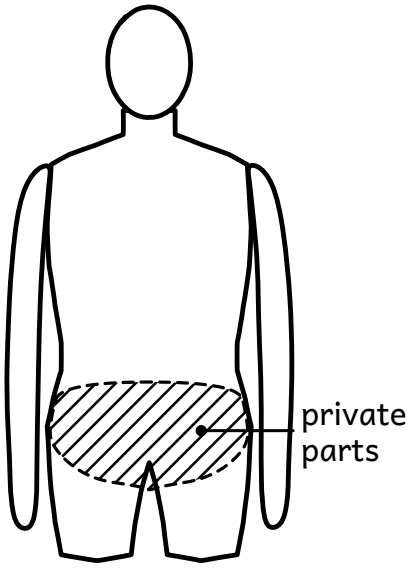
Change your underwear every day. Wear clean clothes, washed and dried in the sun. Cotton cloth lets the skin breathe.

what	how often
wash body	every day
underwear	new every day
hands	after toilet
pad	4 to 8 hours

Wash your hands before you eat, too.

Spots come when tiny holes in the skin get blocked with oil. Wash your face gently with water twice a day. Do not squeeze spots. That can push germs deeper and leave marks.

Staying healthy also means staying safe. Your body belongs to you. Your **private parts** are the parts covered by underwear.



The parts covered by underwear are private. For girls and women, the breasts are private too.

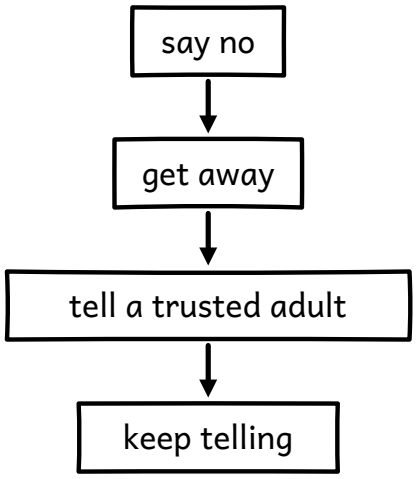
Nobody may touch your private parts, or make you touch theirs, even if you said yes. Nobody may show you pictures of private parts, or ask you for pictures of yours. This is true for strangers, and for people you know.

Consent means a free yes. You can say no to any touch, even from an adult, and even from someone you love.

A child's yes does not make it all right. An adult or an older child who touches a child's private parts is always in the wrong. So is one who asks to be touched, or shows sexual pictures. This is true even if the child said yes, went along with it, or did not say no. A health worker checking your body is different. They explain and ask first, as below.

A health worker may need to look at your body to help you. They tell you what they will do and why, and ask you first. You can ask for an adult you trust, or another health worker, to be there. You can say stop.

If someone at home is hurting you, you can go on your own for help. Tell a health worker, a teacher or another adult you trust.



If a touch ever feels wrong. If the first adult does not listen, tell another, and keep telling until someone helps.

A good secret is a nice surprise, like a gift, and it will be told soon. A bad secret makes you feel worried or scared. A secret about touching is never one to keep. If someone says to keep it secret, tell all the more.

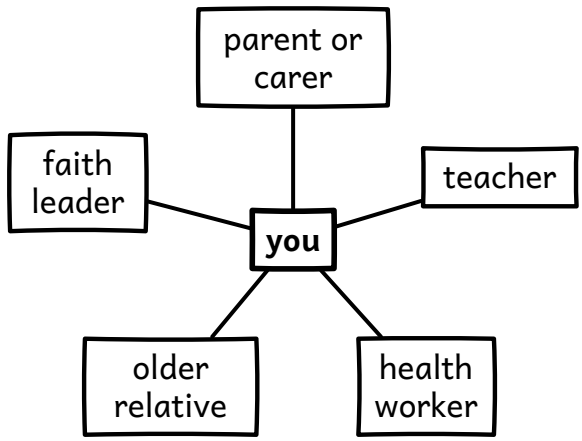
good secret	bad secret
a gift	a wrong touch
a party plan	sent pictures

Keep a good secret for a short time. Tell a bad secret to an adult you trust.

