

Procedure for teaching

Y5 Science Unit

The Human Body

1. The letter informing parents **must** be sent home **at least** one week before teaching the unit.
2. Lessons in the unit **must not** be altered or adapted without first consulting with SLT.
3. The 2nd lesson, Adolescence, **must not** be altered or adapted without a consultation with parents, which will be organised by SLT.
4. The 2nd lesson, Adolescence, **must** be taught in single-gender classes.

Date

L.O: What are the stages of human growth?

<u>L.O. Identify the stages of the human lifecycle</u>	<u>7.6.24</u>
Success Criteria	P
Lifecycle: _____	
Order the stages of the human lifecycle	
Identify the approximate age at which each stage begins	



We're going to look at how our bodies grow and change over the course of our life time.

Vocab

Growth
Stage



Gestation
Period



Uterus



Embryo



Foetus



Vocab

Adolescence



Puberty



Old age



Hormone



The gestation period



Gerbils



Cats



Lions



Humans



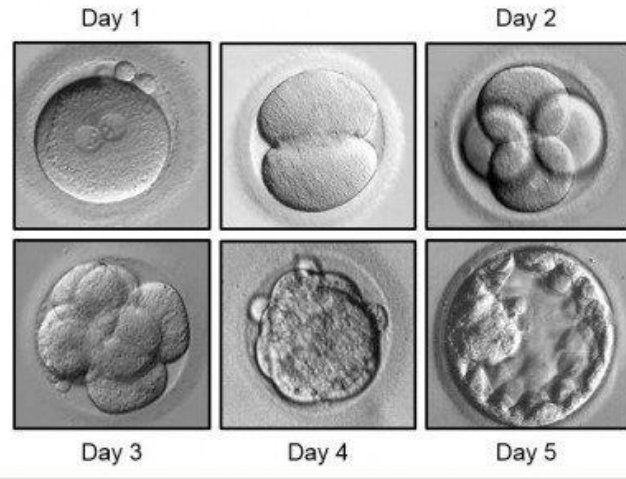
Whale



Elephant



The gestation period



A normal human pregnancy lasts for about 9 months.

We all start life as one tiny cell – so small you need a microscope to see it! This is called an embryo.



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From about 8 weeks, the embryo turns in to a foetus, usually around the same time when it develops a heartbeat for the first time. It will then continue to grow until month 9.

The lifecycle



Talk time: What are the stages of the human lifecycle from when we are born? What age do you think each stage is above?

Life cycle: a series of changes that happen throughout life

Key words: Teenager, baby, adult, toddler, middle aged, old age, young adult

Old age	Embryo	Adolescent	Adult
Child	Baby	Toddler	Foetus



Extension – How do we grow?

Write a couple of sentences about each part of the life cycle and what happens at each stage. For example:



The embryo is the start of the human life cycle. We start from just one cell.



The next stage is called the foetus. It develops a heartbeat for the first time and grows for a total of 9 months

This lesson must be delivered to single-gender classes.

Changes that occur during adolescence

During adolescence, your body changes from being
a child to a young adult.

What causes these changes?

Physical changes happen because the body starts to produce chemicals called hormones; oestrogen, progesterone and testosterone.

This happens anywhere between 8 and 18 years of age.

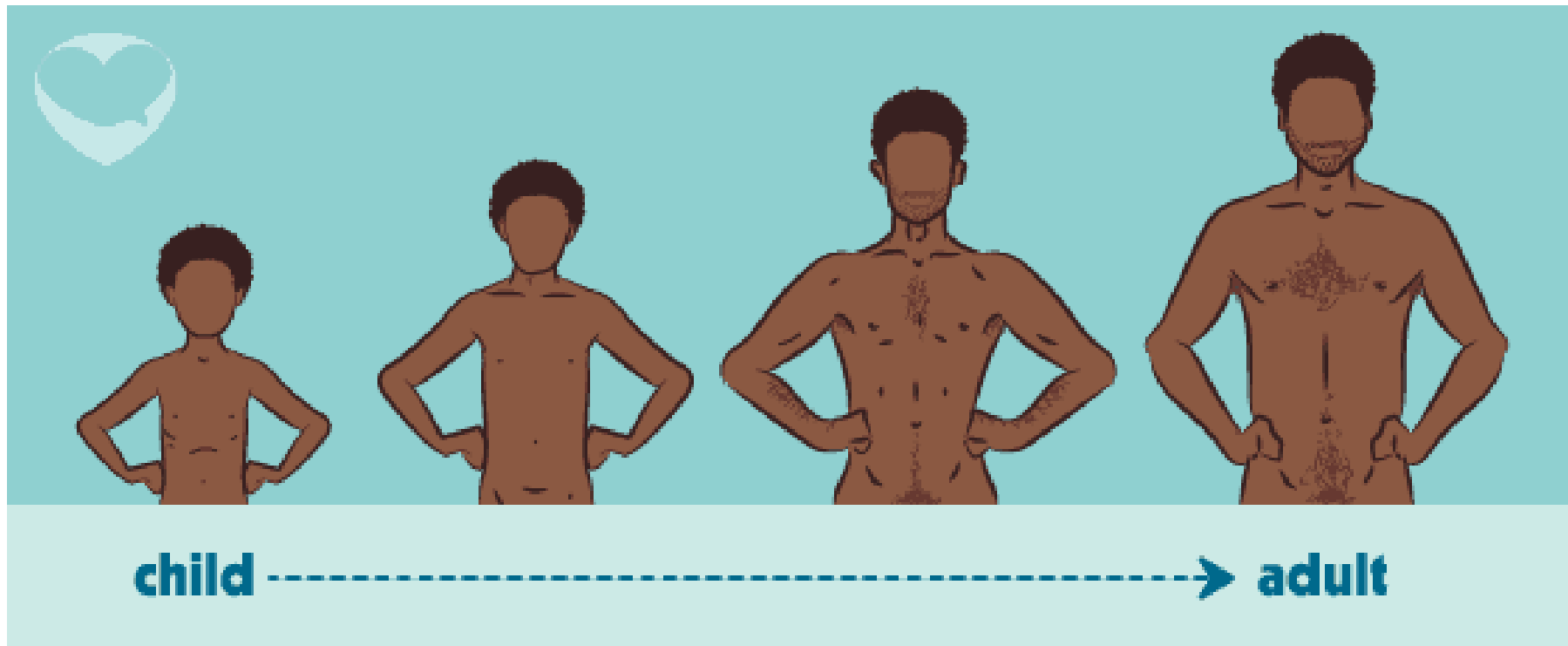
What changes happen to boys?

