

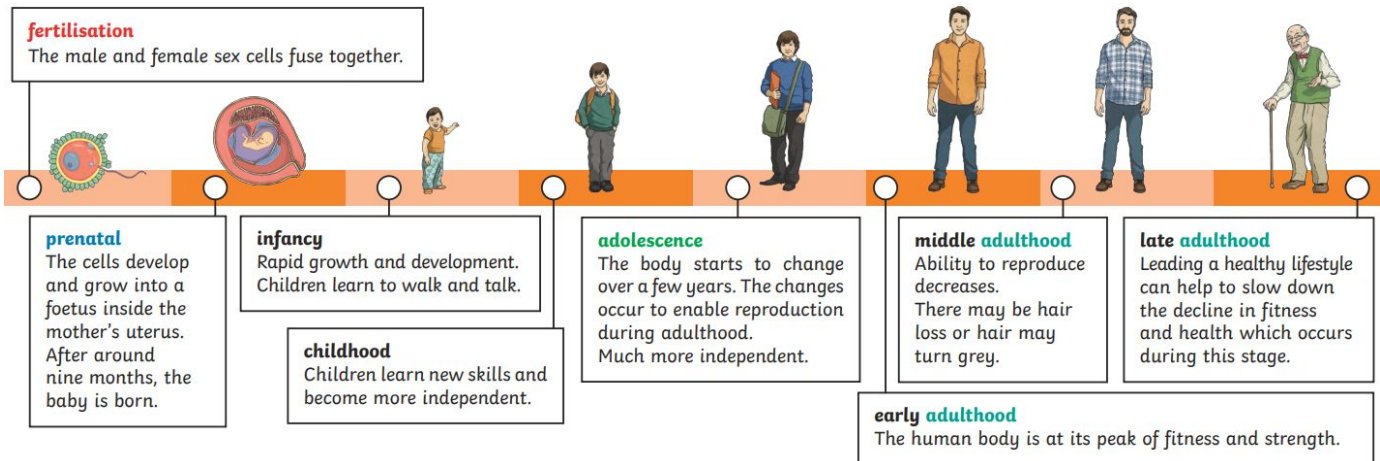
# Science Knowledge Organiser

## Year 5 Spring (i)

### What are the stages of growth in human beings?

#### Substantive Knowledge – What will we learn?

#### To know the changes as humans develop into old age.



#### To know the changes experienced in puberty.

### FEMALE PUBERTY

Puberty is a time of change and development — you are growing up! Puberty begins around 9–14 years of age. Changes happen in the body caused by chemicals called hormones. It's important to remember everyone is different and not to compare your journey to adulthood with others. However, there are common changes that happen during puberty.

**BODY SIZE**  
Arms, legs, feet, and hands grow at a faster rate than other body parts.

**EMOTIONS**  
Fear, frustration, anger, sadness, mood swings and so much more are all feelings you may encounter during puberty. It is a great change physically and emotionally.

**BREASTS**  
Breasts grow larger and develop. Sometimes one is larger than the other - that's natural and will balance out. They develop and a bra may be needed for support.

**SWEATING**  
Body odour can develop, so regular hygiene practices are needed.

**BODY SHAPE**  
Breasts will continue to grow, hips will widen and the waists get smaller.

**SKIN**  
Skin sometimes becomes oily and spots and/or acne may appear.

**HAIR**  
Hair will start to grow on the pubic regions, underarms and legs.

**MENSTRUATION**  
Menstruations usually starts between the ages of 9–14. A layer of blood and tissue builds up in the uterus and is discharged monthly. The flow varies from person to person.

### MALE PUBERTY

The changes that happen in the body are caused by chemicals called hormones. Puberty for boys usually starts between ages 10–16. It is a time of great change and can be a confusing and emotional time. Puberty is the beginning of your journey from a boy into a man. While it can be challenging, it is also one of the most natural things in the world. It is important to keep talking about how you feel to a trusted adult, like a parent, guardian or another person.

**BODY SIZE**  
Arms, legs, feet, and hands grow at a faster rate than other body parts.

**EMOTIONS**  
Puberty will affect your mental health. Feelings of fear, anger, excitement and embarrassment become more common.

**BODY SHAPE**  
Arms, legs and feet will grow faster than the rest of your body. Your shoulders broaden and muscles and weight are gained.

**HAIR**  
Hair begins to grow on your underarms, above the penis, arms, face and sometimes the chest.

**GROWTH SPURT**  
You will experience a growth spurt in puberty, which typically ends around the age of 16.

**ERECTIONS**  
Erections are completely normal and happen due to increased hormones.

**VOICE**  
Your voice will change and become deeper. This usually occurs just after a big growth spurt.

**PENIS**  
Your penis will grow longer and thicker and the testicles will grow larger too.

**SKIN**  
Your skin may become oily, and you will sweat more, meaning a development of acne or spots on your back and/or face.

**SPERM**  
Sperm begin to be produced by your body. During an erection, you may experience ejaculation which is natural and normal.

#### Disciplinary Knowledge – How will we learn?

- Describe and compare
- Identify structure and function
- Identify similarities and differences
- Observe changes over time

#### Core Vocabulary

**gestation-** the process or period of developing inside the womb between conception and birth.

**puberty-** the period during which adolescents reach sexual maturity and become capable of reproduction

**adolescence-** the period following the onset of puberty during which a young person develops from a child into an adult