It is never your fault. It is not your fault if you did not say no. It is not your fault if you were scared and kept quiet. It is not your fault if it was someone you know. It is never too late to tell.

SEE IT THREE WAYS

As a picture



In words

Choose adults who listen and keep you safe. A faith or community leader you trust is fine too. A friend can help you find the words, but an adult can stop it.

TRY IT

Draw your trusted adults hand

You need: paper, a pencil.

1. Draw round your hand on the paper.
2. On each finger, write the name of one adult you trust and could tell.
3. On the palm, write how you could reach them: where they live, or where they work.

What you will see: You now have five people. If one does not listen, go to the next one.

If you cannot try it, this is what happens.

finger	who
thumb	mother
first	teacher
middle	aunt
ring	nurse
little	grandfather

A WRONG IDEA MANY PEOPLE HAVE

~~If someone I know touched me in a wrong way, it must be my fault.~~

Why it feels right: The person may say it was your fault, or that you wanted it. Feeling confused or scared can make you blame yourself.

The test that breaks it: Even if you said yes, went along with it, or stayed quiet, it is not your fault. A child cannot agree to this. The older person knew it was wrong.

What is true: It is never your fault. The person who did it is the one in the wrong. Tell an adult you trust.

KEY WORDS

bacteria
tiny living things with one cell. Some live on the skin.

private parts
the parts of the body covered by underwear.

consent
a free yes, given without fear or pressure.

BACK TO YOUR GUESS

The answer is C: Your body belongs to you. You can say no, and you should tell an adult you trust.

Your body belongs to you. You can say no, get away and tell an adult you trust. A touch that feels wrong is never your fault, whoever it was.

CHECK YOURSELF

Try each one before you look. A wrong answer tells you where to go next.

1. Why does sweat start to smell more in puberty?

   A Sweat is dirty water from inside the body.

   B Bacteria on the skin feed on the new sweat.

   C It means you are ill.

   Answer at the back of the book.

2. How often should you change your underwear?

   A Once a week

   B Only when it looks dirty

   C Every day

   Answer at the back of the book.

3. What is the best way to wash the genitals?

   A With plain water, every day

   B With strong soap, inside the body

   C Not at all, in puberty

   Answer at the back of the book.

4. Someone asks Mei to keep a touch secret. What should she do?

   A Keep it, because she promised.

   B Tell an adult she trusts, and keep telling until someone helps.

   C Try to forget about it.

   Answer at the back of the book.

5. If a touch ever felt wrong, which person could Kofi tell?

   A Nobody, because it would cause trouble

   B Only another child

   C A teacher or a health worker he trusts

   Answer at the back of the book.

6. Is it ever a child's fault if someone touches their private parts?

   A Yes, if the child did not say no.

   B Yes, if it was someone in the family.

   C Yes, if the child said yes.

   D No. It is never the child's fault.

   Answer at the back of the book.

7. Ana puts on a new pad when she wakes, and changes it every 4 hours. She is awake for 16 hours. How many pads does she use while awake?

   Answer at the back of the book.

8. **From an earlier chapter**

Where should a washed cloth pad dry?

A Hidden in a dark corner, out of sight

B It can be worn again while still damp

C In the sun, until it is fully dry

Answer at the back of the book.

KEEP IT

Copy this into your exercise book.

Wash every day and change your underwear every day. Your body belongs to you. If a touch feels wrong: say no, get away, tell a trusted adult and keep telling. It is never your fault.

Draw: Draw your hand and write a trusted adult on each finger.

