

<b>B5- Immunity</b>	<b>Answer</b>
1. How does the skin protect us from disease?	The skin is a barrier and produces Anti-microbial secretions.
2. How does the nose protect us from disease?	The nose hairs and mucus traps particles which may contain pathogens.
3. How do the lungs protect us from disease?	The trachea and bronchi secrete mucus which traps pathogens and cilia waft the mucus to the back of the throat where it is swallowed.
4. How does the stomach protect us from disease?	The stomach produces acid which kills the majority of pathogens which enter via the mouth.
5. Name the 3 ways that white blood cells fight disease	White blood cells help to defend against pathogens by: <ul style="list-style-type: none"> <li>• phagocytosis</li> <li>• antibody production</li> <li>• antitoxin production.</li> </ul>
6. What is a vaccine?	A vaccination involves introducing small quantities of dead or inactive forms of a pathogen into the body to stimulate the white blood cells to produce antibodies.
7. After a vaccine what happens the next time that pathogen enters our body?	If the same pathogen re-enters the body the white blood cells respond quickly to produce the correct antibodies, preventing infection.
8. Give an advantage of giving a vaccine to the majority of the population	If a large proportion of the population is immune to a pathogen, the spread of the pathogen is very much reduced.
9. What is an antibiotic?	Antibiotics, such as penicillin, are medicines that help to cure bacterial disease by killing infective bacteria inside the body.
10. Antibiotics are specific, what does this mean?	Different types of bacteria should be treated using different types of antibiotics.
11. Describe a major concern around the use of antibiotics.	The production of strains of bacteria that are resistant to antibiotics.
12. What can antibiotics not be used for?	Antibiotics cannot kill viral pathogens.
13. Can painkillers be used to treat diseases? Explain your answer.	No Painkillers and other medicines are used to treat the symptoms of disease but do not kill pathogens.
14. Why is it difficult to make a drug which kills viruses?	It is difficult to develop drugs that kill viruses without also damaging the body's tissues.