Topic: Movement

This unit explores how living organisms move, why movement is essential for survival, and the biological systems that make it possible. It highlights both the structural adaptations and the physiological processes that enable movement in humans, animals, and plants.

Key areas of focus include:

- **Movement in Humans and Animals**
    - **The Skeletal System** – bones, joints, and their roles in support, protection, and movement.
    - **Types of Joints** – hinge, ball-and-socket, pivot, and gliding joints, with examples of their functions.
    - **Muscles and Movement** – antagonistic muscle pairs, how muscles contract and relax, and the role of tendons and ligaments.
    - **Locomotion in Animals** – adaptations for walking, running, flying, and swimming.
- **Movement in Plants**
    - **Tropisms** – directional growth responses such as phototropism, geotropism, hydrotropism, and thigmotropism.
    - **Nastic Movements** – non-directional responses like the opening and closing of flowers or leaves.
    - **Adaptations** – how plant movements help survival, reproduction, and resource acquisition.
- **Importance of Movement**
    - For obtaining food, escaping predators, reproduction, and responding to environmental changes.
    - For plants, movement ensures better access to light, water, and support.

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Learning outcomes: By the end of this topic, students should be able to:

- Explain the role of the skeleton, joints, and muscles in human movement.
- Describe different types of animal locomotion and their adaptations.
- Identify and explain plant movements and their survival value.
- Appreciate movement as a key feature of life that supports growth, survival, and reproduction.

This topic connects structure to function, showing how both plants and animals are equipped with specialized systems that allow them to interact with and adapt to their environments.

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