Key words, A to Z

Every key word in this book, what it means, and the chapter that teaches it.

adolescent
a person who is no longer a child but not yet an adult. S3.4.1

afterbirth
the placenta, when it comes out after the baby. S3.4.7

bacteria
tiny living things with one cell. Some live on the skin. S3.4.8

breast milk
milk made in the mother's breasts to feed a baby. S3.4.7

consent
a free yes, given without fear or pressure. S3.4.8

contractions
waves of squeezing by the muscle of the uterus. S3.4.7

crush
strong feelings for someone. S3.4.3

elder
an adult who has grown old. S3.4.1

erections
times when the penis fills with blood and gets stiff. S3.4.2

fertilisation
when the nucleus of a sperm joins the nucleus of an egg. S3.4.6

genitals
the sex organs on the outside of the body. S3.4.2

growth spurt
a time of growing much faster than before. S3.4.2

hatches
breaks out of an egg. S3.4.1

health checks
visits to a health worker to see that mother and baby are well. S3.4.7

hormones

chemical messengers, carried in the blood, that tell parts of the body to change. S3.4.2

labour
the work of giving birth. S3.4.7

life cycle
the stages of a life, in order, from the start to having young. S3.4.1

menstrual cycle
the cycle, about once a month, that gets the uterus ready for a baby. S3.4.5

mood
how you feel inside at one time. S3.4.3

ovaries
two organs that hold the eggs. One is an ovary. S3.4.4

oviduct
a tube that carries an egg from an ovary to the uterus. It is also called a fallopian tube. S3.4.4

ovulation
when an ovary lets go of an egg. S3.4.5

pad
a soft pad worn in the underwear to soak up period blood. S3.4.5

period
the days when the lining of the uterus leaves the body as blood. S3.4.5

placenta
the organ on the wall of the uterus where food and oxygen pass to the baby. S3.4.6

pregnancy
the time a baby grows in the uterus, about 40 weeks counted from the last period. S3.4.6

privacy
time and space to be on your own. S3.4.3

private parts
the parts of the body covered by underwear. S3.4.8

puberty
the time when a child's body changes into an adult's body. S3.4.2

reproductive system

the organ system that makes new life. S3.4.4

sex cells
the egg and the sperm, each with half the instructions for a new person. S3.4.6

sexual intercourse
when an erect penis goes into the vagina. Both people must freely agree. S3.4.6

sperm duct
a tube that carries sperm from a testis to the urethra. It is also called the vas deferens. S3.4.4

testes
two organs in the scrotum that make sperm. One is a testis. S3.4.4

trusted adult
a grown up who listens to you, keeps you safe and helps you. S3.4.3

umbilical cord
the cord that joins the baby to the placenta. S3.4.6

uterus
the hollow organ, also called the womb, where a baby grows. S3.4.4

wet dreams
times when semen comes out of the penis during sleep. S3.4.2

Answers

S3.4.1. The human life cycle

1. **baby, child, adolescent, adult, elder**

   Each stage follows the one before. A person is a baby, then a child, then an adolescent, then an adult, then an elder.

   - **If you chose B:** You may think adolescent is a younger word. An adolescent comes after a child, when puberty starts. Go to S3.4.1.
   - **If you chose C:** Every life starts as a baby. Then come child, adolescent, adult and elder. Go to S3.4.1.

2. **Adolescent**

   The adolescent stage is between child and adult. The body changes in puberty, then the person is an adult.

   - **If you chose A:** A child still has to go through puberty first. That happens in the stage between child and adult. Go to S3.4.1.
   - **If you chose B:** An elder comes after the adult stage, when an adult grows old. Go to S3.4.1.

3. **Adults can have babies, and each new baby starts the cycle again.**

   A life cycle goes on because adults have young. So the ring closes at the adult, with a new baby.

   - **If you chose A:** The arrow does not mean the same person. It means a new life: an adult has a baby. Go to S3.4.1.
   - **If you chose C:** The elder is a branch off the ring. New babies come from adults having children. Go to S3.4.1.

4. **Inside an egg with a shell, outside its mother**

   A bird lays an egg with a hard shell. The chick grows inside it and then hatches.

   - **If you chose B:** A hen lays her egg first. The chick grows inside the egg, outside her body. Go to S3.4.1.
   - **If you chose C:** A nest holds the eggs. The chick grows inside an egg until it hatches. Go to S3.4.1.

