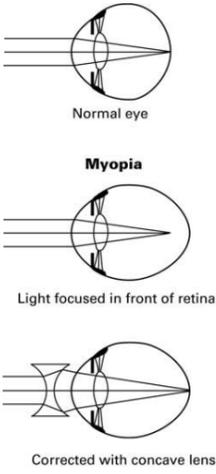
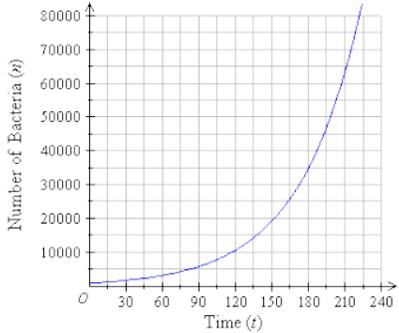
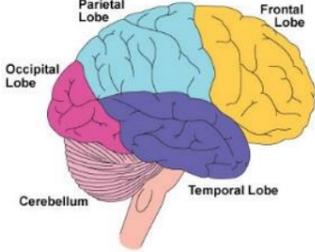


%	I can ...	Prove it!
<p>70%+</p>	<p>4.2. Explain the issues with the development of new antibiotics in the race against antibiotic resistance and what we can do as a society to reduce the rate of development of antibiotic resistance bacteria (linking to medicine and agriculture)</p> <p>4.5. Explain the production and use of monoclonal antibodies (triple only)</p> <p>4.6. Evaluate the advantages and disadvantages of using monoclonal antibodies (triple only)</p> <p>4.7. Compare and contrast painkillers and antibiotics</p> <p>4.8. Explain the benefits and drawbacks of antibiotics and limitations of antivirals</p> <p>7.5. Evaluate the risks and benefits of procedures carried out on the brain and the nervous system (triple only)</p> <p>8.3. Explain the process of accommodation (triple only)</p> <p>8.4. Explain the causes of short sightedness (myopia) and long sightedness (hyperopia) (triple only)</p> <p>8.5. Describe how these defects are treated and how new technologies are helping to improve this (triple only)</p> <p>8.6. Interpret ray diagrams, showing these two defects and showing how spectacle lens correct this (triple only)</p>	<p>1) Write a letter to your local MP. Explain how we as a society could help to reduce the rate of antibiotic resistance. You must make reference to medicine and agriculture.</p> <p>2) Explain how monoclonal antibodies are made and used and give at least 2 advantages and disadvantages of using them.</p> <p>3) The Year 7s told Miss Cooke that antibiotics, painkillers and antivirals are all the same things and do the same job. Are they correct? Write them a postcard explaining your answer and giving some advantages and disadvantages of using each.</p> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p>Normal eye</p> <p>Myopia</p> <p>Light focused in front of retina</p> <p>Corrected with concave lens</p> </div> <div style="flex: 2;"> <p>4) A family is trying to decide whether their son should have brain surgery to hopefully remove a brain tumour. Should they do it? Write them a letter to explain what you think!</p> <p>5) Describe the process of 'accommodation'.</p> <p>6) Hyperopia and myopia are issues with the eye. Explain what is wrong with the eye to cause these issues with vision and how these defects can be treated using new technology.</p> <p>7) Use the diagram to the left to explain how glasses can be used to treat myopia.</p> </div> </div>
<p>60%</p>	<p>3.4. Discuss the global use of vaccination in the prevention of disease</p> <p>4.1. Describe how bacteria have developed resistance to antibiotics - in particular MRSA (and use this as an example of evolution)</p> <p>4.3. Describe how many new drugs are still developed from plants and microorganisms (including digitalis and aspirin)</p> <p>4.4. Explain how preclinical and clinical trials are used to test new drugs (including tests for safety, effectiveness, toxicity and dosage)</p> <p>7.3. Explain some difficulties in investigating brain function and treating brain damage and diseases (triple only)</p> <p>7.4. Explain how neuroscientists have mapped regions of the brain to particular functions (triple only)</p> <p>8.2. Label a diagram of the eye (triple only)</p>	<p>1) Barack Obama has suggested that we should all be vaccinated against the most common viruses and bacteria. Explain how this would help to reduce the prevalence of these diseases across the world.</p> <p>2) MRSA is an example of a resistant bacteria. Describe how this bacteria has become resistant to antibiotics and the issues that this causes for both the medical profession and society as a whole.</p> <p>3) Rena tells Lizzy that it is really to make new medicines. Lizzy says she doesn't think it is such a simple process. Write a bullet point list of the steps that we must take to make a new drug.</p> <p>4) It is incredibly difficult to study and treat brain damage and diseases. Give 2 examples of brain diseases and 2 reasons why someone's brain may have become damaged and explain why it is so difficult to identify the issues and treat them.</p> <p>5) Describe how neuroscientists have worked out which areas of the brain do what.</p> <p>6) Draw and label a diagram of the eye, annotating each part to show it's function.</p>
	<p>3.2. Describe how the immune system tackles pathogens once they have made it into the body (phagocytosis, antibody production and antitoxin production)</p> <p>3.3. Explain how vaccines work</p> <p>3.4. Explain the use of antibiotics and other medicines</p> <p>5.1. Describe situations where types of diseases interact (poor physical health, viruses causing cancer, pathogens -> allergic reactions, immune system defects -> more susceptible to infectious disease)</p> <p>5.2. Translate numerical information between tables and graphs</p>	<p>1) Draw a comic strip to describe how the immune system tackles pathogens that have made it past our first line of defence. You must include the following terms: phagocytosis, phagocytes, specific, non-specific, toxins, anti-toxins, antigens, antibodies, pathogen, lymphocytes.</p> <p>2) Laura is explaining to her younger sister how a vaccination works? Laura's sister is really scared of having one done. Explain to her what a vaccination is and how it works.</p> <p>3) Mr Horlick has gone to the doctors because he is not feeling very well. The doctor tells him that he has measles. Would the doctor give Mr Horlick any medicine? If so, explain which and why.</p> <p>4) Arnold is very overweight. What effect will this have on his chances of suffering from other diseases? Are there any diseases that he will now be particularly susceptible to?</p> <p>5) Use the graph to estimate how many bacteria would be present at:</p> <ol style="list-style-type: none"> 45s 90s 180s <div style="text-align: right;">  </div>



