

How to use the revision cards

It is suggested you cut the pack of cards out, so that there is a question on one side and the answer on the reverse...

Jumble the cards up and try to learn through them all (when you're 100% confident you know one of the cards you can tick it)

Question

Question on one side



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Answer

Answer on reverse



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Question

A good diet keeps you healthy - what should it consist of?

Question

What is metabolic rate and what type of people would have different metabolic rates?

Question

What things can make you unhealthy?

Question

Name 2 examples of micro-organisms (pathogens) and say how they reproduce and make you feel ill

Question

How does the immune system kill pathogens?

Question

What is a vaccine and how does it work?

Answer

Metabolic rate is the speed of all the chemical reactions in your body

People with lots of muscle / people who do lots of exercise will have fast metabolic rates

Answer

Fats (warmth and energy)
Carbohydrates (energy)
Vitamins and minerals (health)
Protein (building cells)
Fibre (passing material)
Water

Answer

Bacteria - copy themselves damaging cells and releasing toxins

Viruses - reproduce inside your cells and damage them

Answer

An unbalanced diet (can make you overweight / underweight)

Not getting enough exercise

Genes play a role - some people are born with a slow metabolic rate / might have too much cholesterol which is bad for the heart

Answer

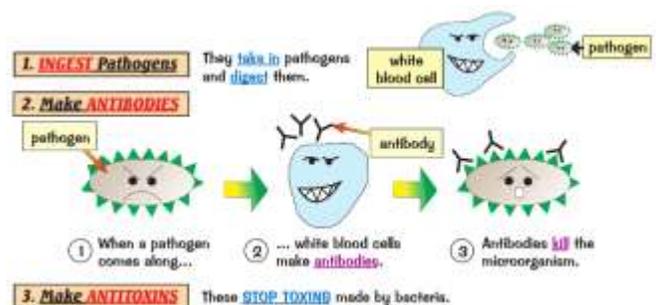
An injection of a dead / inactive pathogen

White blood cells make antibodies to kill the 'harmless' pathogen which then makes you immune (you won't get sick)

If you then do come across the real pathogen your white blood cells can make the antibodies much more quickly before you can become ill

Answer

White blood cells ingest pathogens, make antibodies and make antitoxins



Question

What is MMR vaccine and what does it protect against?

Question

What are antibiotics used for and what do they not help with?

Question

How can bacteria become resistant (like those resistant to antibiotics such as MRSA)

Question

Semmelweis was a doctor who suggested people do what in hospitals?

Question

What are the five sense organs which detect stimuli

*Containing different receptors

Question

How does the central nervous system work?

Answer

Antibiotics kill
bacteria

Antibiotics *do not*
work against a virus

Answer

Measles

Mumps

Rubella

Answer

Doctors (and visitors)
to wash hands before
seeing patients

This reduces bacteria
spreading

Answer

Bacteria can mutate and become
resistant to the drug



Antibiotics need to be controlled
(e.g. not given out for a cold) to
prevent resistance

Answer

The central nervous system is made up of
the brain and spinal cord - neurons carry
messages...



*Sensory neurons carry impulses from
receptors to the brain

**Motor neurons carry impulses from the
brain to the effectors (muscles / glands)

Answer

Eyes (light)
Ears (sound)
Nose (smell)
Tongue (taste)
Skin (touch)

Question

What are reflexes and how do they work?

Question

What do the synapses do?

Question

What are hormones?

Question

What are the 3 hormones needed to control the menstrual cycle and what do they do?

Question

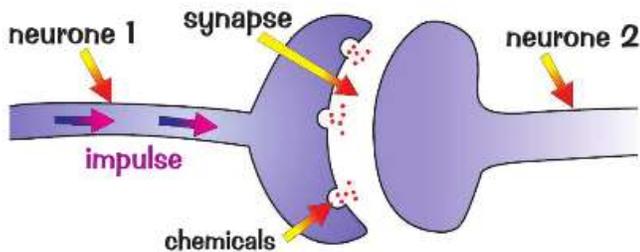
How does 'the pill' stop a woman from getting pregnant?