5. **Both grow up in stages, and adults of both have young.**

   Both go through stages to become adults, and adults have young. That is why both are drawn as a ring.

   - **If you chose A:** Only the bird's egg has a shell. A human baby grows inside its mother. Go to S3.4.1.
   - **If you chose B:** Human babies feed on milk. Hens do not make milk, so a chick eats food from outside. Go to S3.4.1.

6. **Bigger: about a quarter for a baby, and about an eighth for an adult**

   The head grows less than the rest of the body. So it becomes a smaller part of the height.

   - **If you chose A:** A body changes shape as it grows. The legs grow more than the head. Go to S3.4.1.
   - **If you chose C:** A baby's head looks small, but it is a big part of its whole length. Go to S3.4.1.

7. **About 3 weeks**

   A week has 7 days. 21 ÷ 7 = 3.

S3.4.2. Changes in puberty

1. **The breasts grow, the hips widen and periods start**

   Hormones from the ovaries make the breasts grow, the hips widen and periods start.

   - **If you chose B:** Those are changes for boys. Girls' voices change only a little. Go to S3.4.2.
   - **If you chose C:** Puberty happens in the adolescent stage, before adult life. Go to S3.4.2.

2. **The testes and penis grow, and the voice deepens**

   Hormones from the testes make the genitals grow, the voice deepen and hair grow on the face.

   - **If you chose A:** Periods come from the uterus, and boys do not have one. Go to S3.4.2.
   - **If you chose C:** Boys have a growth spurt in puberty. They grow faster for a while. Go to S3.4.2.

3. **Hair under the arms and on the pubic area, more sweat, and a growth spurt**

   These changes come to everyone in puberty.

   - **If you chose A:** Those are changes for girls. Go to S3.4.2.
   - **If you chose B:** Wet dreams are for boys. Semen is made by the male system. Go to S3.4.2.

4. **Puberty starts at different times. Joseph's body will change on its own timetable.**

   Puberty can start some years earlier or later than for a friend. Both are normal.

   - **If you chose A:** There is no right time. Puberty starts at different times for different people. Go to S3.4.2.
   - **If you chose C:** Puberty comes to almost everyone, sometimes later. If it is very late, a health worker can check and help. Go to S3.4.2.

5. **Hormones, chemical messengers carried in the blood**

   Hormones carry the message to change round the body in the blood.

   - **If you chose A:** Food gives you energy to grow, but it does not start puberty. Hormones do. Go to S3.4.2.
   - **If you chose B:** Sport is good for you, but it does not start puberty. Hormones do. Go to S3.4.2.

6. **A wet dream. It is normal in puberty.**

   Semen can come out of the penis during sleep. This is a wet dream, and it is normal.

   - **If you chose B:** A wet dream is not an illness. It is a normal part of puberty, and nothing to hide or be ashamed of. Go to S3.4.2.
   - **If you chose C:** Urine is watery. Semen is a thicker fluid with sperm in it. A wet dream is semen. Go to S3.4.2.

7. **4 cm**

   Take the first height from the second. 148 − 144 = 4.

8. **Adolescent**

   The adolescent stage is between child and adult. Puberty happens in it.

   - **If you chose A:** A baby is far from puberty. It still feeds on milk. Go to S3.4.1.
   - **If you chose C:** An elder went through puberty long ago, as an adolescent. Go to S3.4.1.

S3.4.3. Feelings and growing up

1. **Mood changes are normal in puberty, partly because of hormones.**

   Hormones act on the brain as well as the body, so moods can change quickly in puberty.

   - **If you chose A:** Quick changes of mood are normal in puberty. They are not an illness. Go to S3.4.3.
   - **If you chose C:** Quick changes of mood are normal in puberty. Nothing is wrong with her. Go to S3.4.3.

2. **A teacher or a health worker you know**

   A trusted adult is a grown up you know, who listens and keeps you safe. Teachers and health workers are good choices.

