<table>
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<th>Number of periods</th>
<th>WEEK I starting…... ending ..........</th>
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**TOPIC**  
Transport of materials in animals

**CONTENT**  
- Need for transport system  
- Structure of transport system in a mammal; the heart, arteries, veins and capillaries

**AIM**  
- To enable students appreciate the need for a transport system in large organisms  
- To enable students to develop ability to keep the circulatory system healthy.

**OBJECTIVES**  
- To be able to work out surface area to volume ratio in large and small objects/cube  
- To be able to define diffusion.  
- To be able to relate surface area to volume ratio to diffusion.  
- To explain the limitations of diffusion in transport of materials within large organisms.  
- To name the parts of the transport system of a mammal.  
- To describe structure of the heart, veins, arteries, capillaries  
- To relate the structure of the heart, veins, arteries, capillaries to function

**REFERENCES FOR STUDENTS AND TEACHERS**  
- Bola Maxwell –Ojo ( 1998); Modern Tropical Biology. Evans Brothers , UK.  
- Teacher’s Guide 553

**TEACHING**  
CD’S; Charts; Internet
**AIDS/MATERIALS**

**SCHEME OF WORK (continued)**

<table>
<thead>
<tr>
<th><strong>Week 2</strong></th>
<th><strong>starting ………..</strong></th>
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<tr>
<td><strong>TOPIC</strong></td>
<td>Transport of materials in animals</td>
<td></td>
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<tr>
<td><strong>CONTENT</strong></td>
<td>Functions of the circulatory system in a mammal; The heart beat, general circulatory system i.e. pulmonary and system circulation including the main blood vessels entering and leaving the gut, liver, kidneys, lungs, the head and the lower part of the body</td>
<td></td>
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<tr>
<td><strong>AIM</strong></td>
<td>To enable students appreciate the role of the heart and general circulation so as to keep healthy</td>
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</tbody>
</table>
| Objectives | - To be able to describe parts of mammalian circulatory system.  
- To be able to describe circulation of blood in a mammal  
- To be able to identify and draw an artery, vein and capillary in cross – section.  
- To relate structure to function of a mammalian heart, artery, vein and capillaries. | |
- Bola Maxwell –Ojo (1998); Modern Tropical Biology.Evans Brothers, UK.  
Teacher’s Guide 553 | |
| **TEACHING** | - CD’S on blood circulation | |
### SCHEME OF WORK (continued)

**In Animals**

<table>
<thead>
<tr>
<th>Number of Periods</th>
<th>5 periods</th>
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</thead>
<tbody>
<tr>
<td>Topic</td>
<td>Transport of materials in animals</td>
</tr>
</tbody>
</table>
| Content           | - Blood constitutes, structure and functions  
                   - The red blood and white blood corpuscles, blood platelets, antibodies, vaccination, immunity, HIV/AIDS, blood clotting, cell drainage and lymphatic system elephantiasis, blood groups and blood transfusion. |
| Aim               | - To enable students appreciate a good circulation of blood and application to save lives through correct blood transfusion.  
                   - To avoid infection and spread of HIV/AIDS. |
| Objectives        | - To be able to describe the circulation of blood in a mammal.  
                   - To be able to describe the composition of mammalian blood.  
                   - To state the functions of blood  
                   - To be able to discuss the role of the heart as a pump.  
                   - To be able to compare the blood plasma and tissue fluid/lymph.  
                   - To be able to relate the knowledge gained with regard to transfusion and immunization. |
- Be able to describe the effect of HIV/AIDS on the body immunity.

**References for both pupils And Teachers**
- Bola Maxwell –Ojo ( 1998); Modern Tropical Biology. Evans Brothers, UK.
  Teacher’s Guide 553

**Teaching Aids / Materials**
- Models of heart
- CD’S of various aspects of the topic in question.
- Charts of Macmillan for “O’ levels.