YEAR 3 SCIENCE: KNOWLEDGE ORGANISER

SKELETONS • MUSCLES • NUTRITION AND DIET

1 What does our skeleton do?	**2** Can we name five important bones?	**3** How do muscles help us move?	**4** What is a balanced diet?

THE SKELETON

A skeleton is the framework of bones inside our body. It has three main jobs:
Support – gives our body shape and helps us stand.
Protection – keeps important organs safe.
Movement – works with muscles and joints to help us move.

Key fact: An adult human usually has 206 bones.

BONE	JOB
Skull	Protects the brain.
Ribcage	Protects the heart and lungs.
Spine	Supports the body; protects the spinal cord.
Pelvis	Supports the body and protects organs in the lower tummy.
Femur	Thigh bone; helps us stand, walk and run.

JOINTS

A **joint** is where two or more bones meet. Joints let our body bend and move. Examples: knee, elbow, shoulder and wrist.

MUSCLES WORK IN PAIRS

Muscles are attached to bones. They **pull** on bones to make them move.
When you bend your elbow: **biceps contracts** (gets shorter) and **triceps relaxes** (gets longer).
To straighten your arm, they swap jobs: the triceps contracts and the biceps relaxes.

FOOD GROUPS AND A BALANCED DIET

A balanced diet means eating a variety of foods in suitable amounts. Different foods provide nutrients to help us grow, stay healthy and have energy.

FOOD GROUP	EXAMPLES	WHY WE NEED IT
Fruit and vegetables	Apples, carrots, peas	Vitamins, minerals and fibre.
Potatoes, bread, rice, pasta and other starchy carbohydrates	Potatoes, bread, rice, oats	Give us energy.
Beans, pulses, fish, eggs, meat and other proteins	Beans, lentils, fish, eggs	Growth and repair.
Dairy and alternatives	Milk, yoghurt, cheese	Calcium for strong bones and teeth.
Oils and spreads	Olive or vegetable oil, spreads	Provide fats; choose small amounts.

KEY VOCABULARY

Skeleton – all the bones in the body. **Organ** – a body part with a special job. **Contract** – a muscle gets shorter. **Relax** – a muscle gets longer. **Nutrient** – something in food our body needs. **Protein** – helps growth and repair.

QUICK CHECK

1. Name the three jobs of the skeleton.
2. Which bone protects your brain?
3. What is a joint?
4. What happens to the biceps when you bend your elbow?
5. Name the five food groups.

Remember: Keep active, eat a variety of foods and look after your body!