## Key Stage UKS2 Topic Animals Including Humans

- Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
- Describe the ways in which nutrients and water are transported within animals, including humans

### Key Terminology:
- Organs (various), circulatory system, circulation, blood, plasma, red blood cells, oxygenated, deoxygenated, exchange, artery, vein, heart, heart chambers, pulse, recovery time, drugs (various), alcohol, nicotine, tar

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Content Objective</th>
<th>Skill Objective</th>
<th>Possible Activities</th>
</tr>
</thead>
</table>
| 1      | What do our organs do to keep us alive? | Use complex science words | - Label and annotate (function) cut-out diagram of the human body organs. Research Match pictures (organs) with function cards. Create information table.  
- Compare with other animals including invertebrates. Focus on similarities.  
- Draw around person. Make organ shapes for display (advanced organiser). Annotate. |
| 2      | Why do we have blood? | Use complex science words | - Use standing sample blood to demonstrate components (plasma - water, nutrients; red blood cells - oxygen. No details). Mock blood samples to show oxygenated/deoxygenated  
- Colour/animate diagram of circulatory system. Explain oxygenation/deoxygenation |
| 3      | How does blood get around our body? | Use a science model to explain | - Annotate diagram of double circulation (model). Show sections of artery / vein to explain differences. Basic understanding of pressure differences & gas/nutrient exchange  
- Make a model heart (washing-up bottle with long clear tube held vertical). Half fill with red coloured water. Squeezing bottle (shows how powerful heart has to be).  
- Show an actual heart with vessels attached. Dissect to show chambers. No detail needed |
| 4 & 5  | What happens when we exercise? | Write an ordered method | - Fair test - pulse rate/recovery time with type/severity of exercise. Tabulate, Graph. Explain using model of double circulation. Repeats  
- Fair test - breathing rate/volume with type/severity of exercise. Tabulate, Graph. Explain using model of double circulation. Repeats |
| 6      | What happens when we exercise? | Write an ordered method | - Fitness tests (e.g. bleep test, vertical jump test, etc). Can be tabulated. Repeats.  
- Discuss changes when we exercise (e.g. fatigue, sweating). Explain.  
- Devise a fitness programme. Carry it out over the term. Record changes over time. |
| 7 & 8  | What are the effects of diet, drugs & lifestyle? | Use complex science words | - Sort food labels/pictures to identify sugary/fatty/high energy foods. Washing line  
- Create food diary. Discuss implications and ways forward. Design poster / advise sheet  
- Sort illegal / legal; recreational / prescription; harmful / harmless drugs. Discuss.  
- Fair test - effect of coffee on reaction time (catching a falling ruler)  
- Discuss effects of alcohol / smoking. Design poster / advise sheet. YouTube experiments |