

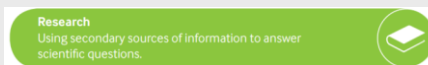
Mendell Primary School



Aspire Challenge Achieve

Medium Term Plan Science

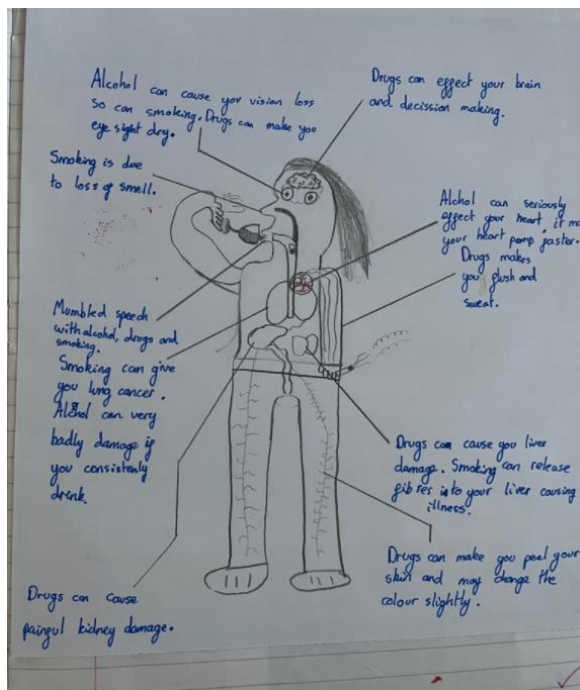


Year Group: 6	Term: Spring 2 Teacher: Sarah Wearing / Dionne Sinatti	Subject lead: Sarah Bride	Overview: Animals Including Humans.	Key End Points: By the end of this unit children will be able to:	
Common Misconceptions: Some children may think: <ul style="list-style-type: none"> • we just eat food for energy • all fat is bad for you • all dairy is good for you • protein is good for you, so you can eat as much as you want • foods only contain fat if you can see it • all drugs are bad for you. 		Unit key Vocabulary: Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle	Children will recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function <ul style="list-style-type: none"> • describe the ways in which nutrients and water are transported within animals, including humans 	<ul style="list-style-type: none"> • 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. 	
Links to other learning: DT – healthy eating PSHE	Prior Learning: <ul style="list-style-type: none"> • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Y2 - Animals, including humans) • Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. (Y3 - Animals, including humans) • Describe the simple functions of the basic parts of the digestive system in humans. (Y4 - Animals, including humans) • Identify the different types of teeth in humans and their simple functions. (Y4 - Animals, including humans) 	Future Learning: <ul style="list-style-type: none"> • The consequences of imbalances in the diet, including obesity, starvation and deficiency diseases. (KS3) • The effects of recreational drugs (including substance misuse) on behaviour, health and life processes. (KS3) • The structure and functions of the gas exchange system in humans, including adaptations to function. (KS3) • The mechanism of breathing to move air in and out of the lungs. (KS3) • The impact of exercise, asthma and smoking on the human gas exchange system. (KS3) 	High Quality Text: Scientist to study: Richard Doll (Doctor who proved the link between lung cancer and smoking)	Risk Assessment: Be careful making holes in battle tops.	Teacher CPD: Reach Out CPD - https://www.reachoutcpd.com/ sign up for free. ASE Plan Muharem work.
Learning Intention	Lesson Outline (Key Questions in colour)		Resources	Vocabulary	Lowest 20% Adaptations



1	<p>L.I. I can describe how water and nutrients are transported in the body.</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is interpreting and communicating/presenting research.</p> <p>Prior knowledge: what do we know about the heart? What do we already know about blood? What is the digestive system? What is a balanced diet? Why do we need to eat? What basic things do we need to survive? – <i>If there are any misconceptions or gaps in knowledge here please review before beginning the lesson.</i></p> <p>Big Question: How are nutrients and water transported around the body?</p> <p>Using the PowerPoint resource explore the different nutrients we get from different food types. Children match the types of nutrients with the reason why we need them. Review how nutrients enter the body and their prior knowledge of the digestive system. Review parts of the body involved in the digestive process. Explore how nutrients are broken down in stomach acid and how they are absorbed into the blood stream. Ask why do we need water? Now explore how water is transported and absorbed in the body using the resources.</p> <p>Provide the children with pictures of the body parts involved in the transportation of water and nutrients in the body. In mixed ability groups children think of a way to communicate what they have found out about how water and nutrients are transported around the body. e.g. poster, PowerPoint, podcast, poster paper, one child is draw around children stick/draw the organs in the correct place and annotate.</p> <p>Children can present their presentations to the rest of the class – teacher can video.</p> <p>Exit pass: use secondary resources to research how water and nutrients are transported in animals.</p>	<p>Blood stream, digestive system, nutrients, transported, adsorbed, small and large intestine, capillaries.</p>	<p>Nutrients, nutrition, water, system, circulatory, digestive, skeletal, muscular, blood, blood vessels, heart, lungs, stomach, gall bladder, liver, small intestine, large intestine, pancreas, liver, kidneys, rectum, bladder.</p>	
2	<p>L.I. I can research the effects of harmful substances on the human body.</p> 	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is interpreting and communicating/presenting research.</p> <p>Prior knowledge: Nutrients and water are absorbed in the system in the _____, _____ and Stomach, small and large intestines.</p> <p>Water and nutrients enter the bloodstream via what? Capillaries.</p> <p>Word of the week: harmful substances</p> <p>Big Question: What effect do harmful substances have on our bodies?</p> <p>What are drugs? Can you give examples? Are all drugs bad? How do you know?</p> <p>Ask the children to sort cards into true and myth about drugs and alcohol in groups. Discuss the answers (see resource) and explain that drugs are substances that cause chemical reactions in the body. Can the children match the vocabulary cards to their definitions: stimulants, hallucinogens, analgesics and depressants? Explain that drugs can have long-term effects on the body as well as instant ones. Ensure children understand that drugs do not just include illegal substances but cigarettes and alcohol.</p>	<p>https://www.bbc.co.uk/bitesize/topics/zrsb87h/articles/zg982nb</p> <p>https://www.bbc.co.uk/bitesize/clips/zc7d7ty</p>	<p>harmful substances, drugs, alcohol, smoking.</p>	

