

BIOLOGY

YEAR 3 and 4: SUMMER 1

How can a balanced diet help us have better energy?

COVERAGE: How can a balanced diet help us have better energy?

Pupils who are secure will be able to:

- Recall the three key functions of the skeleton (movement, support and protection).
- Describe a vertebrate, invertebrate, endoskeleton and exoskeleton.
- Identify and name the skull, spine, ribs and pelvis on a diagram.
- Recall that muscles cause movements in the body, some of which we control by choice and that they cause a movement by shortening and pulling on a bone.
- Recall that animals, including humans, need to eat food to survive.
- Describe some examples of how energy is used by the body and make comparisons about the energy demands between people.
- List some of the seven nutrient groups, name foods that are good sources of them and describe what they are needed for in the body.
- Compare two different meals and explain which is more balanced by naming the nutrient groups and commenting on the relevant proportions.

When working scientifically, pupils who are secure will be able to:

- Use information about skeletons to group animals.
- Record measurements of different bones and use the data to sort them into size order.
- Describe some ways scientific research has improved the field of bionics/prosthetics, such as the choice of materials or linking their movement to muscles in the arm.
- Find relevant data on food packaging and make numerical comparisons.
- Summarise key information using secondary sources.
- Describe some changes to scientific knowledge and jobs that require this information.

KEY LANGUAGE AND VOCABULARY:

balanced diet

bone

carbohydrate

conclusion

fat

fibre

invertebrate

joint

measure (KS1)

mineral

movement

muscle

nutrient

protection

protein

record

research (KS1)

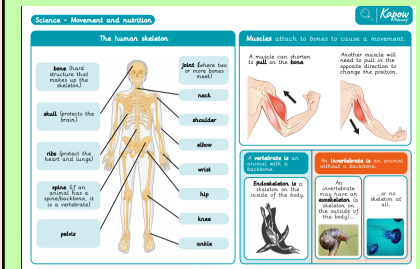
skeleton

support

vertebrate

vitamin

KNOWLEDGE AND FACT SHEET



KEY QUESTIONS:

1. Why do we have skeletons and how do they help us?
2. Can you name the main bones in the human body?
3. Why are muscles and how do they work?
4. Why is food important for humans?
5. What are nutrients and how do they help people?
6. How does a balanced diet work?

KEY SKILLS AND KNOWLEDGE

Knowledge

- Animals can be grouped based on the presence of a skeleton.

- The skeleton in humans and some animals is used for movement, protection and support.
- The muscular system in humans and some animals works with the skeleton for movement.
- The main bones in the body. Animals, including humans, need the right types and amount of nutrition.
- Humans cannot make their own food; therefore, they eat to get the nutrition needed.
- There are nutrient groups (carbohydrates, protein, fats, fibre, vitamins, minerals and water) with their own functions in the body.
- A balanced diet should include all nutrient groups.
- Animals have different diets.

Science in action

- There are famous scientists throughout history.
- There are a range of jobs and careers that use scientific knowledge and methods.
- Scientific work is taking place with modern-day scientists.
- There are science events in the news and recent discoveries.
- There are methods and equipment used by scientists throughout history that have led to modern methods.
- Scientific knowledge has changed over time, leading to the current understanding of Science.
- There is current scientific research taking place with aims for the future.

Skills

Measuring

- Using standard units to measure and compare.
- Using measuring equipment with increasing accuracy.
- Reading scales with unmarked intervals between numbers.

Researching

- Gathering specific information from a variety of sources.

Recording

- Using a prepared table to record results including more detailed observations.

Grouping and classifying

- Grouping based on visible characteristics and measurable properties.

Analysing

- Writing a conclusion to summarise findings using simple scientific vocabulary.

Evaluating

- Beginning to identify new questions that would further the enquiry.		
ENRICHMENT: The children will carry out investigations into body movement and how food can help us retain energy in our systems. Visits: - visit of a personal trainer to advice on different food types and how they help you train.	Previous Learning: The children will have completed an investigation into hand spans and how this can affect grip strength. Future Learning: The children will be moving onto investigating plant reproduction.	
School Drivers to Examine Children will look at: <u>Economy and Power</u> = how has an economy developed and grown around the world into food production and how it can support humans to live a longer life. <u>Creativity and Innovation</u> = children will look at how food production can support and advance in order to provide health benefits.		