

Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: Science - Unit 1/5 Humans and Evolution	Year A phase 3
NC/PoS:	
Describe the changes as humans develop to old age.	
Prior Learning (what pupils already know and can do) Can name and label the parts of the human body including the digestion system, skeleton and muscles Notice that animals, including humans have offspring which grow into adults. Know the basic needs of animals, including humans for survival is a balanced diet, water, air and shelter. Know humans need the right amounts of nutrition from the food groups. Know the life cycle of a human is birth, growth, reproduction and death.	
End Goals (what pupils MUST know and remember) Know prenatal development has a germinal phase, an embryonic phase and a foetal phase Know animals, have different gestation periods Know the stages in a human's life, include infancy, childhood, adolescent, adulthood and old age Know that the hearing of animals deteriorates as they age Know cell decline is part of becoming old Know animals have different lifespans Know the changes that take place in boys and girls during puberty Know in the girls, hormonal changes cause the ovaries to release eggs, and the monthly menstrual cycle is triggered Know the boy's muscles become more developed and facial and body hair begins to grow	
Key Vocabulary: gestation, umbilical cord, sperm, egg, cell, germinal phase, embryonic phase, foetal phase, infancy, childhood, adolescence, adulthood, dependent, puberty, hormones, hormonal, ovaries, testes, breast, pubic hair, menstrual cycle, period, cell decline, lifespan	
Curriculum Connections <ul style="list-style-type: none">• Biology: Understanding human development, from prenatal stages to old age.• Mathematics: Plotting and analysing gestation periods and lifespan data for humans and animals.• PSHE: Addressing the physical and emotional changes during puberty and aging, promoting empathy and awareness.• History: Learning about ancient understanding of aging, such as Egyptian hieroglyphs representing old age.	
Career Opportunities <ul style="list-style-type: none">• Paediatrician: Specialises in the medical care of infants, children, and adolescents.• Geriatrician: Focuses on healthcare for the elderly, addressing aging-related conditions.• Endocrinologist: Studies and treats hormone-related conditions, including puberty and aging.• Biostatistician: Analyses data related to lifespan and development trends.• Geneticist: Investigates hereditary factors influencing growth and aging.	
Session 1: Recap: what is the digestion system – name the parts and their function. What are the basic needs of all animals? Introduce careers: geriatric medicine https://www.youtube.com/watch?v=584Eh0cXa1Y paediatrician https://www.youtube.com/watch?v=ZKKNQ_I A1HQ	

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Vocabulary: oesophagus, stomach, small intestine, large intestine, rectum, anus,
<p>Session 2:</p> <p>Recap: Name 4 muscles and how they help the body to move</p> <p>LO: to research prenatal development in a human's life</p> <p>Watch https://www.youtube.com/watch?v=XEfng4Q4bfk</p> <ul style="list-style-type: none">• Before birth, a human must develop from a series of cells to a baby inside its mother.• Germinal Phase – where cells develop and divide.• Embryonic Phase – major organs and structure to the organism develops.• Foetal Phase – when it takes on a recognisable human form and grows until it is ready to be born. This is called a foetus. <p>Vocabulary: gestation, umbilical cord, sperm, egg, cell, germinal phase, embryonic phase, foetal phase</p>
<p>Session 3:</p> <p>Recap: name the seven nutrition groups and foods within them</p> <p>LO: to research and compare the gestation periods of animals</p> <p>https://www.youtube.com/watch?v=GFmgTfgf-P0 animals with longer gestations</p> <p>Children research gestation period of other animals. Plot results and evaluate what the graph shows. Are there any relationships between size and period of gestation?</p> <p>Vocabulary: gestation</p>
<p>Session 4:</p> <p>Recap: what is the purpose of the skeleton?</p> <p>LO: to research the development in the stages in a human's life</p> <p>https://www.youtube.com/watch?v=3RFir6WwLe0 how does the human body grow</p> <p>https://www.youtube.com/watch?v=9d4ODP5n8Ps stages in growth and development</p> <ul style="list-style-type: none">• Baby or infancy– they drink milk after they are born. They usually start eating solids when their teeth start to appear at about 6 months. Many can crawl by 9 months and begin to walk after they are 1.• Child - running, talking and learning to read, write and count are all developing in a child. They are developing skills as well as developing socially, emotionally, physically and psychologically• Adolescent - during the ages of 9-19, humans become more independent, begin puberty ready for reproduction and become ready for adulthood• Adulthood - the human body is at its physical peak of fitness and strength and are able to be completely independent. This is when most humans reproduce.• Late adulthood/ old age - body declines in fitness and health from 60 years onwards and there is an increased dependence on others to look after them as time goes on. The life cycle ends when a human dies. <p>Vocabulary: infancy, childhood, adolescence, adulthood, old age, dependent, independent</p>
<p>Session 5:</p> <p>Recap: what must an animal do to keep its body healthy? (exercise, drink water, eat balanced diet and sleep)</p> <p>Lo: to identify how a human's body changes during puberty</p> <p>Watch https://www.youtube.com/watch?v=Z7zw3tLA3xU What Happens During Puberty??? @Operation Ouch FULL EPISODE – 30 minutes</p> <p>Puberty is the process of physical changes through which a child's body matures into an adult body capable of reproduction. It is initiated by hormonal signals from the brain to the ovaries in a girl and the testes in a boy</p> <p>Changes for girls:</p>

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- The first physical changes during puberty are breast development and body growth.
- Growth of underarm and pubic hair.
- Increase in weight.
- Hormonal changes cause the ovaries to start releasing the eggs.
- trigger the monthly menstrual cycle

Changes for boys:

- Body growth and growth in the size of their sex organs.
- Their muscles become more developed.
- Acne and facial and body hair starts to grow

Vocabulary: puberty, hormones, hormonal, ovaries, testes, breast, pubic hair, menstrual cycle, period

Session 6:

Recap: changes in boys and girls during puberty

Children learn Know that the hearing of animals deteriorates as they age

Children learn that cell decline is part of becoming old

LO: to identify why the body changes in old age

<https://www.youtube.com/watch?v=vckbQvaZOkU> why do we get old? Up to 3.53

<https://www.youtube.com/watch?v=mIFUJ-0Rb8Y> how your body ages (knowledge for teachers) up to 2.33 for hearing loss

Age-related hearing loss is a common condition where hearing gradually deteriorates over time. It's often caused by changes in the inner ear, specifically the tiny hair cells that transmit sound signals. While it's often gradual and affects both ears, it's more noticeable around the age of 60, but can start earlier.

As people age, the inner ear structures can become damaged or worn out.

Chronic exposure to loud noises can accelerate hearing loss.

Vocabulary: cell decline, lifespan, hearing loss