   - **If you chose A:** You do not know a stranger online, so you cannot know they will keep you safe. Choose an adult you know and trust. Go to S3.4.3.
   - **If you chose B:** Questions about growing up are normal. Trusted adults are there to help. Go to S3.4.3.

3. **They are carried in the blood to the brain, as well as to the body.**

   The brain is where feelings happen. Hormones reach it in the blood.

   - **If you chose B:** Hormones are not germs. They are chemical messengers your own body makes. Go to S3.4.3.
   - **If you chose C:** Hormones are not foods. Your body makes them, and the blood carries them. Go to S3.4.2.

4. **Talk to a trusted adult, such as a parent or a health worker.**

   A trusted adult can tell him that puberty starts at different times, and check if he needs help.

   - **If you chose A:** He can wait, but a worry kept inside often grows. Talking helps. Go to S3.4.3.
   - **If you chose C:** Never take a medicine unless a health worker gives it to you. If puberty is very late, a health worker can check and help. Go to S3.4.3.

5. **Yes. Many people want more privacy in puberty.**

   Wanting time and space of your own is normal. Others want it too, so knock before going in.

   - **If you chose B:** Wanting privacy is a normal part of growing up. It does not mean she is unhappy. Go to S3.4.3.
   - **If you chose C:** Everyone needs some privacy, and adolescents often want more of it. Go to S3.4.3.

6. **A crush is a normal feeling, and he chooses what, if anything, to do.**

   Strong feelings for someone are normal in puberty. A feeling is not something you must act on.

   - **If you chose A:** A crush is private. He does not have to tell anyone. Go to S3.4.3.
   - **If you chose B:** Crushes happen to boys and girls. They are a normal part of puberty. Go to S3.4.3.

7. **A growth spurt**

   Everyone grows faster for a while in puberty.

   - **If you chose A:** Periods come from the uterus, so they are for girls. Go to S3.4.2.
   - **If you chose C:** The voice deepens a lot and face hair grows for boys. Go to S3.4.2.

S3.4.4. Reproductive systems

1. **The testes**

   From puberty on, the two testes make millions of sperm every day.

   - **If you chose B:** The bladder stores urine. It is not part of the reproductive system. Go to S3.4.4.
   - **If you chose C:** The prostate gland adds fluid to the sperm. The testes make the sperm. Go to S3.4.4.

2. **They hold eggs and let go of one about once a month.**

   The ovaries hold the eggs. From puberty, one egg is let go about once a month.

   - **If you chose A:** A baby grows in the uterus. The ovaries hold the eggs. Go to S3.4.4.
   - **If you chose C:** The kidneys make urine. The ovaries are part of the reproductive system. Go to S3.4.4.

3. **In the uterus**

   The uterus is a hollow organ with a strong wall and a soft lining. A baby grows in it.

   - **If you chose A:** The stomach is in the digestive system and holds food. A baby grows in the uterus, a different organ. Go to S3.4.4.
   - **If you chose B:** The ovaries hold the eggs. The baby grows in the uterus. Go to S3.4.4.

4. **The sperm duct**

   Each sperm duct runs from a testis, up and round the bladder, to the urethra.

   - **If you chose B:** The oviduct is in the female system. It carries eggs, not sperm. Go to S3.4.4.
   - **If you chose C:** The vagina is in the female system. It runs from the cervix to the outside. Go to S3.4.4.

5. **The narrow neck at the bottom of the uterus**

   The cervix joins the uterus to the vagina.

   - **If you chose A:** Urine leaves through the urethra. The cervix is part of the uterus. Go to S3.4.4.
   - **If you chose C:** The egg tube is the oviduct. The cervix is at the bottom of the uterus. Go to S3.4.4.

6. **Sperm are made best a little cooler than inside the body.**

   The scrotum keeps the testes a little cooler than the inside of the body.

   - **If you chose A:** Room is not the reason. Sperm are made best where it is a little cooler. Go to S3.4.4.
   - **If you chose B:** Urine does not pass through the testes. It leaves the bladder through the urethra. Go to S3.4.4.