The male body mainly produces testosterone which starts the changes.

Usually starts between 10-15 years.

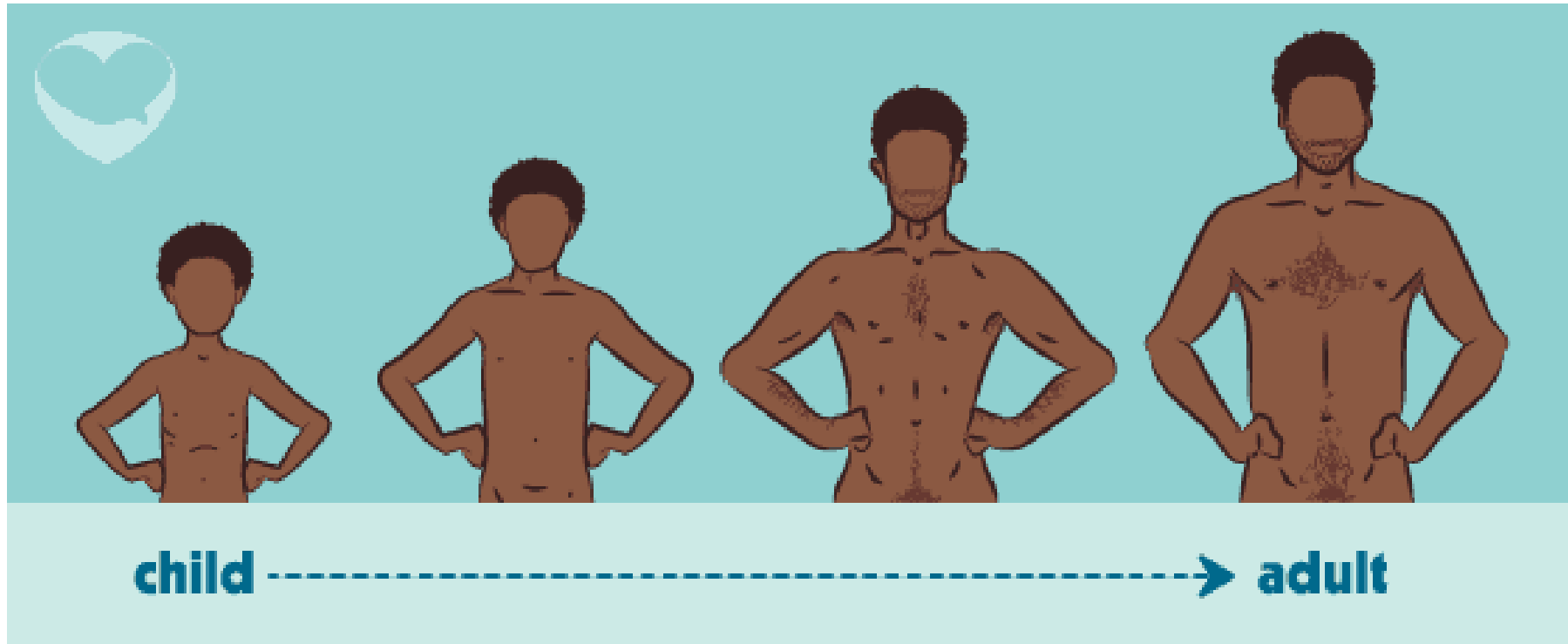
What changes happen to boys?

