Malaria

Student Worksheet

The following answers are based on pages 41–43:

1. What is malaria caused by?
   
   A microscopic parasite called *Plasmodium*.

2. How do humans catch the disease?
   
   The parasite is injected into humans by an infected female *Anopheles* mosquito during feeding.

3. In which regions are people affected by malaria?
   
   Tropical zones (particularly African countries south of the Sahara desert).

4. As yet, there is no successful cure for malaria, although a few drugs are useful in treating the disease. Name one of them.
   
   Quinine; cinchonine.

5. List three ways of protecting yourself from contracting malaria:
   
   (i) Taking anti-malaria drugs.
   (ii) Spraying the inside of rooms with insecticide.
   (iii) Sleeping under mosquito nets.

   Others: fixing insect screens to the windows; wearing long clothes to cover the skin; applying insect repellent to exposed skin; burning mosquito coils.

6. Sometimes the use of a lot of chemicals in the fight against an infectious agent is not advisable. Why not? (Hint: think of the food chains.)
   
   Chemicals may have toxic side-effects, which are passed up the food chain to the primary consumer (i.e. humans).
7. ‘Biological Control’ is introducing a natural predator of the pest to control numbers. Look at the mosquito life cycle below and suggest where and how you could introduce Biological Control to help prevent the spread of malaria:

* At both these stages the mosquito is fairly easy to catch because it is a good food source for predators, and the water (being still or stagnant) offers little scope for escape. Thus the introduction of a predator carnivorous invertebrate or fish eventually helps to reduce the number of adult mosquitos produced. Since no chemicals are used, there is no adverse affect on the food chain.