

Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: Science Year: Y5 (animals including humans) NC/PoS: Describe the changes as humans develop to old age.
Prior Learning (what pupils already know and can do) Name and label the parts of the human body including the digestion system, skeleton and muscles. Know that animals, including humans, have offspring which grow into adults. The basic needs of animals, including humans, for survival is a balanced diet, water, air and shelter. Humans need the right amounts of nutrition from the food groups. The life cycle of a human is birth, growth, reproduction and death.
End Goals (what pupils MUST know and remember) <ul style="list-style-type: none">• 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 cell decline is part of becoming old• Know vision and hearing decline as animals get older• Know animals have different lifespans• know the changes that take place in children during puberty• Know a girl's hormonal changes cause the ovaries to release eggs and the monthly menstrual cycle is triggered• Know a boy's muscles become more developed and facial and body hair begins to grow during puberty
Key Vocabulary: gestation, umbilical cord, sperm, egg, cell, germinal phase, embryonic phase, foetal phase, infancy, childhood, adolescence, adulthood, old age, dependent, independent, puberty, hormones, hormonal, ovaries, testes, breast, pubic hair, menstrual cycle, period, cell decline, lifespan
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
Vocabulary: mouth, tongue, oesophagus, stomach, small intestine, large intestine, rectum, anus, water, air, food, shelter
Session 2: Recap: Name 4 muscles and how they help the body to move Children learn prenatal development has a germinal phase, an embryonic phase, and a foetal phase FOCUS: to research prenatal development in a human's life Watch https://www.youtube.com/watch?v=XEfnq4Q4bfk <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.
Vocabulary: umbilical cord, sperm, egg, cell, germinal phase, embryonic phase, foetal phase

Session 3: Name the phases of prenatal development and name the seven nutrition groups and foods within them

Children learn animals have different gestation periods

FOCUS: to research and compare the gestation periods of animals

<https://www.youtube.com/watch?v=GFmgTfgf-P0> animals with longer gestations

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?

Vocabulary: **gestation**

Session 4: Recap: what is the purpose of the skeleton?

- Children learn the stages in a human's life, include infancy, childhood, adolescent, adulthood, and old age.

FOCUS: to research the development in the stages in a human's life

<https://www.youtube.com/watch?v=3RFir6WsLe0> how does the human body grow

<https://www.youtube.com/watch?v=9d4ODP5n8Ps> stages in growth and development

- 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.

Vocabulary: **infancy, childhood, adolescence, adulthood, old age, dependent, independent**

Session 5: Recap: what must an animal do to keep its body healthy? (exercise, drink water, eat balanced diet and sleep)

- Children learn the changes that take place in children during puberty: a girl's hormonal changes cause the ovaries to release eggs and the monthly menstrual cycle is triggered and a boy's muscles become more developed and facial and body hair begins to grow during puberty

FOCUS: to identify how a human's body changes during puberty

Watch <https://www.youtube.com/watch?v=Z7zw3tLA3xU> what Happens during Puberty??? | [@Operation Ouch](#) | FULL EPISODE – 30 minutes

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

Changes for girls:

- 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.

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<ul style="list-style-type: none">• trigger the monthly menstrual cycle Changes for boys: <ul style="list-style-type: none">• 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 <p>Children learn that cell decline is part of becoming old. Vision and hearing decline as animals get older.</p> <p>FOCUS: to identify why the body changes in old age</p> <p>https://www.youtube.com/watch?v=vckbQvaZQkU why do we get old? Up to 3.53</p> <p>Compare lifespans of other animals: research, collect data and present results</p> <p>https://www.youtube.com/watch?v=LW5ERd8GUQk lifespan comparison – shows a variety of animals to collect data from</p> Vocabulary: cell decline, lifespan
Link to career: geriatric medicine https://www.youtube.com/watch?v=584Eh0cXa1Y paediatrician https://www.youtube.com/watch?v=ZKKNQ_IA1HQ
Scientists who have helped develop understanding in this field: In Egyptian hieroglyphs, images for old age are associated with the outward curvature of the spine through osteoporosis