Grow taller and heavier
Bones grow bigger and heavier



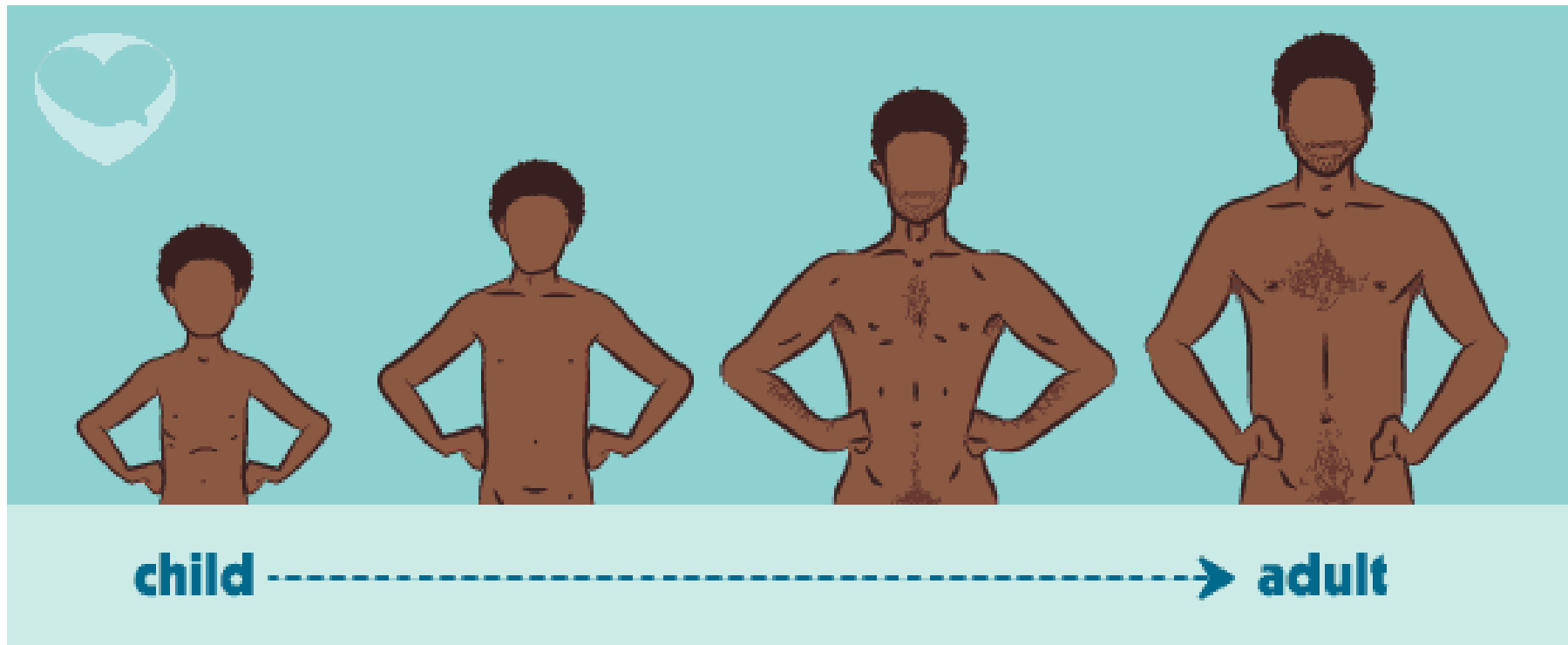
What changes happen to boys?

Muscles develop (chest gets broader)



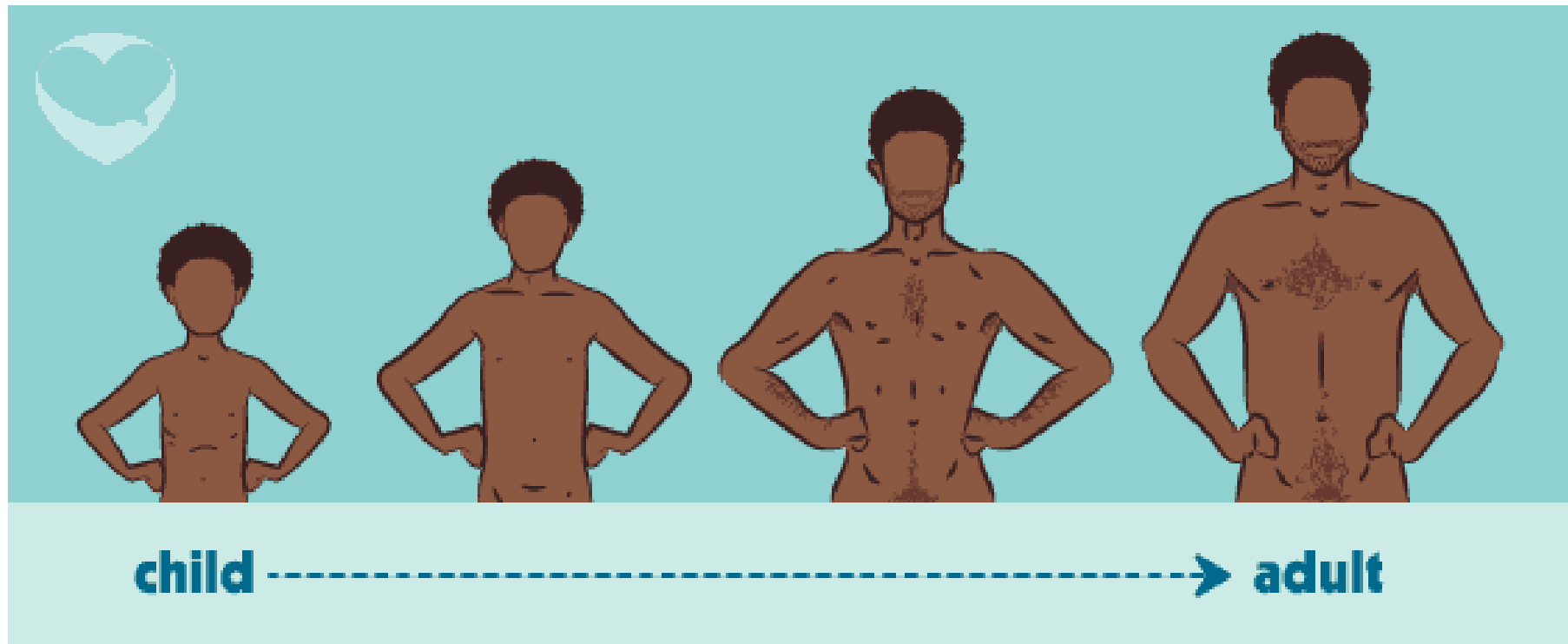
What changes happen to boys?

Hair grows on the face, under the armpits, around the genitals (pubic hair).



What changes happen to boys?

May get more hair on arms, legs and chest.



