

AQA Examinations
AS / A Level Sport and Physical Education
AS 5581
A 6581

Module 1
Part A

Physiological Factors which Improve Performance

THE SKELETON - General Overview

- Background Information

AXIAL SKELETON

- skull
- vertebral column
- ribs
- sternum

APPENDICULAR SKELETON

- shoulder girdle
- hip girdle
- leg bones
- arm bones

FUNCTIONS of the SKELETON

- lever system
- attachment of muscles
- protection (of vital organs)
- support
- shape
- production of blood cells
- storage of fat / minerals

NAMES of MAJOR BONES

- femur, scapula, metacarpals, sacrum etc.

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BONY FEATURES

- **PROTUSIONS**
 - tibial tuberosity
- **DEPRESSIONS**
 - bicipital groove

FUNCTION

- to increase surface area for the attachments of muscle **TENDONS** and **LIGAMENTS**

The VERTEBRAL COLUMN

- modification of vertebrae in **five** major **regions** (of the spine) with different skeletal functions
- **CERVICAL (7 vertebrae)**
- including :
 - **atlas** - nodding of the head
 - **axis** - turning of the head
- **THORACIC (12 vertebrae)**
 - have half-facets to attach to the ribs
- **LUMBAR (5 vertebrae)**
- **SACRUM (fused)**
- **COCCYX (vestigial tail)**

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TYPES OF BONES

	<i>example</i>	<i>principal function</i>
LONG BONE	femur	lever
SHORT BONE	tarsal	strength
IRREGULAR BONE	vertebra	protection
FLAT BONE	pelvis	large surface area for muscle attachment
SESAMOID	patella	increase mechanical advantage of tendon