Science – Year 3

Animals, including humans

How does our body move and stand up?

Is all food good for us?

Why do different types of vitamins keep us healthy and which foods can we find them in?

NC objectives - **areas of study**	End point of area of study	Vocabulary		
		Basic	Adventurous	Technical
• Identify that animals, including humans, need the right types and amount of nutrition, and they cannot make their own food; they get their nutrition from what they eat. • Identify that humans and some other animals have skeletons and muscles for support, protection and movement: Know about the skeletal and muscular system of a human.	Pupils are able to identify the different food groups and name foods that are in each group. They understand and explain how the body needs food from every food group to create a healthy diet and a healthy body. They are able to talk about the differing amounts of food we need from each group and why this is. Using x rays and photographs, pupils can identify the skeleton in different animals and explain its function. They can name some of the bones in the human body and where they are. They know that some animals have an endoskeleton (internal) and others have an exoskeleton (external). They explain how humans move according to how their muscles work alongside their skeleton.	Nutrients, nutrition, carbohydrates, sugars, protein, fats, vitamins, minerals, water, fibre, muscles, relax, bones, joints, skeleton, support, protect, move, skull, ribs, spine		contract, loosen,

Knowledge

Substantive Knowledge

Retrieval- children know the names of different animals and their young and the lifecycle of some. They are able to identify different types of animals and describe them as herbivores, carnivores or omnivores. They know the basic needs of animals including humans and for humans the importance of a balanced diet, exercise and good hygiene.

Lesson 1

To know how different foods contribute to a healthy diet.

Disciplinary Knowledge

Working as Biologists to-

- **Know that science is a way to understand our world by carefully observing and reflecting on what we see. Understanding the role of the skeleton in the life of an animal including humans for survival.**

They develop the skills of working as radiographers to identify bones and skeletons.

Similarities and Differences

Nutrients, nutrition, carbohydrates, protein, fats, vitamins, minerals, water, fibre, sugars ● Know that proteins are good for growth, carbohydrates for energy and fruit and vegetables provide vitamins and minerals which help keep us healthy (e.g. calcium for healthy bones and teeth) Lesson 2 To know the features of a balanced diet. **Nutrients, nutrition, carbohydrates, protein, fats, vitamins, minerals, water, fibre, sugars** ● Know that getting the right amount of each food group (including over half of the diet made up of fruit, vegetables and carbohydrates) is called a balanced diet ● Know that lack of a nutrient can cause ill health; for example, a lack of vitamin D leads to a disease called rickets ● To begin to recognise what is healthy and unhealthy. ● Lesson 3 ● To know that many animals have a skeleton. ● **skeleton, support, protect, move, skull, ribs, spine** ● Know that animals, including humans, have a skeleton made up of solid objects ● Children know what a skeleton is and which animals have one. ● ● Lesson 5 ● To know that skeletons provide support and protection for the body. ● **skeleton, support, protect, move, skull, ribs, spine, endoskeleton, exoskeleton** ● Know that skeletons provide support for muscles and protect the body; for example, the rib cage protects the vital organs in the human body ● Children name some of the key parts of the skeleton and how they support and protect the body. ● To begin to understand the wonder of how animals have been created.	Compare the skeletons of different animals and identify similarities and differences between them. Compare the diets of humans to know what makes a balanced diet. Pupils explore model skeletons in school to see how it is made up and how it supports the body. Identify and name different animals including humans and their type of skeleton, recording findings in drawings and labelled diagrams using the correct scientific language. Classify animals according to their skeleton. Identify the different food groups and foods from each one. Classify different foods in to their different food groups. Ask and answer questions about different diets. They reflect on the diets of different animals and how their diet is balanced or not- why might this be? Pupils identify the different food groups and suggest how foods can be selected to create a healthy balanced meal. **Patterns-** children know that research has enabled us to find patterns in the food eaten and the health of humans. Discussion of different diet as appropriate and how to be healthy- links to PSHE/DT healthy eating. **Use of evidence-** x rays and other images provide great evidence of the skeleton within our body. Pupils need to know what is under the skin and how it is similar to that of the model skeletons used in school.

- Lesson 6
- To know how the human skeleton is made up.
- **muscles, relax, bones, joints**
- Know that human skeletons are made up of bones and cartilage
- Children can name some of the main parts of the human skeleton and how it protects and provides support.
- Lesson 7
- To know how muscles work in the human body.
- **muscles, relax, bones, joints**
- Know that muscles can only contract, so they must be arranged in pairs in the body so that as one contracts the other loosens

Concepts

Biology	Chemistry	Physics	

SKILLS

1. Compare	2. Explore	3. Identify	4. describe	5. classify
6. Question	7. observe	8. test	9. record	10. research

ASSESSMENT

KNOW MORE, REMEMBER MORE, DO MORE...

In this unit of learning, progress has been made when a learner knows more. This 'distance travelled' from the starting point is evidenced through them remembering more and doing more: in books, low stakes quizzes, retrieval, use of mind maps, answering the big question and being able to feel more confident about this unit.