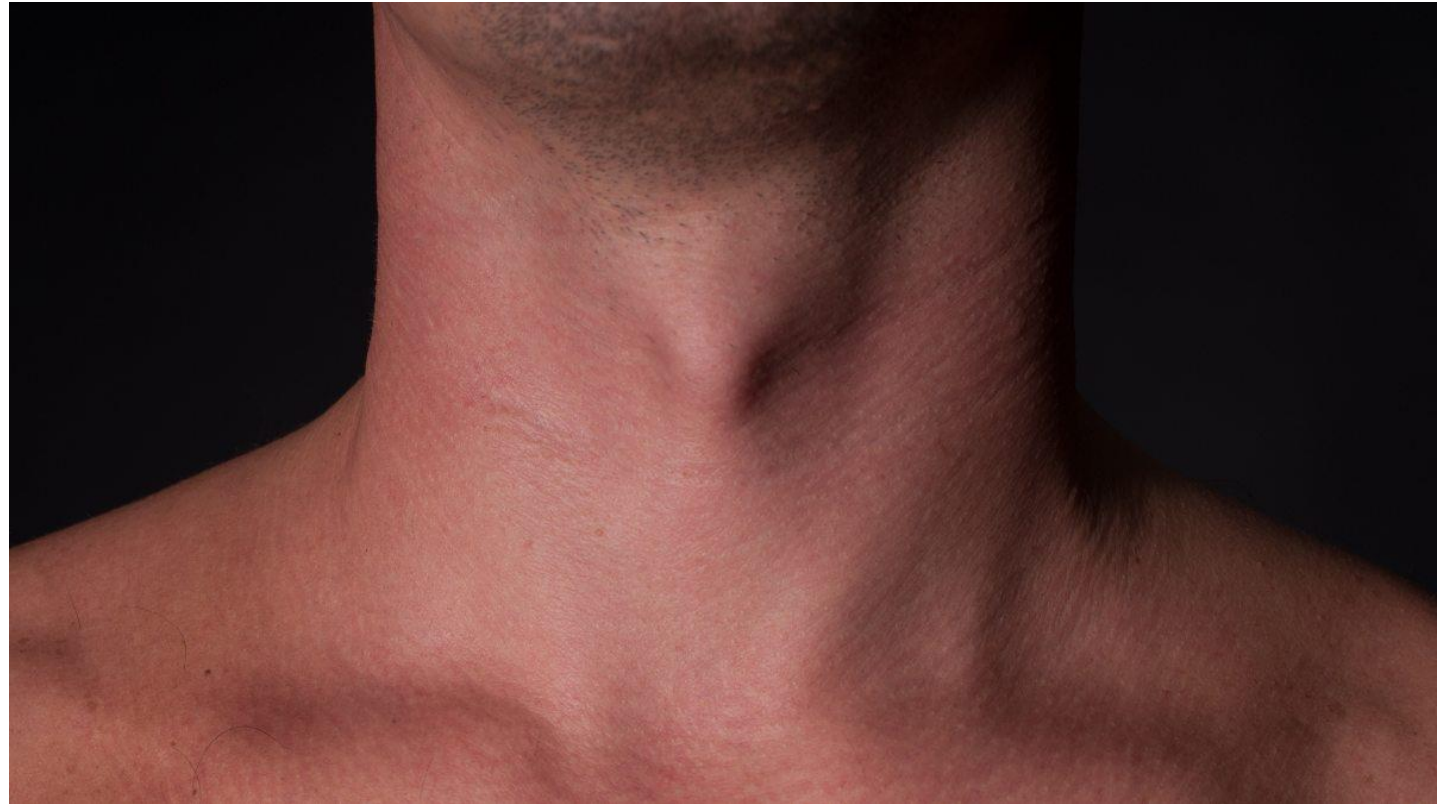
What changes happen to boys?



Face changes shape (nose and jaw get bigger, face gets longer)

What changes happen to boys?

The voice
deepens as the
larynx grows
(Adam's Apple)



What changes happen to boys?

Skin becomes oilier, which can cause spots (acne)



What changes happen to boys?



Body sweats
more, especially,
but not only,
during exercise

What changes happen to **boys**?

The genitals develop.

Penis and testicles change.

What changes happen to **girls**?

