

Y6 Science – Animals inc. humans

NC Targets to be covered:

- describe how to keep their body healthy
- recognise the impact of drugs, alcohol and smoking on the human body
- recognise the impact of an unhealthy diet
- describe how blood is pumped around the body
- describe how water and nutrients are transported around the body
- describe the functions of the heart, blood vessels and blood
- identify and name the main parts of the circulatory system.

Learning Ladders:

I can identify and name the main parts of the human circulatory system
 I can describe the functions of the heart, blood vessels and blood
 I can describe how water and nutrients are transported around the body
 I can describe how blood is pumped around the body
 I can recognise the impact of an unhealthy diet
 I can recognise the impact of drugs, alcohol and smoking on the human body
 I can describe how to keep my body healthy

Working Scientifically

I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.

Week	Order of Study – Main plots and Subplots
1	<u>LI- I can identify and name the main parts of the human circulatory system.</u> Stick in and complete the first two sections of the KWL grid, and then stick in knowledge organiser. Thinking time - what does the heart do? Children to explain on the 'pre-assessment activity worksheet. Children can write or draw a labelled diagram. • Explain that the heart is part of the circulatory system in our bodies. Circulatory means the process of circulation where something is moving around. • Show the diagram of the heart and the lungs and talk through the different stages (PDF slide 3). Explain that even though the diagram shows red and blue, our blood is never blue! This is just something that scientists do to show the difference between oxygenated and deoxygenated blood on diagrams. • Explain the main purpose of the heart and how it works (PDF slide 4) • Explain the purpose of the blood vessels. Explain that there are veins, which carry deoxygenated blood, and arteries which carry oxygenated blood. (PDF slide 5) • Explain the importance of the blood in our bodies and that it transports oxygen around our body. (PDF slide 6) • Partner activity. Children to have the partner activity cards turned upside down on their table. One child should pick up a card without showing their partner. They need to explain the part of the circulatory system to their partner without saying the name. Their partner has to guess which part they are describing. Then swap. • Independent Activity. Children to write short sentences to explain the different parts of the circulatory system using the keywords and draw arrows to show which part they are explaining. • Plenary (PDF slide 9). Can you help me match the different parts of the circulatory system to the correct definition? Teacher mark. Resources needed: Pre-assessment activity • Partner activity word cards (printed and cut out ready to use) • Differentiated activity, challenge and next step activities Key terminology - heart, veins, arteries, blood, lungs, oxygen
2	<u>LI- I can describe the functions of the heart, blood vessels and blood.</u> Last lesson recap. Can you remember the different parts of the circulatory system? Give children time to discuss with partners/groups before feeding back as a class. • Explain the circulatory system diagram (PDF slide 2). Children could explain it to their partners as a recap. • Explain that we will be looking at the heart in more detail today. The heart keeps the blood moving around the circulatory system. It is about the size of a fist and it is protected by the ribcage. Why do you think it needs to be protected by the ribcage? • Show the diagram of the heart (PDF slide 4). Do the children spot anything with the names of the different parts? What do children notice about the colours of the diagram? Are our hearts really red and blue? • Discuss the four main blood vessels that carry blood to and from the heart. (PDF slide 6) • Discuss the four main chambers of the heart. (PDF slide 7) • Group activity. In small groups, can you act out the movements of the heart and blood as it beats? Practise in your groups and we will show them to the class. Children could use printed pictures of the heart/lungs to help