Question

How can hormones help a woman get pregnant?

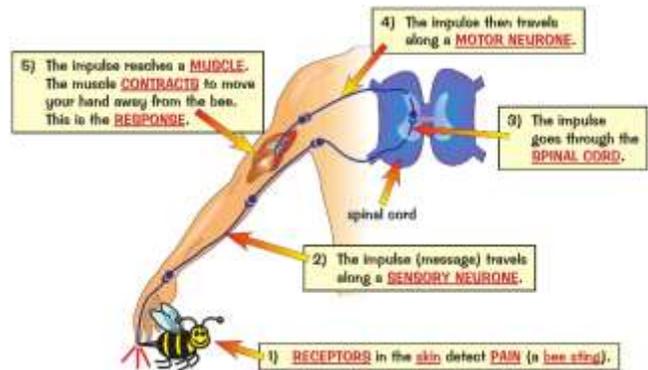
Answer

Synapses join neurons together (chemicals take the impulse across the gap)



Answer

Reflexes are automatic responses (you don't need to think about them)



Answer

FSH - makes the egg grow and mature

Oestrogen - stops FSH being released (for 1 egg at a time)

LH - makes the ovary release the egg

Answer

Hormones are chemicals sent in the blood which affect specific target cells

Answer

FSH and LH are given to stimulate egg maturation and release

IVF can join an egg and sperm 'in a test tube' which is put back into the woman to develop

Answer

The pill stops FSH being released so no eggs mature (the pill contains oestrogen)



Question

What is an auxin and how does it work in light?

Question

What is an auxin and how does it work in gravity?

Question

What 4 things does your body need to keep constant (homeostasis)

Question

How does the body keep ions constant?

Question

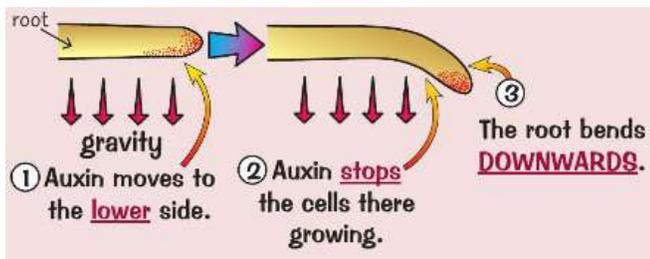
How does the body keep water constant?

Question

How does the body keep temperature constant?

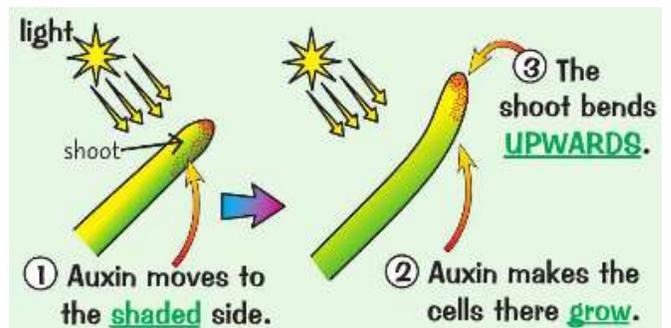
Answer

An auxin is a plant growth hormone - roots grow down towards the soil



Answer

An auxin is a plant growth hormone - shoots grow towards light



Answer

Ions are absorbed through food and lost through sweat and urine

Answer

Ions
Water
Temperature
Blood sugar

Answer

Enzymes need to work at body temperature (37°C) so the body sweats / shivers

Answer

Water is taken in as drink / food and lost as sweat, breath and urine (hot days lots of sweat, cold days less sweat)

Question

How does the body
keep blood sugar
constant?

Question

What is a drug?

Question

What is a statin?

Question

What are steroids?

Question

What are the 3
stages of drug
testing?

Question

What is a placebo?