Allow the children time to research the effects of drug and alcohol on the body and ask the children to record their finding by drawing a labelled diagram see example below;



Exit Pass: share the work of Richard Doll (Doctor who proved the link between lung cancer and smoking)

3 L.I. I can explain how to keep my heart healthy.



This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is

Give the children a variety of pictures and ask them to sort them into healthy and unhealthy – include a range of food and activities e.g. paying sport and sitting on the sofa. **Can any go in the middle part of the Venn diagram? Can the children add any examples of their own?**

Big question: What do we need to keep our hearts healthy?



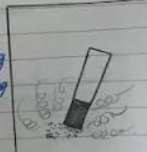
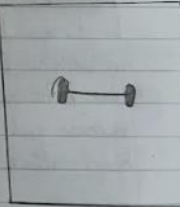
Focus children research today on the heart and how to keep it healthy focusing on the importance of a healthy lifestyle diet and exercise, which also considering their knowledge of the impact of harmful substances such as smoking, alcohol, drugs and too much salt.

Extended writing opportunity: Ask the children to write an information page to share their research and communicate their findings.

Example below:

Sorting cards, Ipads

Healthy, lifestyle, diet, exercise, nutrition, nutrients, food, water, cells, body, human, organs, vitamins, minerals,

	<p style="text-align: center;"><u>How to keep your heart healthy.</u></p> <p><u>Introduction-</u> Your heart is the main muscle in your body that keeps you alive. If your heart is damaged or getting damaged you may die or have an illness that can not be fixed. Please read the next information paragraphs carefully.</p> <p><u>Alcohol-</u> Alcohol can cause heart disease if you have too much of it everyday. Organs are known to be damaged by long-term alcohol misuse includes the brain and nervous system, heart and liver. Alcohol can make your blood pressure increase and can also cause major risks of heart attacks and strokes.</p>  <p><u>Drugs-</u> A drug is a chemical that affects your body physically and mentally. Prescriptive drugs are given to have if you listen to the amount you have to take otherwise they will become an addictive and may cause you an illness.</p> 	<p><u>Illegal drugs</u> can cause anxiety. Short term affects to taking drugs can cause gagging, ^{nausea} dizziness or dizzy and vomiting. Long term affects can cause loss of appetite, seeing things and seizures.</p> <p><u>Smoking-</u> Smoking is one of the main killers as the tar (which is in cigarettes) thickens which clogs the arteries and damages vital organs. Smoking is very addictive, that is because of something in it called nicotine which makes people calm down which wants people to have more. There is multiple ways to stop smoking such as patches for your arms, nicotine gum and there is lots of people to talk to about quitting and lots of websites.</p>  <p>Did you know? 78,000 die every year in the UK because of Smoking.</p> <p><u>Exercising-</u> Exercising is a great way to keep your heart healthy. Doing too much can cause strain on the heart and you could faint or have a heart attack for having too much.</p> 		<p>protein, fats, carbohydrates, water, fibre.</p>	
<p>4 L.I I can find out about the work of Charles Darwin.</p>	<p>This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is asking questions.</p> <p>Zoo Lab workshop – Charles Darwin Evolution – this will act as an impact day/pre teach for the next science unit Evolution and Inheritance. Prior to the workshop encourage children to think of questions to ask.</p>	<p>IPad for teacher, table and access to plug for presenter.</p>	<p>Charles Darwin Evolution theory Adaptations</p>		



Key Workshop Objectives:

- Discuss Charles Darwin's early life.
- Explain the theory of evolution
- Chronicle the path that the Beagle took across the world
- Note the evolutionary history and divergences of the animals used.

Animals often used in this workshop:



Class teacher to take photos and children reflect on key learning after the session.

5 TBC

This is a Science lesson. In Science, we study nature and the behaviour of natural things.

Use this lesson to address areas that need consolidation or further work also consider gap busting for children who need it. See resources for revision activity map if needed.

Revision activity map.

TBC