	with their activity. They could also use blue and red tissue paper streamers to show the oxygenated and deoxygenated blood. • Independent activity. Label the different parts of the heart on the diagram. • Plenary. Recap the different stages of the heart pumping blood. Read through the statements and put them in the order in which they happen. Teacher mark. Resources needed: Differentiated activity, challenge and next step activities • Blue and red strips of tissue paper (optional) • Printed pictures of the heart/lungs (optional) Key terminology: heart, veins, arteries, blood, lungs, oxygen
3	LI- I can describe how blood is pumped around the body and how this transports water and nutrients. Last lesson recap. Can you remember the different parts of the heart? Give children time to discuss with partners/groups before feeding back as a class. • Thinking time. What does the blood transport around the body? • Blood transports oxygen, nutrients and water. How do you think it does this? • The transportation of water and nutrients in our bodies starts with the food we eat. We need to provide our bodies with water and nutrients for the blood to be able to transport them. Show the children the 'Eatwell plate' (PDF slide 5). Children will have seen this before in LKS2. Can they remember the different food groups? • Explain the different vitamins and minerals we get from each food group using the diagram (PDF slide 7) • Discuss the role of the digestive system in transporting water and nutrients. When we digest food, we use a lot of different internal organs. Each organ has an important job in ensuring our food is digested properly. Children will have learnt about the digestive system in LKS2. This will be a recap but also explains more about the transportation of nutrients and water. (PDF slides 9-16) • Group activity. Create a presentation to explain how the body absorbs nutrients and water and then present it to the rest of the class. You could do a poster, a PowerPoint presentation, a drama presentation... it's up to you! Children can use the organ name cards to help them remember the different organs. • Independent activity • Plenary. Match the organ to its definition. Self assessment/Learning journey. Resources needed: Differentiated activity, challenge and next step activities • Organ name cards for group activity (printed and cut out ready to use) Key Vocabulary – veins, arteries, blood, vitamins, water, oxygen, transported
4	LI- I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate. Observation Over Time enquiry- How long does it take your pulse rate to return to your resting pulse rate (recovery rate)? Last lesson recap. Can you remember the different parts of the heart? Give children time to discuss with partners/groups before feeding back as a class. • Explain the circulatory system diagram (PDF slide 2). Children could explain it to their partners as a recap. • When we talk about our heart, we often talk about our pulse. What is a pulse? • A pulse is a steady beat. It can be measured by counting the number of beats per minute. This is our heart rate. • Partner activity. Can you find your pulse? Once you have found your pulse, can children measure their heart rate? Record the heart rates of children in your group on the 'partner activity' worksheet. (Challenge activity is based on these measurements) • It is important that we exercise our hearts to keep them healthy. When we exercise, our heart rate needs to increase. • Today we will be investigating to see which exercise increases our heart rate the most. • Children will first plan out their investigation on the differentiated activity sheets. They can complete this as partners or in small groups. They will then need time to conduct their investigation. This may need extra time. • Plenary. Lesson reflection. What did you most enjoy about this lesson? Tell me one thing you have learnt. Did you find anything difficult? Peer assessment. Resources needed: Partner activity worksheet • Differentiated activity, challenge and next step activities • Objects for different exercises (e.g. skipping ropes, bean bags, footballs, different size balls, hula hoops etc) Key Vocabulary – heart, veins, arteries, blood, lungs, oxygen, exercise, pulse, heart rate, heartbeat
5	LI- I can recognise the impact of an unhealthy diet. • Last lesson recap. Can you remember how we absorb water and nutrients into our blood? Give children time to discuss with partners/groups before feeding back as a class. • Thinking time. What does our blood transport around our body? • As we grow into adults, there are lots of things we should be doing to help keep our bodies strong and healthy. Can you think of anything we could do to keep our bodies strong and healthy?

	• Thinking time. Look at the picture of the boy (PDF slide 5). What do you think has happened to the child in the picture? • This child has been exercising. What is your favourite type of exercise? How does exercising make you feel? • Exercise is important to keep our bodies healthy. Partner activity. Why is important to exercise? Give children 60 seconds to write down as many reasons as they can. Discuss the answers the children have. • Having a healthy diet is also important. Discuss and show the two lunchboxes (PDF slide 11) Discuss which of these lunchboxes is healthy and which is unhealthy. Explain your answer. • Explain that personal hygiene is also important. What do we mean by personal hygiene? How can we have good personal hygiene? Why is this important? • PDF slides 15-22 explain how people can become ill and what they might do to make themselves feel better. • However, if people exercise, eat a healthy diet and have good personal hygiene this gives them a better chance of leading a healthy lifestyle. • Independent activity - Children given plain paper to design their own poster explaining the three main things that people need to do to live a healthy lifestyle (exercise, healthy diet, good personal hygiene). Children could be given an audience to aim their poster at e.g. young children, teenagers or adults. • Plenary. Lesson recap. How can we lead a healthy lifestyle? Peer assessment. Resources needed: Differentiated activity, challenge and next step activities Key Vocabulary – exercise, healthy, unhealthy, diet, personal hygiene, illness, sick, medicine
6	LI- I can recognise the impact of drugs, alcohol and smoking on the human body. Last lesson recap. How can we live a healthy lifestyle? Give children time to discuss with partners/groups before feeding back as a class. • As we grow into adults, there are lots of things we should be doing to help keep our bodies strong and healthy. There are also lots of things that adults do that can damage our bodies. Can you think of anything that adults do that could damage our bodies? • Discussion time (PDF slide 4). Look at the photos. Are these people healthy? • Discuss how being overweight can be unhealthy. This man looks to be overweight. This is not healthy as it can put extra strain on your organs, bones and muscles. • Show the photo of the woman smoking a cigarette with a glass of alcohol. What are your thoughts on this picture? Is it okay for adults to do this? • Explain what smoking and alcohol can do to the body (PDF slide 8 and 9) • Independent activity. Children given plain paper to design their own poster to educate people on one of the health villains we have discussed. Children could be given an audience to aim their poster at e.g. young children, teenagers or adults. • Plenary. Discussion. 'I am in year 8 and two of my best friends have started smoking. They keep asking me if I want one. I said no but they made fun of me and said I wasn't cool. What should I do?' What do you think they should do? Discuss with your partner before we discuss as a class. Peer assessment. Resources needed: • Differentiated activity, challenge and next step activities Key Vocabulary – exercise, healthy, unhealthy, diet, personal hygiene, illness, sick, medicine, smoking, alcohol, excessive, overweight
7	LI- I can describe how to keep my body healthy. Peer assessment. Resources needed: Key Vocabulary –
Assessment time – Complete the final column of their KWL grid.	