



8.1 Respiration

Respiration

Aerobic Respiration

How do our cells use oxygen to release energy from food?

Anaerobic Respiration

How do our bodies release energy when we don't have enough oxygen?

Fungi cells

How do fungi cells compare to animal cells, and why are cell models useful?

Fermentation

Fermentation

How do we use the way yeast respires to make bread and alcohol?

Yeast practical

How can we investigate the factors that affect how quickly yeast respires?

This module continues your learning journey from Y7 and links on work from previous learning on diet and breathing linking it to the cellular reaction of respiration.

The common biology theme of cells is built upon as you learn about respiration.

KEY VOCABULARY

Mitochondria, Respiration, Lactic Acid, Fermentation, Anaerobic, Aerobic, Fungi, Anomalous, Repeatability, Mean, Vacuole.



Movement of Organisms

What are the major bones in our body, and what are the functions of the skeleton?

How do pairs of muscles work together to move our limbs?

How do different types of joints allow our bodies to move?

Health

How does exercise change our bodies in the short and long term?

What are the short and long-term effects of alcohol on the human body?

What harmful chemicals are found in cigarettes, and how do they damage our health?

How does asthma affect our lungs and our ability to exercise?

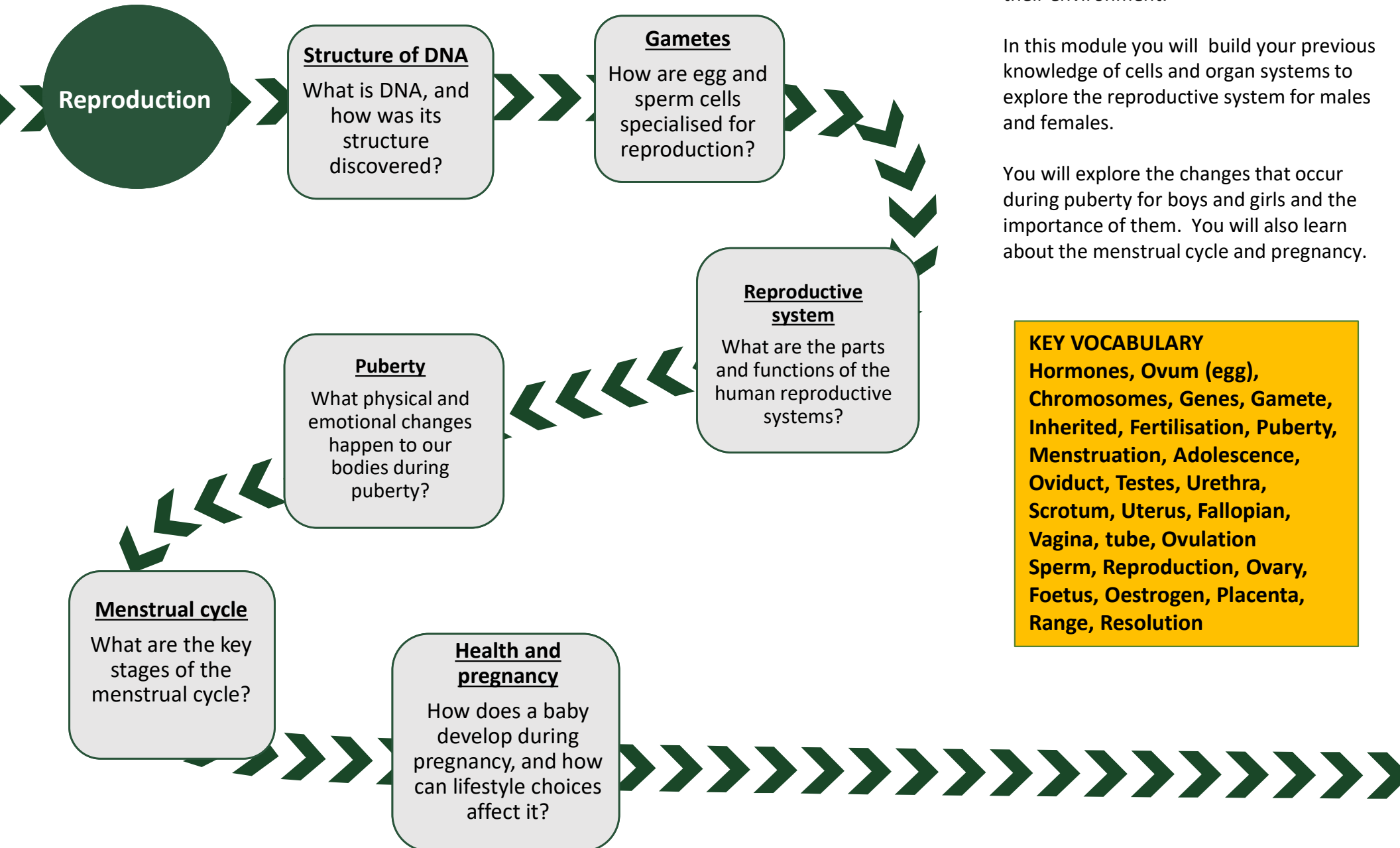
How do different types of drugs affect our behaviour and health?

The common biology theme of cells is built upon as you use your understanding of respiration to link this to exercise and movement.

**Skeletal, Antagonistic pairs,
Tendon, Cartilage, Ligaments,
Synovial fluid, Arthritis, Tar,
Nicotine, Stimulants,
Depressants, Cirrhosis,
Addiction,**



8.3 Reproduction



Biology is the study of living organisms and their environment.

In this module you will build your previous knowledge of cells and organ systems to explore the reproductive system for males and females.

You will explore the changes that occur during puberty for boys and girls and the importance of them. You will also learn about the menstrual cycle and pregnancy.

KEY VOCABULARY

Hormones, Ovum (egg), Chromosomes, Genes, Gamete, Inherited, Fertilisation, Puberty, Menstruation, Adolescence, Oviduct, Testes, Urethra, Scrotum, Uterus, Fallopian, Vagina, tube, Ovulation, Sperm, Reproduction, Ovary, Foetus, Oestrogen, Placenta, Range, Resolution



8.4 All about plants

Plants

Plant Cells

What are the parts of a plant cell, and how do they differ from animal cells?

Plant Organs and Flower Parts

How do roots, leaves, and flowers help a plant stay alive?

Photosynthesis

How do plants use sunlight to make their own food?

Movement of Substances in a Plant

How do water and nutrients move through a plant's xylem?

Plant Adaptations for Photosynthesis

How are leaves perfectly designed to capture sunlight and gases?

Investigating Photosynthesis:

How can we measure the rate at which a plant makes its food?

Plant Reproduction

How do plants use flowers and pollination to reproduce?

Seeds and Fruit

Why do plants produce seeds and fruit, and how are they dispersed?

Plant Minerals

Which minerals do plants need to grow healthy and strong?

Biology is the study of living organisms and their environment. This module continues your learning journey from Y7 and links on work from previous learning on cells and chloroplasts.

The common biology theme of cells is built upon as you learn about the structure of leaves and how they function. Greater knowledge of plant reproduction is gained, and investigations are undertaken to appreciate how plants spread their seeds.

KEY VOCABULARY

Vacuole, Chloroplasts, root hair cells, Photosynthesis, Xylem, Pollination, Fertilisation, Dispersal, Minerals, Deficiency, Stamen, Carpel, Stomata. Osmosis