Mendell Primary School

Aspire   Challenge   Achieve

Medium Term Plan Science

Year Group: 2	Term: Spring1		Teacher: Jess Hindley	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**: • certain whole food groups like fats are 'bad' for you • certain specific foods, like cheese are also 'bad' for you • diet and fruit drinks are 'good' for you • snakes are similar to worms, so they must also be invertebrates • invertebrates have no form of skeleton.			**Unit key Vocabulary:** Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine		·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. • Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Identifying, grouping and classifying Making observations to name, sort and organise items. Research Using secondary sources of information to answer scientific questions. Comparative / fair testing Changing one variable to see its effect on another, whilst keeping all others the same.	Animals, unlike plants which can make their own food, need to eat in order to get the nutrients they need. Food contains a range of different nutrients that are needed by the body to stay healthy – carbohydrates including sugars, protein, vitamins, minerals, fibre, fat, sugars, water. A piece of food will often provide a range of nutrients
Links to other learning: DT – healthy eating **Maths -** Statistics	**Prior Learning:** Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. **(Y1 - Animals, including humans)** • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. **(Y1 - Animals, including humans)** • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). **(Y1 - Animals, including humans)**		**Future Learning:** 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)** • Construct and interpret a variety of food chains, identifying producers, predators and prey. **(Y4 - Animals, including humans)** • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. **(Y6 - Animals, including humans)**	**High Quality Text:** **Scientist to study:** Adelle Davis (Biochemist & Nutritionist who linked health and diet)	**Risk Assessment:**	**Teacher CPD:** ASE plan exemplification – Amelie Reach out CPD https://www.reachoutcpd.com/ sign up for free.

	· Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). **(Y2 - Animals, including humans)** · Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Y2 - Animals, including humans)					

	Learning Intention	Lesson Outline (Key Questions in colour)	Resources	Vocabulary	Lowest 20% Adaptations
1	L.I. I can name and identify food groups.	**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 making observations and asking questions** Prior learning and pre topic assessment: Ask the children to talk to their partner about what they had learnt about animals and humans in Year 2. Share a few key words to help them remember – food, water, exercise, survive, healthy, rest. Refer to prior learning information above. Ask the children to record their understanding as a concept map see example below – children will return to this at the end of the unit to add what they have found out. **Word of the week: nutritions** Give children the following keywords - carbohydrates, proteins, fats, fibre, minerals and vitamins - to research. Ask the children to use ipads, books and other secondary resources to research the key words. Key questions to support research; **What are carbohydrates/proteins/fats/fibre/minerals/vitamins?** **What foods contain carbohydrates/proteins/fats/fibre/minerals/vitamins?** After their research, the children were asked to complete the appropriate nutrient in the first column of the table. 	Ipads, food types books.	**carbohydrates, proteins, fats, fibre, minerals and vitamins**	

Evidence of learning table:

EVIDENCE OF LEARNING			ASSESSMENT
Oral evidence	Examples of work		Knowledge
"We need to eat healthily, so we don't get sick. We can't just eat one thing. We need lots of different things. We would die if we didn't drink water. All animals sleep. Even my dog sleeps. We need to exercise. I swim 5 or 4 times a week, so I am healthy."			During the initial talk, Amelie demonstrates that she is secure with the Year 2 statements.
Teacher observations			Working scientifically
The writing that is covered was added at the end of the topic.			Amelie asks questions relevant to the topic of humans.

Food Group Vocabulary

Monday 12th September

WALT identify food groups. ✓ You are beginning to do this.
Yes I am think you.