7. **Urine through the urethra, period blood through the vagina**

   The opening of the urethra is in front of the opening of the vagina, and apart from it.

   - **If you chose A:** They look close together, but there are two openings. Go to S3.4.4.
   - **If you chose C:** The anus is where waste from the gut leaves. It is apart from the other two. Go to S3.4.4.

8. **A chemical messenger carried in the blood**

   Hormones are made in one part of the body and carried in the blood to others.

   - **If you chose B:** Hormones are made by organs, but a hormone is a chemical, not a part. Go to S3.4.2.
   - **If you chose C:** Sperm are cells. A hormone is a chemical messenger. Go to S3.4.2.

S3.4.5. The menstrual cycle

1. **The lining of the uterus leaving the body as blood**

   When no baby starts, the lining breaks down and leaves through the vagina.

   - **If you chose A:** There is no cut. The blood is the old lining of the uterus leaving the body. Go to S3.4.5.
   - **If you chose C:** Urine leaves through the urethra. Period blood comes from the uterus and leaves through the vagina. Go to S3.4.4.

2. **To be ready in case a fertilised egg settles in it**

   If an egg is fertilised, it settles in the thick lining and grows. If not, the lining breaks down.

   - **If you chose A:** The lining is not a food store for her. It is ready for a fertilised egg to settle in. Go to S3.4.5.
   - **If you chose B:** The lining is not for cleaning. It is a soft bed for a fertilised egg. Go to S3.4.5.

3. **Day 14**

   The egg is let go about 14 days before the cycle ends. 28 − 14 = 14.

   - **If you chose A:** Day 1 is the first day of a period. The egg is let go later, about 14 days before the cycle ends. Go to S3.4.5.
   - **If you chose C:** Day 28 is the last day of the cycle. The egg is let go about 14 days before that. Go to S3.4.5.

4. **Wash it with soap and water and dry it in the sun**

   Soap and water clean the pad, and sunlight and a full drying help kill germs.

   - **If you chose A:** A damp pad grows germs. Wash it with soap and dry it fully first. Go to S3.4.5.
   - **If you chose C:** There is nothing to hide, and a dark damp place lets germs grow. Sunlight helps kill them. Go to S3.4.5.

5. **Warmth on the belly and rest**

   Warmth relaxes the cramping muscle of the uterus, and rest helps too.

   - **If you chose B:** Warmth, rest and gentle walking help, and a health worker can help more when the pain is bad. Go to S3.4.5.
   - **If you chose C:** Going without food does not help. Eating well, with foods that have iron, helps your body. Go to S3.4.5.

6. **If her periods are very heavy or very painful**

   Very heavy or very painful periods can often be helped, so they are worth a check.

   - **If you chose A:** Periods are a normal part of life, so most need no health worker. Go to S3.4.5.
   - **If you chose B:** Periods are private, but health workers help with them all the time. It is fine to ask. Go to S3.4.5.

7. **About day 16**

   The egg is let go about 14 days before the cycle ends. 30 − 14 = 16.

8. **An ovary**

   The two ovaries hold the eggs. About once a cycle, one of them lets go of an egg.

   - **If you chose A:** The uterus is where a baby grows. The eggs are held in the ovaries. Go to S3.4.4.
   - **If you chose C:** The cervix is the neck of the uterus. The eggs are held in the ovaries. Go to S3.4.4.

S3.4.6. Fertilisation and pregnancy

1. **The nucleus of one sperm joins the nucleus of one egg.**

   Each brings half the instructions, so together they make a full set for a new person.

   - **If you chose A:** Only one sperm gets in. Then the egg changes so no other can. Go to S3.4.6.
   - **If you chose C:** That comes about a week later, and it starts a pregnancy. Go to S3.4.6.

2. **In an oviduct**

   The egg moves along the oviduct, and the sperm swim up into it. That is where they meet.

   - **If you chose A:** Sperm are placed in the vagina, but they swim on, through the uterus, into the oviducts. Go to S3.4.6.
   - **If you chose B:** The egg leaves the ovary first. They meet in the oviduct. Go to S3.4.6.