Answer

A drug changes the body chemistry

Answer

Cells need energy constantly so the body keeps sugar content constant in the blood (via a hormone called insulin)

Answer

Steroids increase muscle mass (though are often illegal for sports due to unfair completion / side effects)



Answer

A statin lowers the risk of a heart attack



Answer

A 'fake' medicine which has now drug in it which checks the drug is working (some people 'feel better' by simply being told it'll help them which is not helpful when trying to identify if a drug does work)

Answer

1. Laboratory testing on human cells / animals (is the drug effective / how harmful is it / best dose)
2. Testing on healthy volunteers (safety check)
3. Testing on ill volunteers (identify what drugs work best)

Question

What is thalidomide and what was the problem with it (and how is it used now)?

Question

What are the issues with cannabis?

Question

What does it mean for an organism to be adapted to its environment (e.g. in the desert)?

Question

How are a polar bear / cactus adapted to their environments?

Question

What is an extremophile?

Question

What do animals and plants need to survive?

Answer

Some drugs are illegal as they can cause health problems

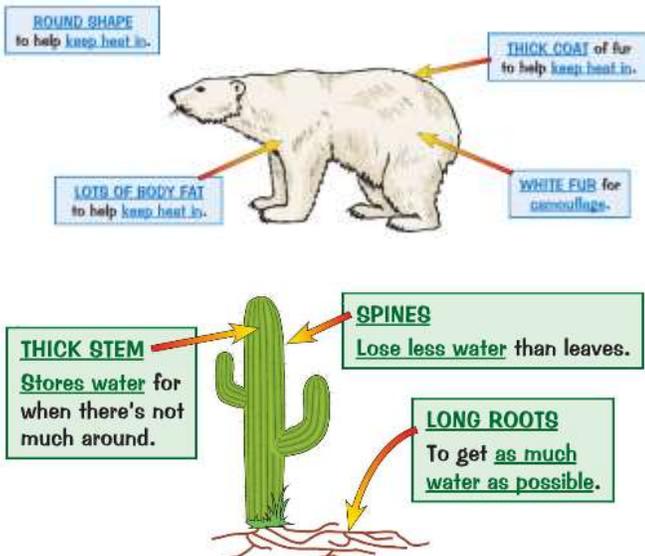
Cannabis has associations with memory loss and mental illness

Answer

Thalidomide is a drug that wasn't tested properly which caused the babies of pregnant women to have deformities

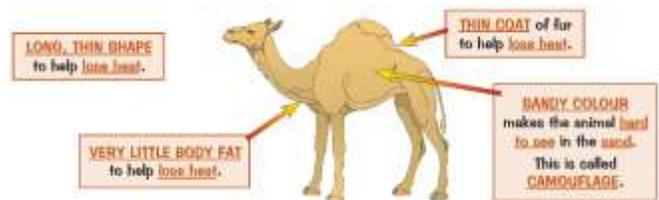
It is now banned for pregnant women but is used to treat leprosy

Answer

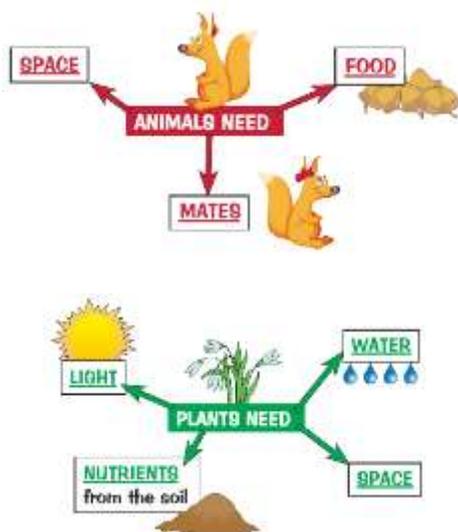


Answer

The organism has features which help it survive there



Answer



Answer

An organism which can survive in really tough environments (hot places / deep places etc...)

Question

How can environmental changes be measured?

Question

What does a food chain show and what does the arrow indicate?

Question

What does biomass mean?

Question

What does a pyramid of biomass show?

