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| Healthy Body, Healthy Minds Spring 2 – **UKS2**/LKS2/KS1 Science Year 5**Science: Humans developing to old age****What impact do diet, exercise, drugs and lifestyle have upon the way our bodies function?** |
| **Prior Knowledge/Skills** | **Future Learning** |
| • Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals, including humans) | Reproduction in humans (as an example of a mammal), including the structure and function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetus through the placenta. (KS3)• The consequences of imbalances in the diet, including obesity, starvation and deficiency diseases. (KS3) • The effects of recreational drugs (including substance misuse) on behaviour, health and life processes. (KS3) |
| **Planned outcome:**• Describe the changes as humans develop to old age. Recognise the impact of diet, exercise, drugs and lifestyle on the way that their bodies function**Misconceptions**• a baby grows in a mother’s tummy • a baby is “made”.we just eat food for energy • all fat is bad for you • all dairy is good for you • protein is good for you, so you can eat as much as you want • foods only contain fat if you can see it • all drugs are bad for you.**Key Learning to assess**When babies are young, they grow rapidly. They are very dependent on their parents. As they develop, they learn many skills. At puberty, a child’s body changes and develops primary and secondary sexual characteristics. This enables the adult to reproduce.Diet, exercise, drugs and lifestyle have an impact on the way our bodies function. They can affect how well out heart and lungs work, how likely we are to suffer from conditions such as diabetes, how clearly we think, and generally how fit and well we feel. Some conditions are caused by deficiencies in our diet e.g. lack of vitamins. **Possible Evidence**• Can explain the changes that takes place in boys and girls during puberty • Can explain how a baby changes physically as it grows, and also what it is able to do |
| Learning Journey – small steps in learning to meet the planned outcome **Step 1 Human life cycle**Describe the changes as humans develop to old age by drawing a timeline to indicate stages in the growth and development of humans.There are six stages in the human life cycle. Throughout the life cycle humans develop and grow physically and emotionally.   1. **Foetus** - At this time, a baby is growing inside its mother's womb. The foetus totally depends on its mother as it cannot breathe, drink or eat by itself.  2. **Baby** - A baby is born after spending nine months inside the womb. New born babies can breathe, suck, swallow and cry when they feel hungry, cold and hot temperatures or any uncomfortable situation. This is how they communicate as they still cannot talk. To begin with babies are only fed milk.  3. **Childhood** - The baby grows into a child. It slowly learns to crawl and then walk, talk, run, jump, eat by itself, identify things in its surroundings, communicate properly, read and write, make friends and do many more childhood activities.  4. **Adolescence** - Children grow into an adolescent through a period called puberty which usually continues through the teenage years. During puberty rapid growth and changes of the body take place. At this stage the behaviour patterns and attitudes of the teenagers will change as they are independent in doing their day-to-day activities. 5. **Adulthood** - Your body is fully developed.  Adults can reproduce, make their own families and so continue the life cycle.  6. **Old age** - The last stage in the life cycle of a human. The body ages and physical changes take place such as the skin becoming wrinkly and the body becoming more frail. Create a graphs and bar chart to show how babies change in height.**Step 2 Gestation Period**Report findings from enquiries-Compare gestation periods for different animals.**Step 3 Puberty**Describe and explain the main changes that occur during puberty.Compare the changes that take place to boys and girls during puberty. * **Changing size and shape**
* **Hair Growth**
* **Periods**
* **Acne**
* **Breaking Voice**
* **Body Odour/Perspiration**
* **Feelings**

**Step 4 Changes in Old Age**Describe the changes as humans develop to old age by understanding the changes that take place in old age. Distinguish between facts or myths**Step 5 Diet, exercise, drugs and lifestyle**The health of humans can be adversely affected by the following: * **Poor diet**
* **Exposure to disease-causing micro-organisms**
* **Exposure to harmful substances, drugs**
* **Lack of exercise, rest and sleep:**
* **Stress**
 | Tiered Vocabulary **Reproduction, Foetus, Adolescence** **3** **2** **1****Childhood. Adulthood, Gestation*** Old age, human, development, growth rate, decrease, changes, compare.

**Baby, Old age, pregnant****Reproduction -** The process by which a living organism creates a likeness of itself, in a human this is sexual requiring both a female and a male sex cell**Pregnant -** a female is carrying a developing unborn offspringor foetus**Gestation -** the period of time that a mammal carries her offspring inside her body before giving birth**Puberty -** the time when somebody’s body begins to develop and change from being a child into an adult**Genitals -** the sexual organs on the outside of the body**Pubic Hair -** hair that grows above the genitals around the pubic area of the body**Vagina -** the inside passage way to the cervix and uterus in a female body**Menstruation -** another word for ‘period’- the 2 to 7 days when a girl or woman has her menstrual flow, which is when blood and tissue leave her body through her vagina**Period -** the 2 to 7 days when a girl or woman has her menstrual flow, which is when blood and tissue leave her body through her vagina**Egg -** the female reproductive cell**Breasts -** the milk production (mammary) glands on the front of a woman’s chest**Penis -** The male external sex organ**Testes/Testicles -** The two oval shaped male reproductive glands that produce sperm and male hormones**Scrotum -** The bag of skin that holds and helps to protect a males testes/testicles**Sperm -** the male reproductive cell**Larynx -** another name for your voice box**Breaking voice -** Getting a deeper voice is one of the changes that boys go through as they grow into men**Perspiration -** the process of sweating**Medication -** a drug or other form of medication that is used to treat or prevent disease**Recreational drugs -** chemical substances taken for enjoyment, or leisure purposes, rather than for medical reasons   |
| Scaffolds | Oracy Activities |
|  This unit is likely to be taught through direct instruction due to its sensitive nature, although children can carry out a research enquiry by asking an expert e.g. school nurse to provide answers to questions that have been filtered by the teacher. | Can present information about the changes occurring during puberty as an information leaflet for other Y5 children or answers to ‘problem page questions’ |