	<p>5.3. Construct and interpret bar charts and histograms</p> <p>6.3. Explain the adaptations of plants that help them to defend themselves against diseases (triple only)</p> <p>7.1. Describe the structure and the role of the brain (triple only)</p> <p>7.2. Identify three specific parts of the brain from a diagram and explain their specific functions - cerebral cortex, cerebellum, medulla (triple only)</p> <p>8.1. Describe the function of the eye (triple only)</p>	<p>6) Use the data below to construct a bar chart:</p> <table border="1" data-bbox="1081 281 1879 519"> <thead> <tr> <th>Disease</th> <th>Number of deaths per annum</th> </tr> </thead> <tbody> <tr> <td>Coronary Heart Disease</td> <td>74,000</td> </tr> <tr> <td>Respiratory Disease</td> <td>27,000</td> </tr> <tr> <td>Stroke</td> <td>150,000</td> </tr> <tr> <td>Cancer</td> <td>160,000</td> </tr> <tr> <td>Liver Cirrhosis</td> <td>16,000</td> </tr> </tbody> </table>  <p>7) Draw an arrow on to the brain to identify the cerebral cortex, cerebellum and medulla and explain what each is used for.</p> <p>8) Describe what the eye is used for and what would happen if someone's eye was damaged.</p>	Disease	Number of deaths per annum	Coronary Heart Disease	74,000	Respiratory Disease	27,000	Stroke	150,000	Cancer	160,000	Liver Cirrhosis	16,000
Disease	Number of deaths per annum													
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	<p>2.1. Describe three viral diseases in details - the effects, how they are spread, how people are trying to reduce its impact (Measles, HIV and Tobacco Mosaic Virus)</p> <p>2.2. Describe two bacterial diseases in detail - the effects, how they are spread, how people are trying to reduce its impact (Gonorrhoea and Salmonella)</p> <p>2.3. Describe one fungal disease in detail - the effects, how it is spread, how people are trying to reduce its impact (Rose Black Spot)</p> <p>2.4. Describe one protist disease in detail - the effects, how it is spread, how people are trying to reduce its impact (malaria)</p> <p>3.1. Describe how the body prevents entry of pathogens into the body</p> <p>6.1. Explain how diseases in plants can be detected (triple only)</p> <p>6.2. Describe the types of diseases that can affect plants (triple only)</p>	<p>1) Which disease have we learnt about that....</p> <p>(a) causes a red blotchy rash to appear mainly on the back and neck?</p> <p>(b) causes yellow spots to appear on a plant?</p> <p>(c) is caused by the protist 'plasmodium'?</p> <p>(d) is a sexually transmitted disease, caused by a virus that cannot be cured?</p> <p>(e) is a type of food poisoning caused by a bacteria?</p> <p>(f) causes spots to appear on roses?</p> <p>(g) is caused by a fungus?</p> <p>(h) is a sexually transmitted disease caused by a bacteria that can be cured?</p> <p>2) Give 3 ways that they body prevents pathogens from reaching our blood stream/organs/</p> <p>3) Describe two diseases that can affect plants and explain how they can be detected.</p>												
	<p>1.1 Define 'health'</p> <p>1.2 List factors that affect mental and physical health</p> <p>1.3. Define 'pathogens' and explain the difference between 'communicable' and 'non-communicable' diseases</p> <p>1.4. Explain how 'viruses', 'bacteria', 'protists' and 'fungi' are spread in animals and plants</p> <p>1.5. Describe the how bacteria and virus cause problems within the body</p> <p>1.6. State 4 ways to reduce or prevent the spread of communicable diseases</p>	<p>1) Complete the definition of health below. 'Health' means complete _____ and _____ well being.</p> <p>2) List 3 factors that could affect your physical or mental health</p> <p>3) Which of these is the correct definition of a pathogen?</p> <p>(a) Something that makes people sick</p> <p>(b) A microorganism</p> <p>(c) A disease causing microorganism</p> <p>4) What is meant by the term 'communicable'? Can you give an example of a communicable disease?</p> <p>5) Give two ways that pathogens are spread between animals or plants</p> <p>6) Miss McCormick is writing some safety instructions for the new Year 6s. Give them 4 top tips to prevent the spread of Salmonella.</p>												

Key Terms

Health	Physical	Mental	Pathogens	Protist	Virus	Bacteria	Fungi
	Communicable	Non-communicable	Malaria	Rose Black Spot	Salmonella		
Gonorrhoea	Tobacco Mosaic Virus	Measles	HIV	Iris	Ciliary Muscle	Cornea	Pupil
Lens	Retina	Optic Nerve	Cerebral cortex	Cerebellum	Medulla	Bar Charts	
Histograms	Allergic Reaction	Immune System	Antibiotics	Antiretroviral	Safety		
Effectiveness	Toxicity	Dosage	Neuroscientist	Mutation	Resistance	Phagocytosis	
	Antibody	Antitoxin	Accommodation	Antivirals	Hyperopia		

