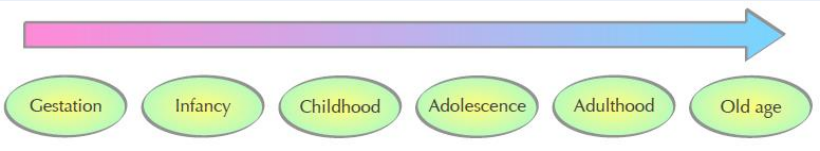
Animals including Humans | Science | Years 5 & 6 | Summer Term 2024-25

National Curriculum Science - Knowledge	Key Learning	Vocabulary
• Describe the changes as humans develop to old age.	As we get older and transition through the different stages of the human life cycle, our bodies undergo various changes. There are many factors that affect the rate at which our bodies grow.	**Adolescence**: the period following the onset of puberty during which a young person develops from a child into an adult. **Adulthood**: the state or condition of being fully grown or mature. **Childhood**: the state or period of being a child. **Development**: to grow and change to become more mature and/or advanced. **Elderly**: a person aged 65 years or more. **Embryo**: an unborn or unhatched offspring in the process of development, in particular a human offspring during the period from approximately the second to the eighth week after fertilisation (after which it is usually termed a foetus) **Foetus**: an unborn or unhatched offspring of a mammal, in particular an unborn human more than eight weeks after fertilisation. **Fertilisation**: the fusing of male and female gametes (sex cells) to create an offspring. **Gestation**: the period of developing inside the womb between conception and birth. **Infancy**: the state or period of babyhood or early childhood. **Old Age**: the period towards the end of the human life cycle. **Pregnancy**: the period in which a foetus develops inside a woman's womb or uterus. **Puberty**: the period during which adolescents reach sexual maturity and become capable of reproduction **Reproduction**: the production of offspring.
	There are six main stages in the human life cycle:  	
	Gestation – New life begins as a microscopic fertilised egg cell inside the mother's womb.	
	Infancy – Babies rely on their parents for everything at first. After a few months, they can move on their hands and knees. Infants grow very quickly at this stage.	
	Childhood – From around the ages of four to nine, growth slows down a bit Bones bones and muscles continue to strengthen and grow more slowly, and the brain grows and develops as you learn and play.	
	Adolescence – Puberty occurs at the start of this stage. This is where humans mature sexually.	
	Adulthood – By this stage, adults are fully grown. Their brains are fully developed and their bodies are ready to reproduce and have children. They are fitter and stronger than they have ever been.	
	Old Age – As humans get older, their bodies are not as good at renewing and repairing themselves. Muscles, bones and eyesight can gradually weaken, and our appearance changes.	

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National Curriculum Science – working scientifically

- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- Use test results to make predictions to set up further comparative and fair tests.
- Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
- Identify scientific evidence that has been used to support or refute ideas or arguments.

Key Learning continued…

The gestation period for humans is around 9 ½ months, or 40 weeks.

Our bodies know when and how to grow due to the release of chemicals called hormones.

The growth and development of children 0-11 years.

0	0-6 months	• Completely dependent on parents • Cannot walk, crawl or sit • Cannot feed themselves	• Need parents to clothe them
	6 months - 2 years	• Brain and body grow quickly • Grow teeth • Can grip and hold things	• Recognise parents • Start to crawl, then stand and walk • Smile and laugh
	2-4 years	• Teeth grow fully • Eat solid food • Curious - learning lots	• Walk and climb stairs • Learned to talk • More than tripled in weight
	4-6 years	• Growth slows down a little bit • Limbs longer and stronger • Learning to read and write	• More active; coordination, strength and stamina improving
11	6-11 years	• Grow taller and stronger • Brain develops to handle complex ideas and greater challenges	• Friends are very important • Can be a bit emotional • Better strength and stamina

Scientific investigations

This unit is likely to be taught through direct instruction due to its sensitive nature.

1) Conduct research to find out the gestation periods of other mammals. Compare these to the human gestation period by presenting findings in a graph and using this information to ask and answer scientific questions. Use correlations identified to make predictions about gestation periods of other mammals.

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Key Learning: To understand the changes between different stages of the human life cycle.	
1	**What are the stages of growth and development in humans?** Recognise the stages of growth and development in humans. Know the stages in the life cycle of humans as: gestation, infancy, childhood, adolescence, adulthood and old-age. Provide key facts about physical changes in each stage of development and explain factors affecting the growth rate of humans.
2	**How does the gestation period of humans compare to other mammals?** Know the stages in the gestation period of humans (including fertilisation, cell division and embryo) and work scientifically to compare them to other animals. Ask further scientific questions based on observations and comparisons made.
3	**How do our needs change during infancy and childhood?** Recognise the differing needs of humans during each stage of development and explain how / why these needs change over time as we grow through our life cycle.
School Nurse	School nurse and PSHRE enrichment day workshop visits to discuss changes during puberty (both inside and outside, and how changes differ for boys and girls) including personal health, hygiene and emotions.