SW9 Partnership SCIENCE Medium Term Plan: Year Group: 3 Term: Teacher:

TOPIC	NATIONAL CURRICULUM	KEY VOCABULARY	POSSIBLE TRIP
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. • Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	**TIER 2 (Academic):** Compare, identify, classify, investigate, measure, contract, function, structure. **TIER 3 (Topic Specific):** Exoskeleton, endoskeleton, muscles, protection, nutrition, support, movement, vitamins, minerals, fat, protein, water, diet, carbohydrates, fruit, vegetables, dairy, sugar, brain, rib cage, heart, lungs, joints, skull, spine, pelvis, bone, socket, femur, collar bone, herbivores, omnivores, carnivores, amphibians, birds, mammals, reptiles, fish, common animals, vertebrates, invertebrates, insects, minibeasts.	**Grant Museum of Zoology (UCL):** Houses thousands of real skeletons and fluid specimens, perfect for comparing human and animal skeletons, joints, and vertebrates vs. invertebrates. **Vauxhall City Farm (SW8):** provides guided educational visits focused on animal nutrition, digestive needs, and bone structures.
PRIOR LEARNING	**Y2:** Offspring growth stages, basic animal survival needs (water, food, air), simple food groups, and basic health/exercise/hygiene.		

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
ENQUIRY QUESTION	What nutrients do our bodies need from the food we eat?	How do the nutritional needs of carnivores, herbivores, and omnivores differ?	How do endoskeletons and exoskeletons differ in the animal kingdom?	What are the main bones in the human body and what do they do?	How do muscles and joints work together to create movement?	Do people with longer legs jump higher?
LEARNING OBJECTIVES	To identify key nutrients in human food packaging.	To classify animals by diet and compare their nutritional inputs.	To compare and classify vertebrates and invertebrates.	To identify, label, and state functions of major human bones.	To investigate how contracting muscles pull bones across joints.	To collect data and seek patterns between body proportions and physical performance.
ACTIVITY **WORKING SCIENTIFICALLY SKILLS**	**RESEARCHING:** Read food packaging nutritional labels to measure protein, carbohydrate, fat, vitamin, and mineral content.	**CLASSIFYING:** Compare nutritional requirements and teeth/digestive adaptations of herbivores, carnivores, and omnivores.	**CLASSIFYING:** Sort animal specimens into endoskeleton (vertebrates), exoskeleton (invertebrates), or hydrostatic structures.	**MODELLING & OBSERVING:** Construct life-size skeleton models; label skull, spine, rib cage, pelvis, femur, collar bone.	**MODELLING:** Construct working card/elastic band arm models demonstrating biceps contracting to pull radius/ulna bones.	**PATTERN SEEKING:** Measure leg length vs vertical jump height across the class; record data on scatter graphs.

SW9 Partnership SCIENCE Medium Term Plan: Year Group: 3 Term: Teacher:

ASSESSMENT	Explain the functions of proteins, carbs, fats, vitamins, and minerals.	State why animals cannot make their own food unlike plants.	Correctly categorize organisms into vertebrates and invertebrates.	Pair major bones with their key function: support, protection, or movement.	Explain that muscles can only pull (contract) and work in antagonistic pairs.	Identify whether data supports or refutes the hypothesis using measurements.
END POINT ASSESSMENT	Pupils can explain that animals obtain nutrition from food, sort food items into key nutrient categories, differentiate vertebrates from invertebrates, identify key bones and their functions (support, protection, movement), and describe how contracting muscle pairs move joints.					
HIGHER ORDER QUESTIONS	What would happen to human bones if our diet lacked minerals like calcium?	Why can't a carnivore survive on a herbivore's plant diet?	What are the advantages and disadvantages of having an exoskeleton vs an endoskeleton?	Which internal organs would be vulnerable if humans lacked a rib cage and skull?	Why do muscles need to work in pairs to move a single joint back and forth?	Does a longer femur always generate more jumping force?
FURTHER OPTIONAL QUESTIONS/BIG QUESTIONS FOR DISPLAY	Why don't human bodies collapse into a pile on the floor? Could a human survive with a skeleton on the outside of their body? Is a diet of pure fruit healthy for a tiger?					
INCLUSION & ADAPTATION	Pre-highlighted nutrition labels with simple low/high visual indicator cards.	Animal sorting mats with picture cards of food types (meat, plants, both).	Tactile bone/shell kits; dual sorting hoops labelled "Inside Bone" vs "Outside Shell".	Pre-cut magnetic skeleton puzzle pieces with color-coded body zone outlines.	Direct physical arm contraction exercise using thick resistance bands.	Pre-set tape measure floor strips and simple 2-column recording sheets.
GREATER DEPTH	Analyse specialized athletic diets and calculate daily macronutrient ratios.	Compare skull and jaw structures of extinct pre-historic predators vs herbivores.	Research ecdysis (moulting) in invertebrates with exoskeletons.	Research bone marrow function and red blood cell production.	Investigate antagonistic muscle pairing in complex multi-directional joints (hip/shoulder).	Evaluate secondary variable impacts (e.g., muscle mass vs leg length) on performance.