

Subject: Science

Topic: Genes – Variation & Human Reproduction

Year Group: 7



Knowledge: Adaptations

- **Adaptations** are characteristics which organisms have developed to best survive in their surroundings Organisms with the best suited adaptations
- can breed and pass these on 3 Those who are not best adapted will die

out and not be able to pass on their genes

Knowledge: Inherited Variation

Anything that comes directly from your parents, anything that you inherit

Examples can include lobe less or lobed ear lobes and eye colour.

Knowledge: Environmental Variation

Any type of variation that is caused by your surroundings

Factors that can cause environmental variation include diet, education and lifestyle.

Environmental factors can also impact inherited factors, e.g. a poor diet can affect height or your exposure to the sun can affect skin tone

Characteristics which are inherited and not affected by environmental variation include natural eye colour, blood group and genetic diseases

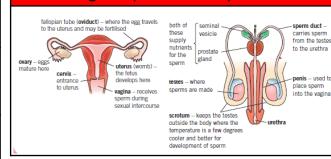
Knowledge: Variation

- The differences in characteristics of living things is known as variation
- 2 There is a large amount of variation between different species, but within species many more characteristics are shared
- 3 Even though two organisms may look the same, they will always have variation between them.

Knowledge: Adolescence

- **Adolescence** is the process in which a child changes into an adult, it involves both physical and emotional changes
- The physical changes alone in this time are known as puberty, these are caused by sex hormones

Knowledge: Reproductive System



Key Vocabulary Gametes

a sperm, the female gamete is an egg. Process where the baby develops 2 Gestation during pregnancy.

The male gamete (sex cell) in animals is

- Joining of a nucleus from a male and 3 **Fertilisation** female sex cell.
- Liquid that surrounds and protects the Amniotic fetus. fluid
 - **Placenta** Organ that provides the fetus with oxygen and nutrients and removes waste substances. It also acts as a barrier, stopping infections and harmful substances reaching the fetus.

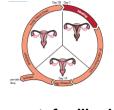
Knowledge: The menstrual cycle

The menstrual cycle is the process in which an egg is released from an ovary and leaves through the vagina

Day 	blood from the uterus lining lost (a period)	
Day 5	Bleeding stops, uterus lining starts to re-grow	

Egg released from Day 14 one of the ovaries

(ovulation)



If the egg is fertilised the cycle stops until the baby is born

Additional Information: Knowledge of Fertilisation, Implantation & Gestation required.