

Key Ideas

After the pre-natal stage, there are six stages of human development: infancy, childhood, ,adolescence, early adulthood, middle adulthood and mature adulthood (old age).

In puberty, boys and girls bodies change as they physically prepare for sexual reproduction. Both change body shape, grow taller and develop body hair. In addition, boys voices change; and girls start periods and may become emotional.

As humans grow old their cells die and regenerate slowly. This causes: hearing to decrease; eyesight to deteriorate; thinner skin and wrinkles; not being able to absorb nutrients as well; and organs work less effectively.

Animals and humans have different gestation periods and life spans.

Key Questions

Can you list the six stages of human development?

Explain the difference between an embryo and a fetus.

What happens to humans when they go through puberty?

Do all mammals have the same gestation period?

Did you find a relationship between mammals gestation periods and the length of their lives?

How does a causal relationship differ from a correlation?

Key words

Explanation

Adolescence	The period of change from a child to an adult. It changes the body and how a young person relates to the world
Causal Relationship	One variable causes the other to change and this can be observed in all cases.
Correlation	There is a relationship between the two variables but one does not necessarily cause the other.
Embryo	The early stage of development when a tiny fertilized egg divides and develops to a point where it starts to resemble a newborn.
Fetus	The unborn offspring of an animal that develops from an embryo.
Genitals	The sexual or reproductive organs located on the outside of the body.
Gestation	The time between conception and birth when the baby grows and develops inside the mother's womb.
Menstruation	Sometimes called a 'period', is normal vaginal bleeding that occurs as part of a woman's monthly cycle if they are not pregnant.
Pre-natal	The development is that occurs prior to the birth of a child.
Puberty	The normal and healthy stage of life when a child's body changes into an adult body capable of sexual reproduction.
Variable	An element in a science enquiry which can change.

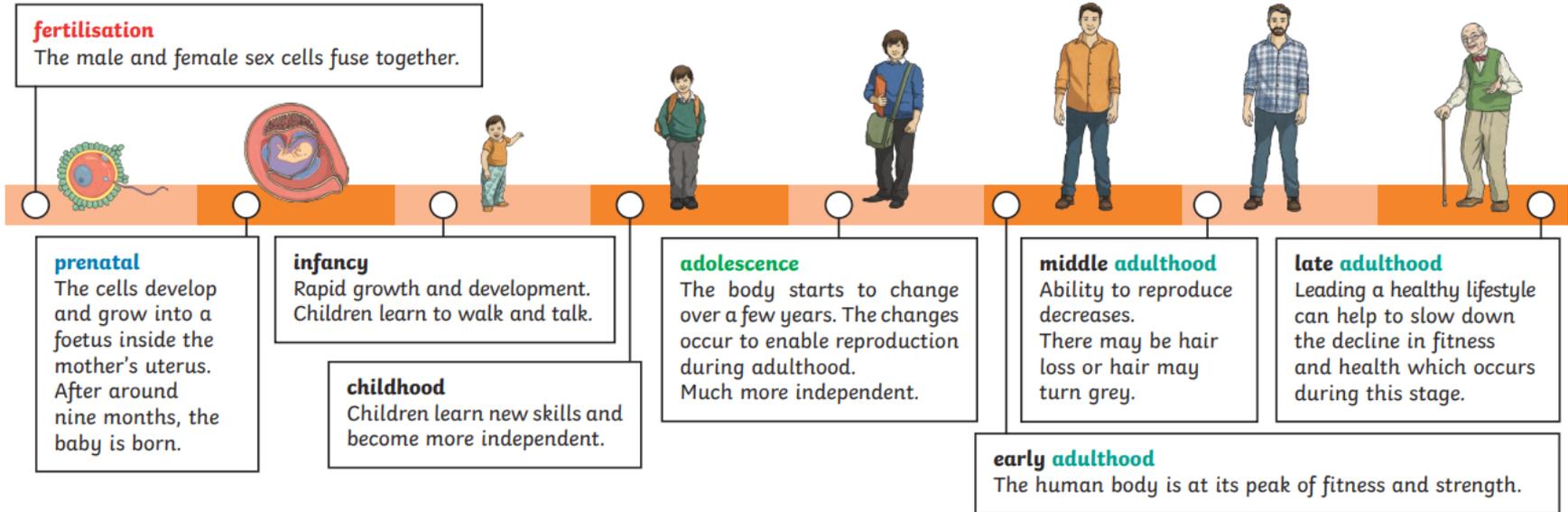


Key Figures:

Patrick Steptoe, Jean Purdy and Sir Robert Edwards successfully carried out a pioneering conception which resulted in the birth of the world's first baby to be conceived by IVF and born on 25 July 1978. In 2010, they were awarded the Nobel prize, by this time more than 4.5 million babies had been born.

Nobel Prize Winner, **Jennifer Doudna** helped develop the genetic-engineering method that could allow for "designer babies" and treatments which could eradicate or sickle cell anemia, cystic fibrosis, Huntington's disease, and HIV.

The stages of human development.

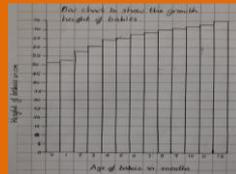


Linked skills:

Tables:

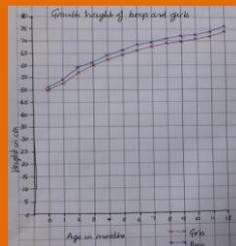
A table is a set of facts and figures arranged in columns and rows and. is a very useful way of organizing numerical information or data.

Bar chart



A bar chart (or graph) organises information into a graphic using bars of different lengths. The length of these bars is proportional to the size of the information they represent.

Line graph



A graph used to show changes over time, for example, changes in temperature through a day. It is created by plotting points and joining them with straight lines.

Line graphs are ideal for adding a visual representation to statistical data. They are brilliant for plotting data that could not be shown in any other chart, for example, 'How do babies heights change over time?' This question could not be well represented in a pie or bar chart as the scale is overtime.