Question

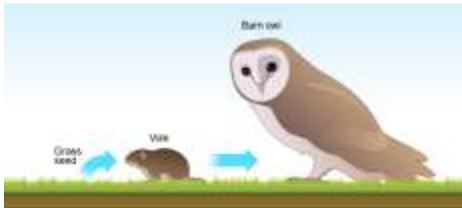
How are materials put back into the environment?

Question

What is the carbon cycle?

Answer

A food chain shows what is eaten by what (the arrow shows the energy being passed on)



Answer

Living indicators (such as plants and indicators only living where it is clean)

Non-living indicators (such as temperature, pH, oxygen meter etc...)

Answer

The quantity of biomass at each stage in the food chain

Answer

The amount of biological matter (how much all the organisms weigh (- the water content))

Answer

Carbon is taken in from the atmosphere via photosynthesis

Carbon is released back into the atmosphere via respiration, combustion and decay

Answer

Decay - waste and dead organisms are broken down by microorganisms



Question

Draw out the carbon cycle

Question

What are genes?

Question

What is the difference between characteristics caused by genes and the environment?

Question

What is the difference between sexual and asexual reproduction?

Question

How can plants be cloned?

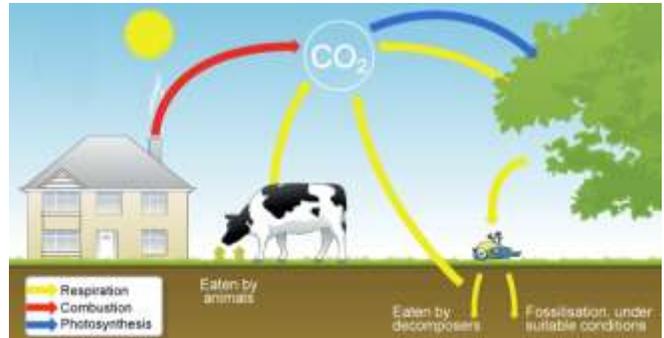
Question

How can animals be cloned using embryo transplants?

Answer

Genes control features (e.g. eye colour)

Answer



Answer

Sexual reproduction requires the meeting of a sperm and egg and causes variation (differences in offspring)

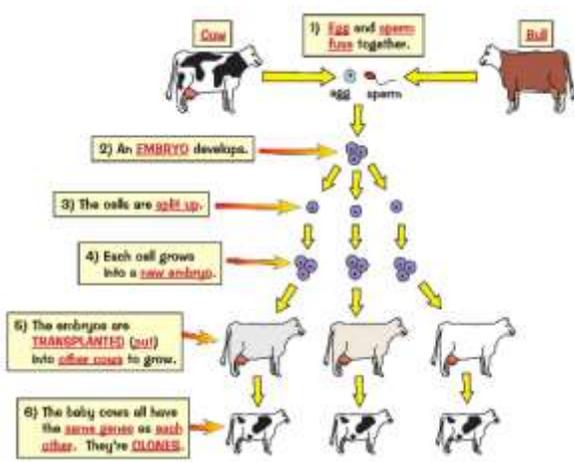
Asexual reproduction is where one cell splits into two (only one parent is needed and there is no variation - a clone has been produced)

Answer

Characteristics caused by genes are inherited whilst the environment can cause organisms to change

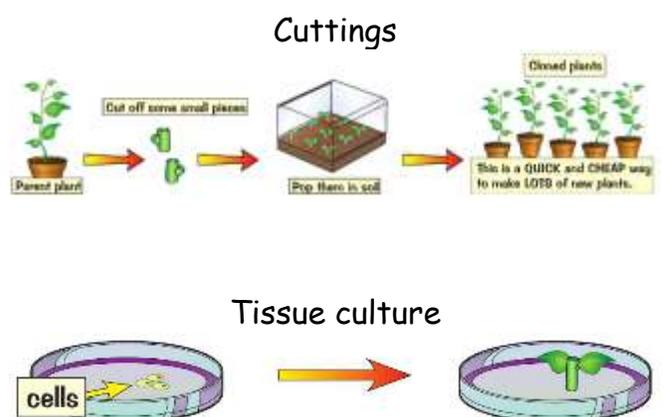
Answer

Embryo transplant



Answer

Cuttings and tissue culture can clone a plant



Question

How can animals can be cloned using fusion cell cloning?