What are they called?	What do they do?	Where are they found?
carbohydrates 1) starches ✓	They give you energy	Bread, cereals, pasta, rice ✓
carbohydrates 2) Sugars		Biscuits, sweets, cakes
Proteins	They help you to grow and your body to repair itself	Meat, fish, dairy products, dry beans and eggs
Fats	They provide energy and help to build up your body	Milk, cheese, butter, meat cooking oil and some meat.
Fibre	It helps you digest your food	Wholegrain bread, cereals, fruit and vegetables
Vitamins and minerals	They build healthy cells	Fresh vegetables and fruit
water ✓	70% of your body is water and it is vital for good health	Drinks and some foods

Exit pass: how do animals get nutrients? How would we classify the diet of different animals? – omnivore, herbivore, carnivore.

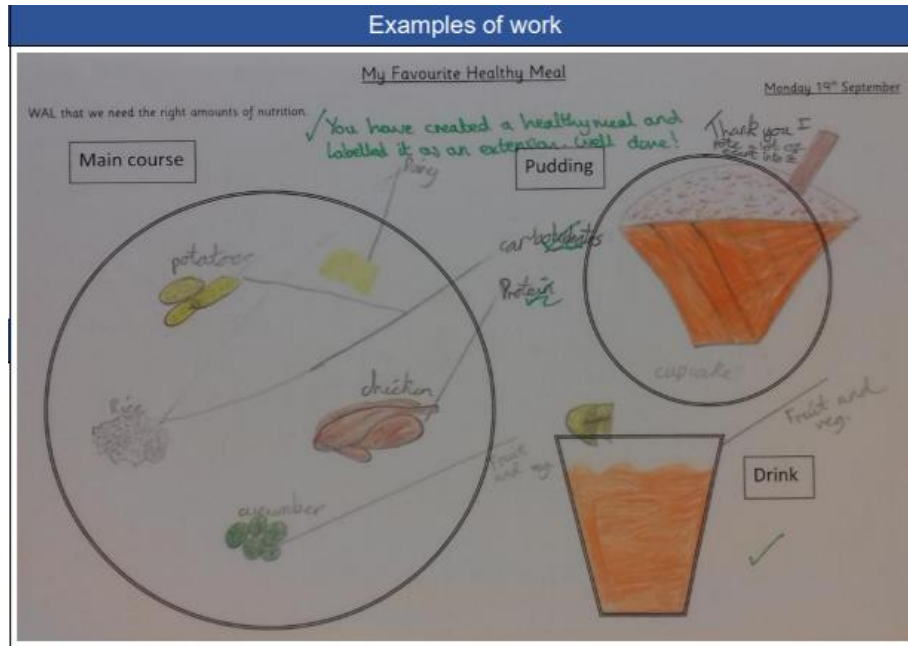| 2 | L.I. I can design a healthy balanced plate. | **This is a Science lesson. In Science, we study nature and the behaviour of natural things. The skill we will be using this lesson is communicating information.**
Prior learning;
Ask the children what they recall about the Eatwell plate from Year 2 – DT work.
Which foods contain carbohydrates/proteins/fats/fibre/minerals/vitamins?

Word of the week: balanced diet

Share the work of Adelle Davis Biochemist & Nutritionist who linked health and diet

Explorify: odd one out; fuel up.

1. Show the three images above and ask everyone to come up with as many similarities and differences as they can. If they get stuck, prompt them to think about:

    ● appearance
    ● what they do
    ● where they might be found

2. Then, everyone needs to decide which one is the odd one out and why. Encourage a reason for every answer and there is no wrong answer! | Eat well plate representation image.

Healthy plate template.

Ipads. | **carbohydrates, proteins, fats, fibre, minerals and vitamins, eat well plate, nutrients.** | |

Big Question: Explorify which foods keep us healthy?
What do the pupils already know about food we need for a healthy diet? – share the eat well plate and ask the children to explain what it shows us.

The children were asked to draw their favourite meal and then annotate it to show what nutrients they would gain from each food item
Recording example below:

After annotating their meal encourage the children to make green pen changes to ensure their meal is balanced using what they have found out from the eat well plate.

