

MALARIA IN CONTEXT

HIGH SCHOOL WORK SHEET

History: World-wide

1. Pope Gregory the Great made some keen observations about the epidemiology of malaria. List these observations and explain how malaria is spread amongst humans.
2. On a world map, trace and label the spread of malaria from its origin to all the locations mentioned in the text.
3. List the valuable insights gained by Hippocrates.

History: South Africa

1. Name the areas in South Africa where malaria used to be endemic.
2. Outline the contributions that Ingram and De Meillon made to malaria research in South Africa.
3. What is the most effective method of malaria control?
4. The use of DDT, which was introduced very effectively in the 1950s, has been a source of great controversy. Do research and explain the issues around the production, use and the effect of DDT on the environment.

Discovery of cause and transmission of malaria

1. Laveran first described malaria parasites as protozoan organisms in human blood. List the finer classification of the types of protozoans that was undertaken by others, based on his work.
2. Draw a time-line, tracing the association of malaria with mosquitoes from ancient times until the early 20th century.

Anopheline mosquitoes and life-cycle of the malaria parasite

1. Explain how only certain anopheline species transmit malaria in humans.
2. Name the three most common vectors of malaria in Africa.
3. Briefly summarise the five stages of the *plasmodium spp* malaria parasite.

Diagnosis of Malaria

1. Which three components play a vital role in the diagnosis of malaria?
2. Testing blood for malaria is not always easy. It requires skill and experience. List the principles for the testing of blood for malaria.
3. Find out what Polymerase Chain Reaction (PCR) is and briefly explain how this may help in the diagnosis of malaria.

Treatment of Malaria

1. List the objectives for the treatment of malaria.
2. What factors does a doctor have to consider when prescribing a particular drug for malaria?
3. Explain the difference between uncomplicated and severe malaria.
4. Why is prompt treatment essential?

Drug Resistance in Malaria

1. Explain how drug resistance comes about.
2. What are the major effects of antimalarial drug resistance?
3. Explain how combination therapy works, with specific reference to Artemisinin Combination Therapy (ACT).
4. A new challenge has emerged in South East Asia. Explain.

Impact of Malaria in Africa

1. How many malaria deaths occur in Africa annually?
2. "There is an undeniably close association between malaria prevalence and socio economic depression ...". Explain this, also referring to the impact of malaria on the economic growth of a country.
3. Outline the connection between malaria and HIV.

Severe Malaria

1. Name the key factors in preventing severe malaria.
2. Outline the clinical manifestations of severe malaria.
3. Name the four main areas of the management of severe malaria.