SO FAR IN OUR SEARCH FOR BETTER HEALTH...you have discussed in previous lessons the difficulties of defining the words "health" and "disease" and you have outlined the function of genes, mitosis, cell differentiation and specialisation in the maintenance of health. You have distinguished between infectious and non-infectious disease, identified conditions under which an organism is described as a pathogen, and looked at the role of food safety and personal hygiene in controlling the spread of the disease. Now the class will delve further into the mysterious world of infectious disease beginning with malaria which is one of the biggest causes of death and suffering in humans around the globe. In small groups the class will be gathering and processing information to understand this deadly disease and to trace its remarkable history. Secondly each group will be identifying data sources, gathering and processing information to describe one other named infectious disease. Perhaps there is a disease that has affected you, someone you know, or your community that you would like to choose. Maybe you have seen a movie or documentary about a disease you would like to know more about, or you could choose a disease which you know nothing about! We will have a brief class discussion after choosing our topics to make sure there are no double ups as we will be posting the products of this Web Quest to our class wiki to become resources for the whole class.

Your group will process information you gather to trace the historical development of the cause, treatment and prevention of Malarial in order to produce an annotated timeline showing various scientists' contributions to our understanding of this disease. Groups will choose one infectious disease and identify data sources to gather, process and analyse information to describe the disease in terms of its cause, transmission, host response, major symptoms, treatment, prevention and control. This information will be used to produce a report on the disease which must include a summary in the form of a flowchart produced using Smart Draw. Your work products will be posted to the class wiki to become a resource for the whole class.

Individually you will post feedback on your experience completing the Web Quest.

You will be assigned to a group of 3 class members and have 15 minutes to complete Steps 2-3. Read over the WebQuest instructions in full. Choose a group name, have a brief brainstorming session about what roles will be required to complete your task, allocate responsibilities and choose your infectious disease.

Present this information in any way that you feel meets the Evaluation Rubric. Using the resources below and sites you may have found completing Step 5 to identify data sources, gather, process and analyse information to describe your infectious disease in terms of its cause, transmission, host response, major symptoms, treatment, prevention and control. This information will be used to produce a report on the disease which must include a summary in the form of a flowchart produced using Smart Draw. Your work products will be posted to the class wiki to become a resource for the whole class. Individually you will post feedback on your experience completing the Web Quest.

Post your timeline and report to the class wiki (url below) and each group member is required to post their personal feedback/reflection on the task as an individual.
The products of your group work, that is your timeline on the development of Malaria and written report of 2000 words which includes a flowchart (constructed with Smart Draw) summary of the cause, transmission, host response, treatment and prevention of your chosen disease will each be marked out of 10 according to the Evaluation Rubric attached. Each must also be posted to the class wiki. Marks will be assigned to individuals for their reflections and comments on the class wiki, making the assignment worth a total of 25 marks. If you have any problems or questions outside of class time post them on the wiki and they will be answered as soon as possible.

<table>
<thead>
<tr>
<th>Category and Score</th>
<th>Fail</th>
<th>Needs improvement</th>
<th>Good</th>
<th>Excellent</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeline</td>
<td>Timeline not present</td>
<td>Timeline present but not complete</td>
<td>Timeline complete and includes adequate detail</td>
<td>Timeline complete and contains a high level of detail</td>
<td>/10</td>
</tr>
<tr>
<td>Written report on named disease</td>
<td>Report absent, word count inadequate or excessive, does not contain flowchart</td>
<td>Report present, adheres to word count, flowchart present, some elements missing or lacking in detail</td>
<td>Report present, adheres to word count, flowchart present, all elements covered in adequate detail</td>
<td>Report present, word count adhered to, flowchart present, all elements covered in great depth</td>
<td>/10</td>
</tr>
<tr>
<td>Individual reflection on task posted on class Wiki</td>
<td>Reflection not posted</td>
<td>Reflection posted but lacking in length or substance</td>
<td>Reflection posted and shows thoughtful insight</td>
<td>Reflection is posted, shows a high level of thoughtful insight and interest in the task</td>
<td>/3</td>
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<tr>
<td>Comments on other groups’ work</td>
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<td>Thoughtful comments</td>
<td>Thoughtful and detailed comments and suggestions</td>
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<td>Total Score</td>
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Conclusion

Congratulations on completing the Infectious Diseases Web Quest! Through your research you now have a detailed knowledge of the cause, treatment and prevention of Malaria and have produced a timeline of the development of our undiagnosed global killer. You have also become an expert in the description of one other infectious disease and have completed a report on it to share with the rest of the class on our “Search for Better Health Wiki”. Included in this report is a flowchart (produced using Smart Draw) providing a summary of the important points you have uncovered. Importantly, you have reflected on this experience and may be able to use what you’ve learned going forward in your studies as you research other topics, or work in other group situations. Don’t forget to look at other groups’ reports and make comments and suggestions. Perhaps you can think of further research that can be done on one of the diseases, or have a great idea for a Public Awareness Campaign. Maybe experts from the websites you discovered would like to hear about them. Now the class will go on to look at the hot topic of Vaccination against some of these viral diseases and the role of anti-biotic use/overuse in the treatmant of some bacterial diseases.

Teacher Page

This WebQuest addresses the following outcomes taken from The NSW Board of Studies Stage 6 Syllabus. 9.4 The Search for Better HealthContextual Outline When physiological processes malfunction, the body tries to repair the damage. The process is similar in all living things and it is only when the process fails to contain the damage that disease can be recognised. Humans have long recognised the symptoms of disease both in themselves and the animals and plants around them. Since the beginnings of recorded history, they have noted the signs that reveal the body is malfunctioning. Increasing understanding of the causes of disease together with accompanying advances in technology have changed approaches to treatment and management of disease. The search for measures to treat and manage diseases of humans and other organisms continues and this search is paralleled by continued refinements in technology. This module increases students’ understanding of the history, nature and practice of biology, the applications and uses of biology, and the implications of biology for society and the environment. Prior Learning: Recall statements in Preliminary course: module 8.3 (subsections 3 and 7). HSC Module 9.3 (subsections 3, 4 and 5) Syllabus Outcomes: Prescribed Focus Area. H1 evaluates how major advances in scientific understanding and technology have changed the direction or nature of scientific thinking. H2 analyses the ways in which models, theories and laws in biology have been tested and validated. H3 assesses the impact of advances in biology on the development of technologies. H4 assesses the impacts of applications of biology on society and the environment. H5 identifies possible future directions of biological research. Domain Knowledge and understanding H6 explains why the biochemical processes that occur in cells are related to macroscopic changes in the organism. H8 evaluates the impact of human activity on the interactions of organisms and their environment. H13 uses terminology and reporting styles appropriately and successfully to communicate information and understanding. H14 assesses the validity of conclusions from gathered data and information. H15 explains why an investigation is best undertaken individually or by a team. Values and attitudes H16 justifies positive values about and attitudes towards both the living and nonliving components of the environment, ethical behaviour and a desire for a critical evaluation of the consequences of the applications of science. Module Outcomes Focus area: During the second half of the nineteenth century, the work of Pasteur and Koch and other scientists stimulated the search for microbes as causes of disease. Students Learn to: gather and process information to trace the historical development of our understanding of the cause and prevention of malaria. Identify data sources, gather process and analyse information from secondary sources to describe on

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[Image 30x289 to 580x318]

[Image 30x339 to 580x368]
infectious disease in terms of its:

- cause
- transmission
- host response
- major symptoms
- treatment
- prevention
- control

Standards

Credits

Other