

305 TASK C GUIDE

Unit 305 Task C

Know the Structure and Function of Animal Skeletal Systems

What Is This Task About?

For this assignment you will identify the main parts of the animal skeletal system and explain their functions.

You will also compare the skeletons of three different animals and explain how their skeletons have adapted to suit their environment or method of movement.

Assessment Criteria

You will need to:

3.1 Identify the component parts of the animal skeletal system

3.2 Describe the functions of the animal skeletal system

3.3 Describe adaptations of selected skeletal systems of animals living in different environments

What You Need To Produce

You must:

- ✓ Label the bones of animal skeletons
- ✓ Describe the functions of the skeletal system
- ✓ Compare three different animal skeletons
- ✓ Explain how skeletal adaptations help animals survive and move in their environment

Photographs of labelled skeleton models, labelled diagrams or completed worksheets may be used as evidence.

Bones You Need To Know

You should be able to identify and label:

- Skull
- Atlas
- Axis
- Cervical Vertebrae
- Thoracic Vertebrae
- Lumbar Vertebrae
- Sacral Vertebrae
- Coccygeal Vertebrae
- True Ribs
- Scapula
- Humerus
- Radius
- Ulna
- Carpus
- Metacarpals
- Pelvis
- Femur
- Tibia
- Fibula
- Tarsus
- Metatarsals
- Phalanges

Functions of the Skeletal System

Support

The skeleton provides shape and support for the body.

Protection

Bones protect important organs.

Examples:

- Skull protects the brain
- Ribs protect the heart and lungs
- Vertebrae protect the spinal cord

305 TASK C GUIDE

Movement

Bones work with muscles and joints to allow movement.

Blood Cell Production

Bone marrow produces red and white blood cells.

Mineral Storage

Bones store minerals such as calcium and phosphorus.

Skeletal Adaptations

You will compare three different animals and explain how their skeletons help them survive in their environment.

Horse

- Long limb bones
- Strong skeleton
- Adapted for speed and running

Bat

- Lightweight skeleton
- Long finger bones support the wings
- Adapted for flight

Whale

- Forelimbs adapted into flippers
- Strong backbone
- Adapted for swimming

How To Achieve A Pass

To achieve a Pass you must:

- ✓ Correctly identify the main bones of the skeleton
- ✓ Describe the functions of the skeletal system
- ✓ Describe adaptations found in different animal skeletons

How To Achieve A Merit

To achieve a Merit you must do everything required for a Pass plus:

- ✓ Give more detailed descriptions of skeletal functions
- ✓ Explain several adaptations for each animal
- ✓ Use correct scientific terminology
- ✓ Show a good understanding of how skeletons help animals survive

How To Achieve A Distinction

To achieve a Distinction you must do everything required for a Merit plus:

- ✓ Give detailed explanations of how skeletal adaptations relate to environment and movement
- ✓ Compare animals clearly and accurately
- ✓ Demonstrate excellent understanding of structure and function
- ✓ Use detailed biological knowledge throughout your work

Tips For Success

- Learn bone names little and often.
- Use labelled skeleton diagrams for revision.
- Remember the five main functions of the skeleton.
- Think about how each animal moves and how its skeleton helps it.
- Use examples to support your explanations.
- Check scientific spelling carefully.