Examples of work

CH: see resources for diet comparison with an animal

| 3 | L.I. I can research the | 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 making observations, making predictions and recording data. | PowerPoint, different | carbohydrates, proteins, fats, fibre, | |

	nutritional information in different food products.	**Word of the week: saturated fat** **Prior learning:** Over the last few lessons we have learnt about the nutrition of different foods. Let's test our knowledge by working in pairs to complete a true or false quiz. Read the statements from around the room and decide which you think are true and which you think are false? **Explorify – what if – what if you only ate chips for a month?** **Big Question:** **What can we find out about nutrition from looking at labels on food packaging? What do you think we might find when we look? Discuss with your talk partner. How does this link to maths?** – watch the following video: https://www.youtube.com/watch?app=desktop&v=ylY0w04AAVk Share and discuss the food labels on the PowerPoint – think about what information it gives us and the information we are given by the traffic light system. Allow children time to explore the food packaging on their tables. Using the food packaging ask the children to sort it according to how much fat or sugar they contain. Bring their attention to the column that displays content per 100g so that they could compare food items. Ask children to record their sorting in books. **What is the nutritional information like for MacDonald's food products? – What are the children's predictions?** Using the McDonalds nutrition calculator ask the children to discuss the nutritional value of a Big Mac. – allow the children time to explore the calculator and note the fat content of their favourite McDonald items. **Exit pass:** using excel ask the children to create a pie chart displaying the nutritional value of their favourite McDonald item – post it note challenge: could they swap their favourite item for a healthier option from McDonalds?	food packaging. McDonald calculator	**minerals and vitamins, saturates, nutritional value.**	

4	L.I I can compare nutrients from similar foods.	**This is a Science lesson. In Science, we study of nature and the behaviour of natural things. The skill we will be using this lesson is making predictions.**
		
		Prior learning: This week we analysed the nutritional content of different food products. Remind your talk partner which nutritional food groups we should eat more of and which we should eat less of. **Can you remember why each nutrient is important for our body?**
		
		Explorify; Big Question – which breakfast is best? Encourage the children to consider everything they have learnt so far about nutrition and take that into account when providing an answer.
		
		Big question; What nutrients does a slice of pizza give us? Rally robin to discuss different types of pizzas, then predict what the nutrients might be like on a pizza. Discuss with talk partner.
		
		Provide the children with a selection of pizza and ask them to choose a typical slice of pizza they would eat at home. Ask them to discuss, think about and then reflect on the following questions:
		Spend some time now discussing the nutritional content of the slice you have chosen with your partner. Use these questions to help you:
		    1) **What nutrition does the base of the pizza give you?**
		    2) **What nutrition does the cheese give you?**
		    3) **What nutrition does the sauce give you?**
		    4) **What nutrition does the toppings give you?**
		Recording: share a WAGOLL with the children and ask them to draw, label and write about the nutrients provided by their slice of pizza – see PowerPoint for WAGOLL.
		Exit pass: ask children to compare the difference pizzas and say, which the healthiest and less healthy pizza is using sentences stems.
			Pizza, PowerPoint.
			
			Explorify – which breakfast is best?
			
			Sentence stems.
				Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat	

| 5 | L.I. I can investigate how much sugar is in fizzy drinks. | **This is a Science lesson. In Science, we study of nature and the behaviour of natural things. The skill we will be using this lesson is asking questions, making predictions and setting up tests.**

Prior learning: what are the different food groups? What foods give use vitamins and minerals? Why shouldn't we eat too much fat? What nutrition did your favourite slice of pizza provided you with?

Explorify – thirsty work – What's going on?

Big Question: Which type of fizzy drink contains the least sugar? – ask the children how can we find out the answer to our question? Do you have any predictions?

Share the examples on the PowerPoint about ways of finding an answer to our scientific question. Ask children to write their investigation and findings using the template provide and WAGOLL on powerpoint. | A range of fizzy drinks.

PowerPoint | **Nutrition, nutrients, sugars,** | |