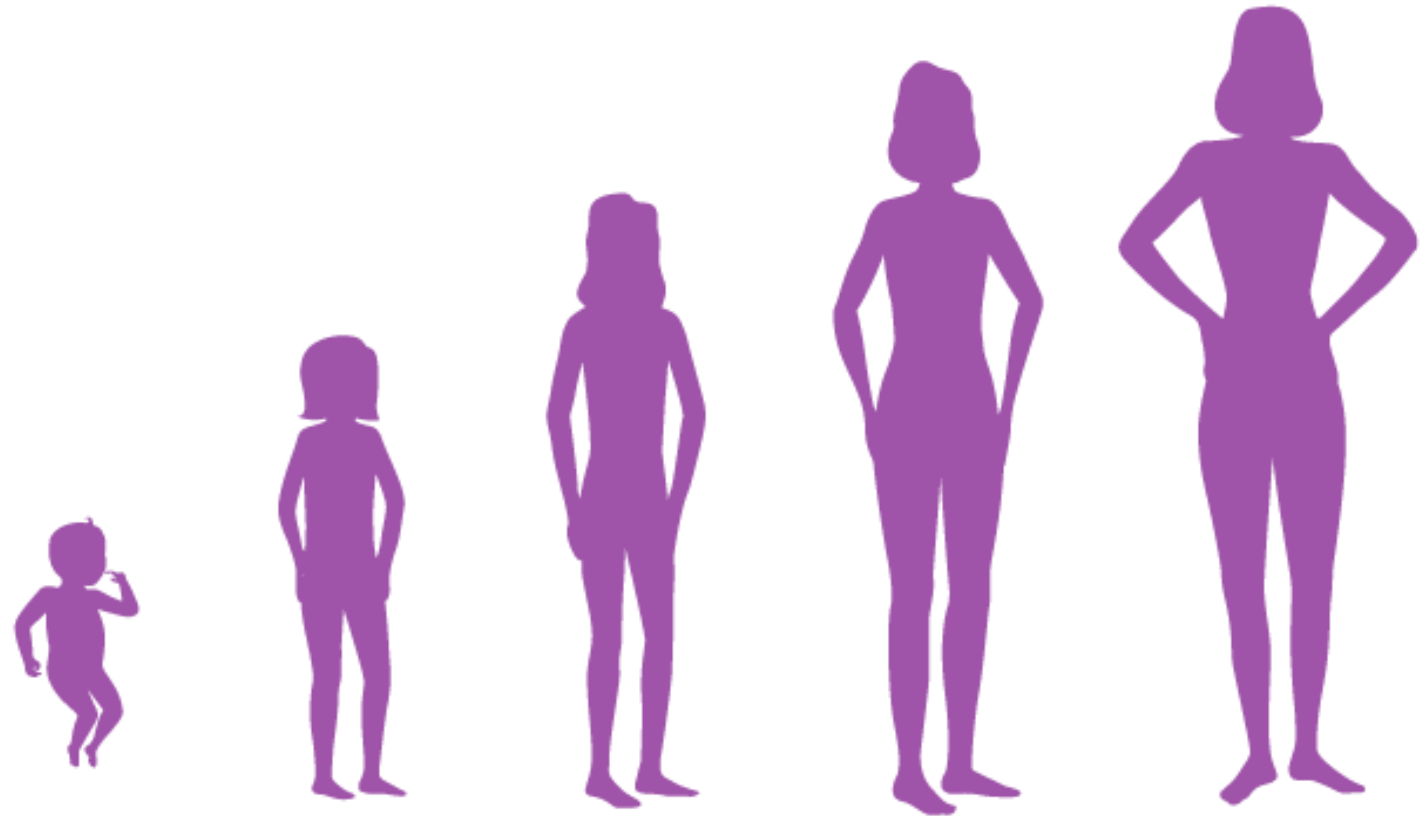
The female body mainly produces progesterone and oestrogen which start the changes.

Usually starts between 8-13 years.

What changes happen to girls?

Get taller and heavier

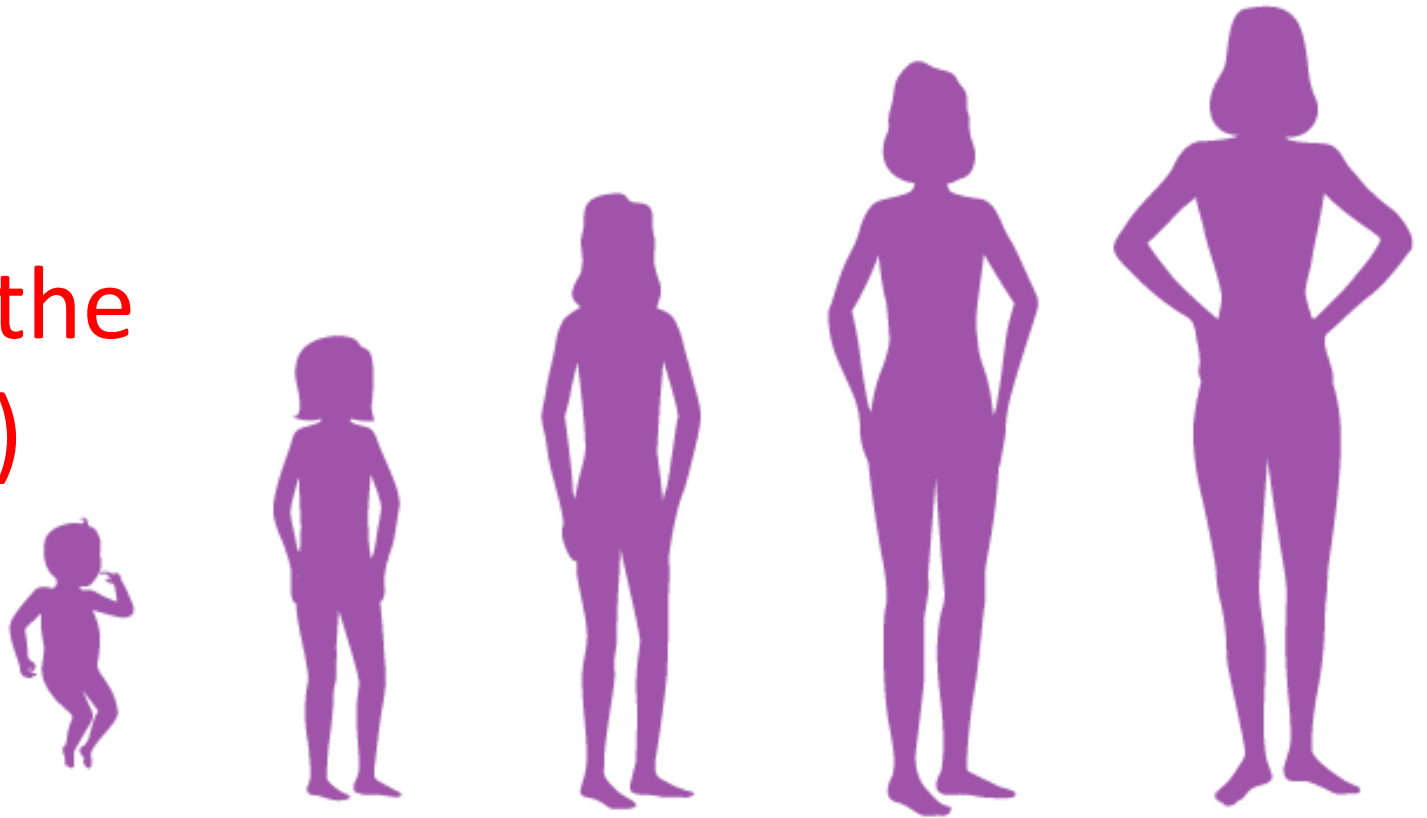
Bones grow bigger and heavier



What changes happen to girls?