3. **From the mother's blood, through the placenta and the cord**

   In the placenta, oxygen passes from the mother's blood into the baby's blood, which flows along the cord.

   - **If you chose A:** There is no air in the uterus. The baby floats in fluid. Go to S3.4.6.
   - **If you chose C:** Every living cell needs oxygen. The baby gets it through the placenta. Go to S3.4.6.

4. **About 40 weeks**

   A pregnancy lasts about 40 weeks, about nine months, counted from the first day of the last period.

   - **If you chose A:** That is far too short. A baby needs about 40 weeks to grow. Go to S3.4.6.
   - **If you chose B:** After 4 weeks the embryo is still tiny. A baby needs about 40 weeks. Go to S3.4.6.

5. **It cushions the baby from bumps.**

   The baby floats in the fluid, which soaks up knocks and keeps it safe.

   - **If you chose B:** Food comes through the placenta and the cord. The fluid protects the baby. Go to S3.4.6.
   - **If you chose C:** Oxygen comes from the mother's blood, through the placenta. Go to S3.4.6.

6. **The lining is needed, because the baby is growing in it.**

   A period is the lining breaking down. In a pregnancy the lining is kept, so there are no periods.

   - **If you chose B:** Her body pauses the cycle while the baby grows. It does not stop for ever. Go to S3.4.5.
   - **If you chose C:** Period blood comes from the lining of the uterus. The lining is kept for the baby. Go to S3.4.5.

7. **About 280 days**

   A week has 7 days. 40 × 7 = 280.

8. **About 10 cm**

   50 − 40 = 10.

9. **It breaks down and leaves the body as a period.**

   The lining builds up for a fertilised egg. With none, it breaks down and leaves through the vagina.

   - **If you chose A:** If no baby starts, the lining is not needed, so it breaks down. Go to S3.4.5.
   - **If you chose C:** Eggs come from the ovaries, not from the lining. Go to S3.4.5.

S3.4.7. Birth and caring for a baby

1. **The muscles of the uterus, squeezing in contractions**

   The uterus is a strong muscle. In labour it squeezes in waves and pushes the baby out.

   - **If you chose A:** A baby moves, but it is not strong enough. The muscle of the uterus does the pushing. Go to S3.4.7.
   - **If you chose C:** The stomach is part of the digestive system. The uterus is the muscle that pushes. Go to S3.4.7.

2. **It must widen.**

   The baby leaves the uterus through the cervix, so it opens wide during labour.

   - **If you chose B:** The cervix is closed during pregnancy. For birth it has to open wide. Go to S3.4.7.
   - **If you chose C:** The cervix is not broken. Contractions open it slowly, over hours. Go to S3.4.7.

3. **The placenta, called the afterbirth**

   Once the baby is born, the placenta comes away from the wall of the uterus. Then it is pushed out.

   - **If you chose A:** The placenta is not needed after birth, so it comes out too. Go to S3.4.7.
   - **If you chose B:** The uterus stays in the body and slowly shrinks back. It is the placenta that comes out. Go to S3.4.7.

4. **It has the food and water the baby needs and helps protect it from illness.**

   Breast milk feeds the baby and carries antibodies from the mother that help fight illness.

   - **If you chose B:** Breast milk has fat, sugar and protein as well as water. Go to S3.4.7.
   - **If you chose C:** A baby feeds on milk long before it has any teeth. Go to S3.4.7.

5. **Alcohol crosses the placenta and can harm the baby.**

   Alcohol in the mother's blood passes through the placenta to the baby's blood.

   - **If you chose A:** The placenta does not block alcohol. It crosses to the baby. Go to S3.4.7.
   - **If you chose C:** The baby is growing all through pregnancy, so it matters from the start. Go to S3.4.7.

6. **Good food and health checks**

   Good food helps the baby grow, and health checks find any problems early.

