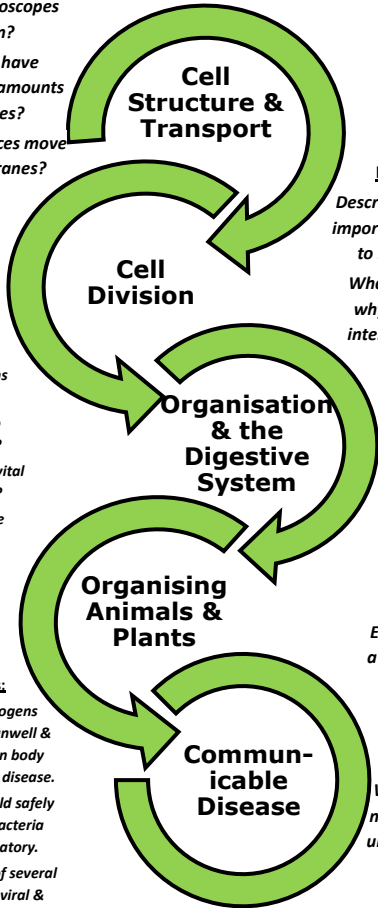




YEAR 9

Key Questions:

- Why don't microscopes "zoom" in?
- Why do cells have different types/amounts of organelles?
- How do substances move across membranes?



Key Questions:

- Describe the process of & importance of cell division to living organisms.
- What are stem cells & why are they of such interest to scientists & doctors?

Key Questions:

- What are the functions of the organs that make up the circulatory system?
- Explain in detail how a steep concentration gradient is maintained in the lungs & why it is needed.
- Why do leaves have more stomata on the underside of the leaf?

Key Questions:

- How are organisms organised?
- What happens to food in our body?
- How are enzymes a vital part of digestion?
- Describe the route of food through our digestive system

Key Questions:

- Describe how pathogens can make a person unwell & the ways the human body defends itself against disease.
- Explain how you would safely grow a culture of bacteria in the school laboratory.
- Compare the effects of several diseases caused by viral & bacterial infections.

YEAR 10

Key Questions:

- Describe how pathogens can make a person unwell.
- Compare the effects of several disease caused by viral & bacterial infections.
- Describe the different ways the human body defends itself against disease.

Key Questions:

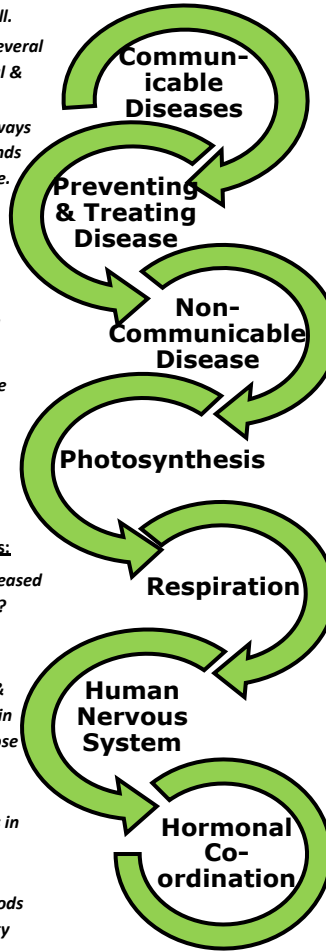
- What is a causal relationship?
- How does lifestyle influence risk?

Key Questions:

- How is energy released in organisms?

Key Questions:

- Explain how glands & hormones play a role in controlling blood glucose levels.
- Describe the main hormones & their roles in puberty & the menstrual cycle.
- Identify the main methods used to control fertility



Key Questions:

- What is the difference between vaccines, antibiotics & painkillers?
- What happens before drugs are available to the general public?

Key Questions:

- Describe how a leaf is adapted to allow photosynthesis to take place.
- Explain why glucose is important for a plant to function correctly.

Key Questions:

- What is homeostasis & why is it so important?
- Why are reflex action so important for survival?
- What are the functions of the main areas of the brain?
- Why do some people wear glasses?

Key Questions:

- Explain how glands & hormones play a role in controlling blood glucose levels.
- Describe the main hormones & their roles in puberty.
- Identify the main methods used to control fertility.

Key Questions:

- Explain why identical twins never look exactly the same.
- Is selective breeding humans determining natural selection?
- Evaluate the pros & cons of genetics engineering.

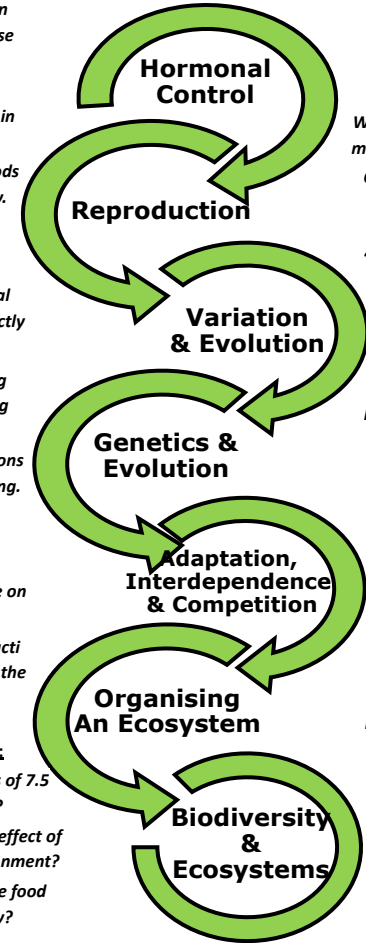
Key Questions:

- How many daisies are on the school field?
- How are camels & cacti adapted to survive in the desert?

Key Questions:

- What are the effects of 7.5 billion people?
- How can we limit the effect of humans on the environment?
- How can we produce food more effectively?

YEAR 11



Key Questions:

- Why do some cells divide by meiosis rather than mitosis?
- Can you predict offspring phenotype?
- Evaluate the statement "screening of all embryos should be offered to all pregnant couples".

Key Questions:

- How did science help us understand our genes?
- How do we use fossils?
- How do we group organisms?

Key Questions:

- Describe how energy is transferred from the sun to a cow?
- Identify the main parts of the decay, carbon & nitrogen cycles.
- Describe the factors that affect the rate of decomposition.