Hips get wider and more
“curvy”

Hair grows around the
genitals (pubic hair)



What changes happen to girls?



Face changes
shape



Voice becomes
deeper

What changes happen to girls?



Hair grows under the armpits

Hair on arms and legs grows darker

What changes happen to girls?

Body sweats more,
especially, but not
only, during exercise



What changes happen to girls?

Skin becomes oilier, which can cause spots (acne)



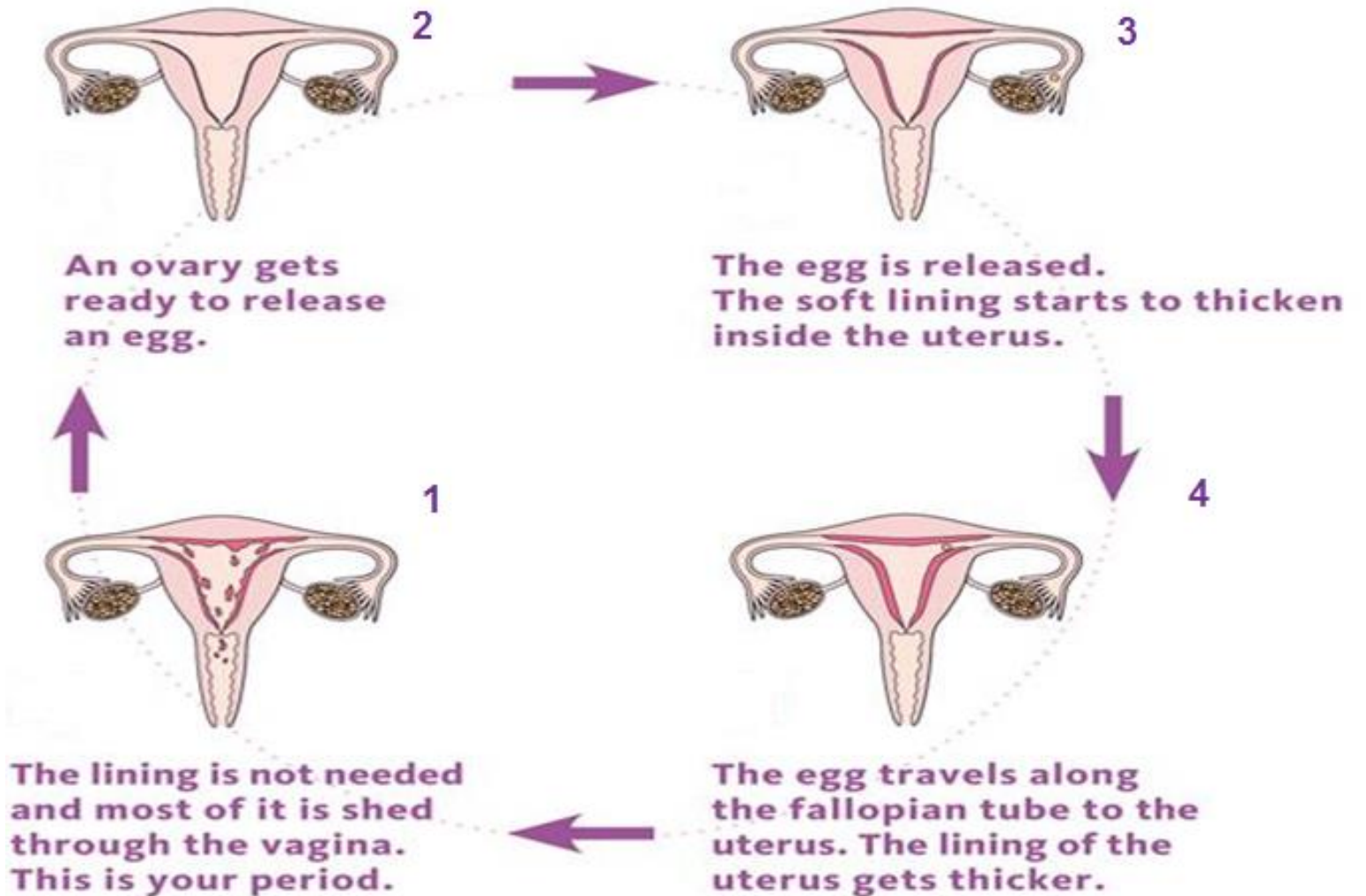
What changes happen to girls?

Breasts change

Genes determine the changes

What are periods?

Periods (menstruation) happen due to the hormones changing in a girl's body.



What are periods?

Bleeding can last between 3 and 8 days.

Blood flow may be heavier in the first few days.

The average blood loss is only a small amount (roughly 3 tablespoons).

Periods happen once a month but the body takes time to get into a routine so for the first year or so the time between each period may vary.

When do periods start?

Usually between 10-16 years old

REMEMBER – every girl is different!