   - **If you chose A:** The baby needs food from the mother's blood to grow. Good food helps. Go to S3.4.7.
   - **If you chose B:** Any tobacco smoke can harm the baby. The best is none at all. Go to S3.4.7.

7. **8 feeds**

   24 ÷ 3 = 8. Many babies feed even more often.

8. **It joins the baby to the placenta.**

   The baby's blood flows along the cord to the placenta, picks up food and oxygen, and flows back.

   - **If you chose B:** The baby floats and moves in the fluid. The cord carries blood to and from the placenta. Go to S3.4.6.
   - **If you chose C:** The cord carries the baby's blood to the placenta and back. Waste goes into the mother's blood there. Go to S3.4.6.

S3.4.8. Staying healthy and safe

1. **Bacteria on the skin feed on the new sweat.**

   New sweat glands work in puberty. Bacteria feed on their sweat and make the smell, so daily washing helps.

   - **If you chose A:** Fresh sweat is mostly water and salt, with little smell. Bacteria on the skin make the smell. Go to S3.4.8.
   - **If you chose C:** More sweat and smell is normal in puberty. Washing every day takes care of it. Go to S3.4.8.

2. **Every day**

   Clean underwear every day keeps sweat and bacteria from building up.

   - **If you chose A:** Sweat and bacteria build up in a day. Change it every day. Go to S3.4.8.
   - **If you chose B:** Bacteria cannot be seen. Change it every day even if it looks clean. Go to S3.4.8.

3. **With plain water, every day**

   Plain water cleans the genitals gently. Girls wipe from front to back after the toilet.

   - **If you chose B:** Strong soap can sting and upset the skin there. Plain water on the outside is best. Go to S3.4.8.
   - **If you chose C:** Washing every day keeps the genitals clean and healthy, in puberty most of all. Go to S3.4.8.

4. **Tell an adult she trusts, and keep telling until someone helps.**

   A bad secret should be told. If the first adult does not help, she tells another.

   - **If you chose A:** A secret about touching is never one to keep, even after a promise. Go to S3.4.8.
   - **If you chose C:** Forgetting does not keep her safe. Telling a trusted adult does. Go to S3.4.8.

5. **A teacher or a health worker he trusts**

   A trusted adult can listen and act to keep him safe.

   - **If you chose A:** Telling is right, even if it causes trouble. Keeping safe matters most. Go to S3.4.8.
   - **If you chose B:** A friend can help him find the words, but an adult can stop it. He should tell an adult. Go to S3.4.8.

6. **No. It is never the child's fault.**

   The person who did it is in the wrong. The child should tell a trusted adult.

   - **If you chose A:** Being scared or quiet is not a yes. It is still never the child's fault. Go to S3.4.8.
   - **If you chose B:** Who it was does not change it. It is never the child's fault. Go to S3.4.8.
   - **If you chose C:** A child's yes does not make it all right. The older person is always in the wrong. Go to S3.4.8.

7. **4 pads**

   She puts one on at waking and every 4 hours after. 16 ÷ 4 = 4.

8. **In the sun, until it is fully dry**

   Sunlight and a full drying help kill germs, so the pad is clean to wear again.

   - **If you chose A:** There is nothing to hide, and a dark damp place lets germs grow. Go to S3.4.5.
   - **If you chose B:** A damp pad grows germs. Dry it fully first. Go to S3.4.5.

About this book

For learners who can read a page alone and use the four operations. In many schools this fits children of about 11 to 13, and older learners and adults can use it too. The book names every part of the body by its correct name. It explains puberty, periods, sex, pregnancy and birth in plain, calm words, as a school science book does, and it says how to stay safe and who to tell. An adult can read it with a learner, and each chapter has questions to talk about. Activities need only paper, a pencil and a door frame, and none asks a learner to show their body to anyone. A learner can also work alone: every exercise has its answer and the reason for it.

Written and drawn by attnom. Edition 1.0, 2026-11-12.

This book is free. You may read it, print it, copy it and share it with anyone.

The newest copy is at https://attnom.com/academy/growing-up-puberty-and-reproduction.