Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: Science Year: LKS2 year B

NC/PoS:

- 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.

Prior Learning (what pupils already know and can do)
All animals produce off spring. All animals need food, water, air, shelter. Know exercise is important. There are different types of food: dairy, fruit and vegetables, carbohydrates, fats and proteins. know important to eat a variety of food and have good hygiene

End Goals (what pupils MUST know and remember)
To know the right food is important for a healthy body
To know animals get their nutrients from what they eat
To know all animals need the right amount of nutrients from the food they eat
To know carbohydrates and fats provide energy, proteins help with growth and repair, vitamins and minerals keep cells healthy, fibre helps food move through the gut and 70% of the body is water
To know the skeleton does three jobs: protecting the body parts, supporting the body and letting the body move.
To know bones have joints so the skeleton can bend.
To know muscles and joints allow movement
To know muscles are soft tissues that are joined to bones and always work in pairs.

Key Vocabulary: muscles, tendons, tissue, skeleton, protective, support, vertebrates, ribcage, sternum, pelvis, spine, endoskeleton, exoskeleton, serving, balanced diet, healthy, nutrients, carbohydrates, fibre, vitamins, minerals, fats, protein

Session 1: review prior learning
What do all animals need? Why is exercise important? Name different types of food.

Introduce career scientist
https://pstt.org.uk/application/files/3516/4572/2477/Protein_Biochemist_-_Dr_Gulin_Guler-Gane_-_v2.pdf
Show De Vinci's Vitruvian Man – anatomical drawing of human body.
He was fascinated by nature and spent time studying the human body.

Session 2:
Recap: Name three foods that are dairy, carbohydrates, contain fats and protein

LO: to research different nutrients
Children research carbohydrates, proteins, fats, fibre, minerals and vitamins and examples of food that provide them.
Seven types of nutrients:

a) Water – essential for survival, makes up 60% of human body
b) Carbohydrates – gives animals energy and prevents loss of muscle mass
c) Protein – building blocks for cells and essential for forming muscles
d) Fats – boosts absorption of vitamins and protects the organs of the body
e) Vitamins – help the bones grow and support the immune system
f) Minerals – helps the body to work properly

g) Fibre – helps the digestive system stay healthy NB. A piece of food will often provide a range of nutrients. Animals, including humans, cannot create their own food, so must consume plants and/or other animals to obtain energy and nutrients. A balanced diet is one that that contains the right nutrients in the right quantities, and should include carbohydrates, proteins, fats, minerals and vitamins. Nutrients, carbohydrates, protein, fats, vitamins Vocabulary: nutrients, carbohydrates, fibre, vitamins, minerals, fats, protein
Session 3: Recap: the 7 nutrients and what they do for the body Lo: to design a healthy meal that contains the right nutrients Design a meal showing food groups Vocabulary: balanced diet, healthy
Session 4: Recap: Match the food to the nutrients LO: to research and compare fats and sugars on food packaging Compare food by looking at 100g serving. Vocabulary: serving,
Session 5: Recap: Parts of the body linked to senses LO: to understand the function of a skeleton https://www.youtube.com/watch?v=WGd8_hZwnsA www.youtube.com/watch?v=fIoBoGSPkws – basic anatomy a) to support the body b) protect the organs c) help the body to move Name some of the major bones. Also look at skeletons of a variety of animals and group them An endoskeleton is an internal skeleton like in vertebrates An exoskeleton is the external skeleton that supports and protects an animal's body like in ants, bees, crabs Vocabulary: skeleton, protective, support, vertebrates, ribcage, sternum, pelvis, spine, endoskeleton, exoskeleton
Session 6: Recap: what are an exoskeleton and endoskeleton? What is their function? Name 3 bones Lo: To understand how muscles work https://www.youtube.com/watch?v=3haTJCOkyxA how bones and muscles work https://www.bbc.com/bitesize/articles/zpbxb82 - how do your muscles work Muscle is a soft tissue that produces force and motion and maintains the position of parts of the body. Muscles are joined to bones by tendons Vocabulary: muscles, tendons, tissue
Link to career scientist: https://pstt.org.uk/application/files/3516/4572/2477/Protein_Biochemist_-_Dr_Gulin_Guler-Gane_-_v2.pdf Orthopaedic doctor https://www.youtube.com/watch?v=6O4BM53cjSk
Scientists who have helped develop understanding in this field: Leonardo da Vinci made first anatomical drawings.