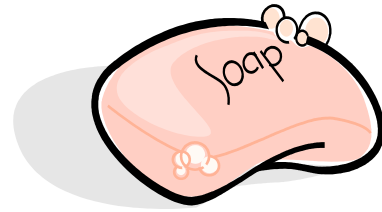
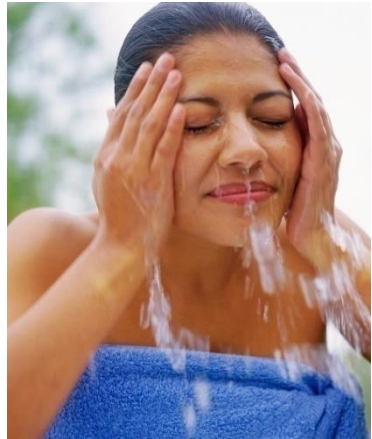
Sweat



Sweat is your body's natural way of helping you to cool down.

Sweat can also some times become smelly when the chemicals it contains mixes with bacteria that live naturally on your skin.

Personal Hygiene What do we do?



Date

L.O: What happens as we move from adulthood to old age?

What happens to our bodies as we get older?	P	T			
State what happens to 6 parts of our bodies					
Discuss how we can slow down the effects of aging					
Explain what can influence how we age throughout our lives.					
CIP	Group Work	Sentence Starters	Supported		

Previous learning

What are the stages of human development?

What stages of human development happen inside the uterus?

What can happen to our bodies during puberty??

At what age do we typically stop growing?

This is Mary Walker. She is currently the oldest person in the United Kingdom.

She is 112 years old and was born in 1910!

Who is the oldest person you know?



Kane Tanaka of Japan is currently the oldest person in the world at 118 years old. She lives in Japan! Jeanne Calment of France holds the record at being 122. He passed away in the 1997s.

Vocab

Ageing

The process of getting older

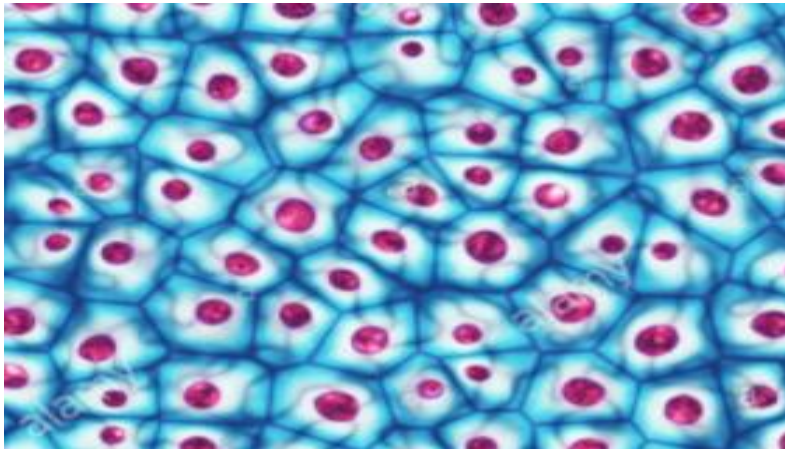
Life span

How long we live for

Metabolism

How quickly we convert food in to energy

Cells



What we are made of! We are made of billions of them! Cells have different roles in the body as well.

Cell damage

Cells that get affected by the environment we live in.

When is the peak of human performance?



37



28



40

Sports champions often hit their peak between 25 and 40. This is when the human body is at its peak physical condition.

When is the peak of human performance?



37



28



40

The human body stops growing and developing at the age of 21. At age 40, the body's metabolism starts to slow down. In the UK, the average lifespan is 80 years (women tend to live slightly longer than men).

How do we age and what effects it?



<https://youtu.be/BkcXbx5rSzw>

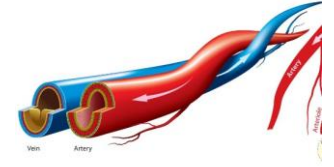
What happens to our bodies as we age?

These get weaker and break easier

Bones



Veins



This starts to lose focus and things become blurry

This gets thinner and wrinkles

Skin



You may start to become forgetful

Hair

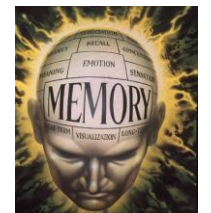


These become harder and transporting blood around the body becomes more challenging.

Eyes



Memory



This starts to thin out and lose its colour

What happens to our bodies as we age?

These get weaker and break easier

Bones



This starts to lose focus and things become blurry

Eyes



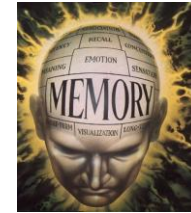
This gets thinner and wrinkles

Skin



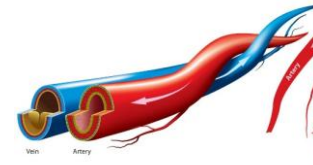
You may start to become forgetful

Memory



These become harder and transporting blood around the body becomes more challenging.

Veins



This starts to thin out and lose its colour

Hair



What happens to our bodies as we age?



