

National Curriculum Objectives:

- 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

Key Vocabulary:

nutrients, nutrition, carbohydrates, protein, fat, vitamins, minerals, water, fibre, skeleton, bones, joints, muscles, contract, relax

Lesson 1: Nutrition
Identify & Classify
Enquiry Question – Do all animals have the same diet?



Investigation Station: Are these foods healthy? Can you use the pictures to create a healthy meal?
Children to draw a concept map about what they learned in Y2 – animals – add to at the end of topic.
Show chn a range of foods and pictures of animals that eat them. Discuss which animals they think might eat which of the foods. Encourage them to look for clues in the pictures of the animals and foods. Recap herbivores, carnivores and omnivores with the chn and discuss their different diets. Chn to sort animals into their diets and think of different foods they may eat.

Working Scientifically Skills: To compare and contrast the diets of different animals and decide ways of grouping them according to what they eat. To answer their own and others; questions based on observations they have made.
Key Knowledge: Different animals are adapted to eat different foods.

Lesson 2: Nutrition
Identify & Classify/Research
Enquiry Question – Where do living things get their food?



Investigation Station: range of different food packaging
Odd one out – which is healthy and which is not. Chn to discuss. Ask chn what would happen if we didn't eat. Explain that we need food to continue existing. Chn to sort foods into healthy foods and less healthy foods. Can they remember the different food groups from Y2. Introduce nutrients and discuss the importance of a balanced diet. Chn to research the different nutrients and use this to design their own healthy meal. Label with the different nutrients it provides.
Visit the goats and discuss with the chn their diet. Is it the same/different. Where do the goats get their food?

Working Scientifically Skills: To research different food groups and how they keep us healthy. To present information in different ways (diagram).
Key Knowledge: Know that animals, including humans, cannot make their own food. They get their nutrition from what they eat.

Lesson 4: The Human Skeleton
Research
Enquiry Question – Why do animals have skeletons?



Investigation Station: skeleton, names of bones
Have paper cut out and ask chn to label with body parts. Let it fall to the floor and ask if there is anything else a body needs.
Take the children outside and have them run, skip, jump and ask if they know what part of their body allows them to do this. Discuss the need for bones – protection, movement and support.
Observe the goats and focus on how they walk. Research the difference between human and goat skeletons.

***child led investigation**
Working Scientifically Skills: To ask relevant questions and use different types of scientific enquiry to answer the. To observe and compare movement in animals.
Key Knowledge: Many animals have skeletons for support, protection and movement.

Lesson 5: The Human Skeleton
Pattern Seeking
Enquiry Question – Do older people have longer bones?



Investigation Station: Why do we need bones and muscles? Rubber gloves, straws, string.
Pose this question to the children and ask them how we can find out the answer.
Children to visit different year groups and take measurement of elbow-wrist and knee-ankle.
Children to record the measurements (link to length in maths).
Discuss what we could do with the measurements – create table. Children to write their answer to the question.

Working Scientifically Skills: To use observations to suggest how and why things are linked. Setting up simple practical enquiries, comparative and fair tests.
Key Knowledge: The length of our bones changes as we get older. Older children have longer bones.

Lesson 3: Food Packaging
Research
Enquiry Question – What nutrients do different food provide?



Investigation Station: skeleton, names of bones
Nutrient match – what do the nutrients do in our body? Children to look at different food packaging and discuss the different nutrients from the different foods. Discuss hidden sugars.
Look at amount per 100g for comparisons.
Children to complete table to show carbs, protein, fat per 100g of different foods.

Working Scientifically Skills: To answer questions based on observations they have made and information they have gathered from different sources.
Key Knowledge: Different foods provide different nutrients. We need to have a healthy, balanced diet to ensure our bodies get the correct nutrients.

Week 6: Muscles
Enquiry Question – Why do animals have muscles?

Investigation Station: Diet information, skeleton to label, sheets to complete
Children to recap the functions of a skeleton and learn about the different joints in a skeleton. Chn to find them on their body and investigate how they move in different ways.
Ask children if there is anything else that our bodies need to move – muscles. Children investigate their biceps and triceps – feel them change shape as they contract and how they tire when they have worked.
Children to make a hand model using straws for bones and string for muscles to see how bones and muscles work together. Large scale model.

Working Scientifically Skills: To answer questions using scientific language. To consider their prior knowledge when answering questions.
Key Knowledge: Muscles are connected to bones and move them when they contract. We need muscles to help us move.

Prior learning:

- In Year 2 - the children learnt:
- Animals, including humans, have offspring that grow into adults.
 - The basic needs of animals, including humans, for survival.
 - The importance of exercise for humans, eating the right amounts of different types of food, and hygiene.

Future Learning:

- In Year 4 the children will learn:
- The basic parts of the digestive system.
 - The different types of teeth and their functions.
 - How to construct a food chain and identify producers, predators and prey.

Working Scientifically Skills:

- Asking questions
- Making predictions
- Setting up tests
- Observing and measuring
- Recording data
- Interpreting and communicating results
- Evaluating

Things to include each half term:

- 1 x active learning
- 1 x outdoor science lesson
- 3 x experiments/investigations
- 1 x child-led investigation
- 3 x enquiry type lesson

Science Display:

Enquiry types
Photographs
Vocabulary

