Biology

Natural selection and genetic modification

What affects how serious is genetic mutation ?

Some mutations make big changes in the phenotype

some mutations make small or no change

What is Darwin's theory of natural selection

Organisms with helpful features survive and Reproduce

These helpful features are passed on

How does antibiotic resistance support Darwin's theory

Resistant bacteria survive the antibiotic. They reproduce and pass the resistance on.

What is the Fossil evidence for human evolution

Ardi, Lucy and Leakey's fossils show humans slowly changed over time

What is the evidence from stones tool

Stone tools became better and more advanced with time

tools are dated using rocks in soil around them

How has genetic analysis changed the classification ?

Genetic test show Big differences in organism scientist now use three domains instead of five kingdoms

What is selective breeding

Humans choose parents with good trades and breed them
This produces better plants and animals

What is genetic engineering

Scientist change and organisms DNA to give it useful traits

What are the main stages of genetic engineering

- **Restriction enzymes cut the DNA into parts**
- **Sticky ends help the DNA join**
- **ligase connects the DNA together**
- **vectors move the new DNA into cells**

What are the benefits and risk of genetic engineering and selective breeding

benefits are better crops better animals and better medicine
risk includes held worries ethical issues and low variety

Health disease and development of medicine

What is health WHO

Health means physical mental and social well being

What is the difference between communicable and non communicable diseases

Communicable disease pass from person to person

non communicable diseases do not spread

Why can one disease make you more likely to get another

One disease can we can the immune system

What is a pathogen

Pathogen is an organism that causes a disease when enter inside our body

What are the examples of common infections and their pathogen

Cholera - bacteria

Malaria- protest

HIV- virus

stomach ulkers- bacteria

How are the pathogens spread and prevented

Through water
2. through air
3. through direct contact
● Through water, some pathogens can spread when people drink or bath in dirty or contaminated water
● Through the air , some pathogens can travel through the air and enter the body when you breathe them
● These pathogens can be carried in tiny droplets that come out when a person sneezes in the air ● Through direct contact, some diseases spreads through the touch
● like if you touch the surface or object that has been contaminated by a person so you will get the disease
● for example athlete's foot is a fungal disease that makes your skin itchy and flaky

What is the role of specific immune system

lymphocyte makes antibodies for antigen
These antibodies destroy pathogens

How does the immunization work

a weak or inactive pathogen is given the body makes antibodies and memory cells

Why do antibiotics only treat bacteria

antibiotics kill bacteria but do not kill viruses

What are the stages of developing a new medicine

on PDF

what causes many non communicable diseases

manufacturers work together such as genes and the lifestyle

what are the treatments of cardiovascular disease

medicines surgery in life style changes help treated