Question

What are the advantages and disadvantages of cloning?

Question

What is genetic engineering?

Question

What are the advantages and disadvantages of genetic engineering?

Question

What is evolution?

Question

What is natural selection and how does it drive evolution?

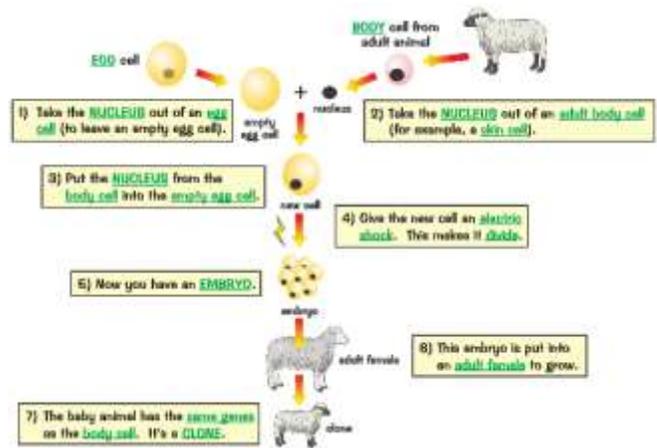
Answer

Advantages: lots of copies

Disadvantages: clones have the same genes so a disease which affects one affects them all

Answer

Fusion cell cloning



Answer

Advantages: higher crop yields / healthier foods

Disadvantages: maybe not safe to eat / playing 'God'

Answer

Genes from one organism (maybe of another species) are taken and put into another

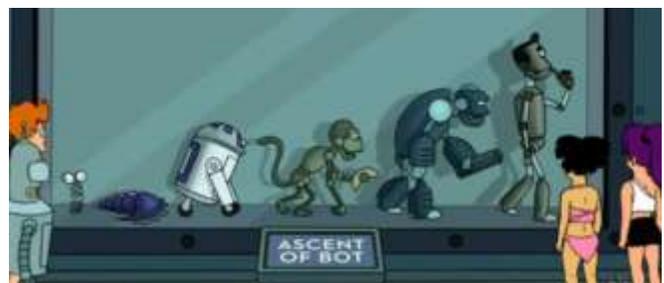


Answer

1. Living things are varied
2. Some have characteristics which make them more likely to survive and breed
3. Only these characteristics are passed on meaning they become more common

Answer

Evolution is the change of organisms over time...



Question

How can genes change?

Question

What was the difference between Darwin and Lamarck's ideas for evolution?

Question

What problems did Darwin face with his theory of evolution via natural selection?

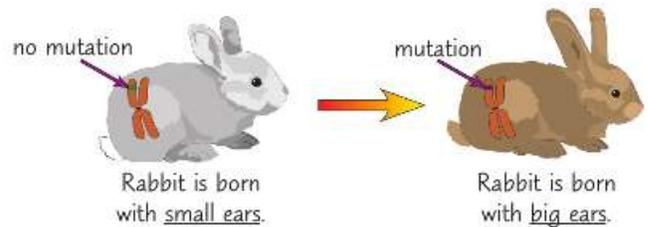
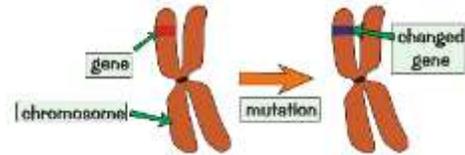
Answer

Darwin came up with the idea of evolution by natural selection

Lamarck thought if a characteristic was used a lot it would become more developed (this idea was incorrect)

Answer

Genes can change because of mutations



Answer

The idea went against that of the church and there was not much evidence at the time

Now his theory is accepted