1975



1988

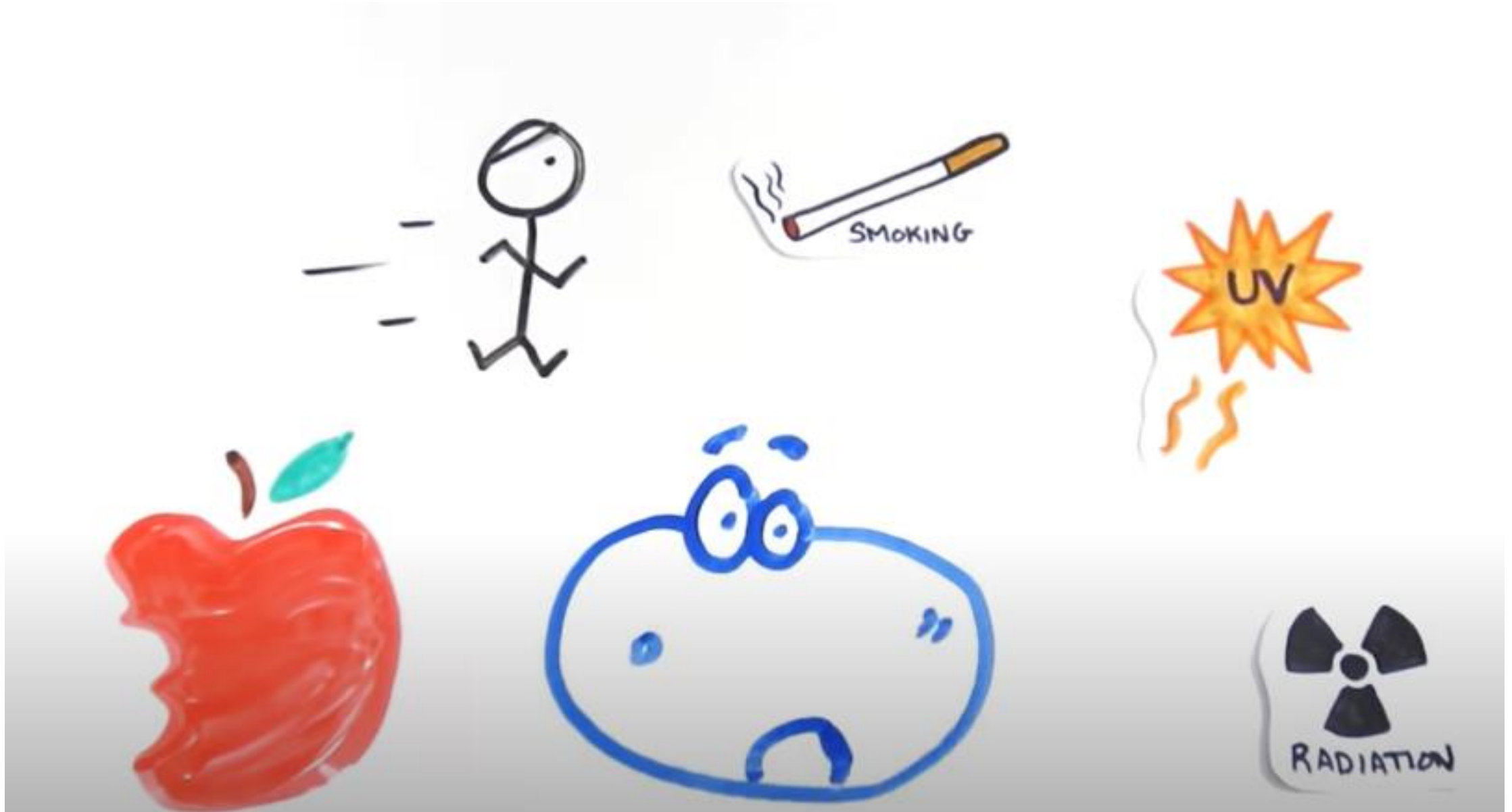


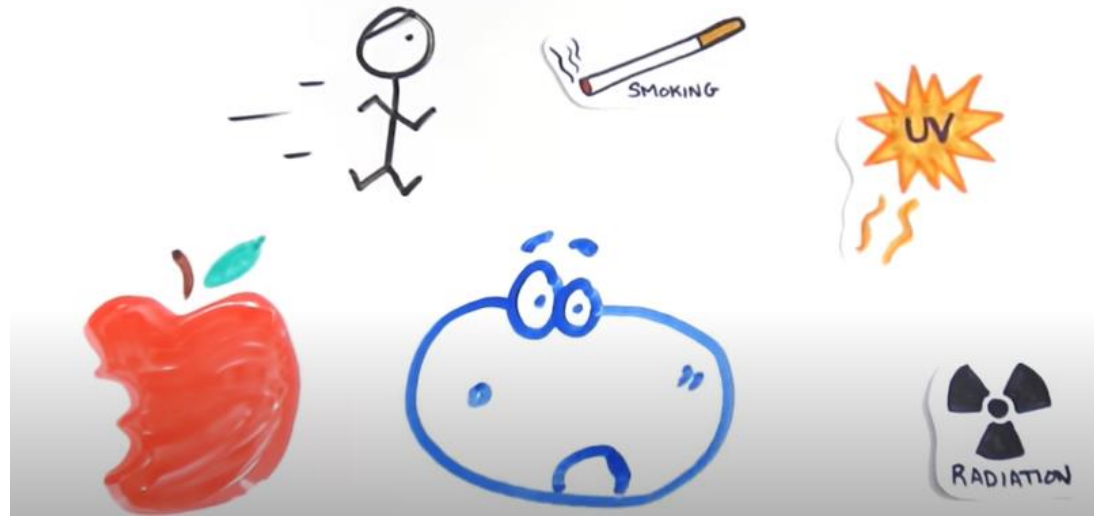
1999



2014

What can make aging faster?





How can diet, exercise, smoking, sunlight and pollution affect the aging process? How can it speed it up and slow it down? Write a short paragraph to explain this.

When we are eating, we need...

Exercise is....

Smoking can have a serious effect..

Sunlight can damage...

Pollution...

Vocab

Ageing The process of getting older

Life span How long we live for

Metabolism How quickly we convert food in to energy

Cells What we are made of! We are made of billions of them! Cells have different roles in the body as well!

Cell damage Cells that get affected by the environment we live in.