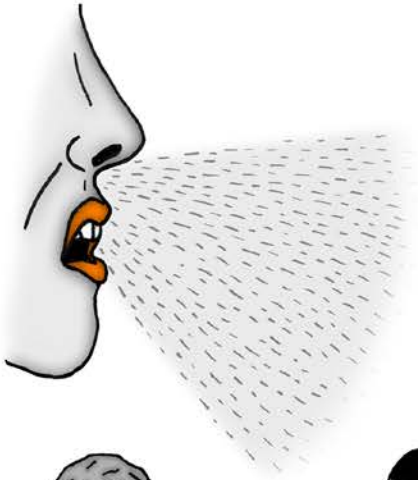
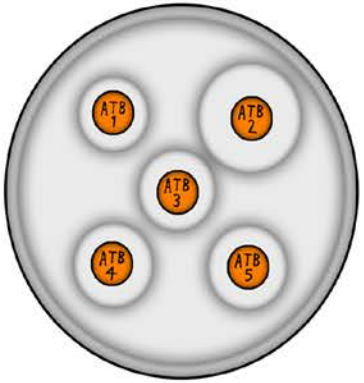
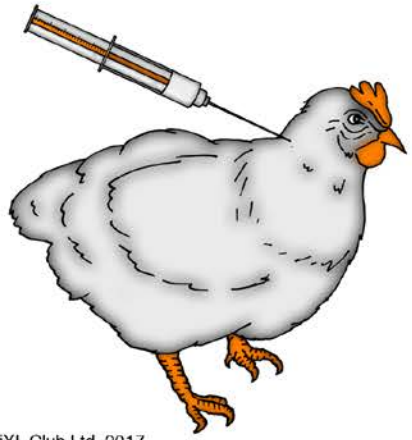
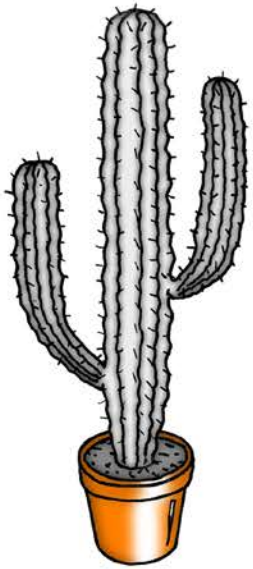
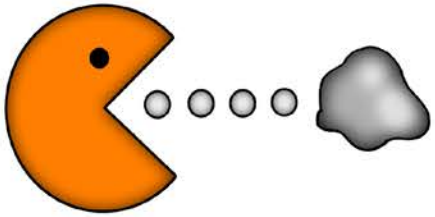




AQA GCSE
INFECTION & RESPONSE
THINK IT!







AQA GCSE Infection & Response

ThinkIT!

Communicable disease:

- Cervical cancer is spread by the human papillomavirus (HPV). Suggest how this makes it different to many other cancers.
- Discuss the similarities and differences between measles and HIV.
- Explain how viruses cause illness?
- Salmonella bacteria release a toxin into the gut. Use your knowledge of osmosis to explain why this can cause diarrhoea.

Antibiotics and painkillers

- Justify why doctors refuse to prescribe antibiotics for viral diseases, such as flu.
- Antibiotics are described as specific to the type of bacteria. Discuss the meaning of the term 'specific'.
- Suggest why antibiotics become less effective at treating a disease if they are used too often.
- Conjunctivitis is a bacterial infection of the eye causing irritation and inflammation. Explain why a doctor may prescribe both antibiotics and painkillers.

Discovery and development of drugs:

- Suggest why the pharmaceutical industry are concerned by the destruction of natural habitats like rainforests.
- Describe and explain the processes involved in getting a drug from the point of discovery to market. What is the role of peer review? What are the 3 main outcomes being tested during trials?
- Evaluate the risks and benefits of using unlicensed drugs as a treatment in the Ebola virus outbreak which killed 11,000.

Human defence systems:

- What is meant by the 'non-specific' defence systems of the human body?
- Describe how each of the following body parts defend against pathogen entry: skin, nose, trachea & bronchi and stomach. Include the role of cilia in your answer. Classify these defences as mechanical, chemical or physical.
- Cystic fibrosis leads to a build up of mucus in the lungs. Explain how this could put a sufferer at a greater risk of infection.
- Compare and contrast skin & plant epidermis.

Monoclonal antibodies (Biology & HT only)

- Why are some antibodies described as monoclonal?
- Prostate cancer releases a chemical called PSA into the blood. Discuss how monoclonal antibodies could be used for this condition.
- Suggest some of the benefits of using monoclonal antibodies bound to a radioactive drug to target cancer cells in comparison to traditional radiotherapy/chemotherapy treatments.
- Suggest why some people feel the use of monoclonal antibodies is unethical.

Vaccination:

- Herd vaccination protects the whole population. Ring vaccination targets those at risk when there is an outbreak. Suggest the benefits and drawbacks from each of these methods.
- A person can catch chicken pox many times but only get symptoms once. Explain this.
- If a person already has TB explain why a vaccine for TB will not help them.

Plant defence: (biology only)

- Compare and contrast the methods plants use to defend themselves with the human body defence systems.
- Explain why it would be beneficial to a plant to be able to make its leaves droop or curl.
- Discuss why foxgloves are both a benefit to humans and a risk to cows.
- Both the cloudberry (arctic) and cactus (desert) plants are xerophytes. Explain what this means and how it aids defence.

Plant disease: (biology only)

- Describe how you could set up an investigation to prove that pond weed needs nitrate ions to be healthy.
- A gardener noticed Tobacco Mosaic Virus (TMV) on some of his plants. Suggest three ways he might have identified that the plant was diseased.
- A website he looked at suggested he needed to disinfect his gardening tools. Why?