

Physiology of the Nose and Tongue
(pages 169 to 172)

- Name the four conditions a substance must meet for its smell to be perceived. *The substance must be odorant, volatile (or gaseous), sufficiently concentrated and come into contact with the cells of the olfactory epithelium.*
- Name the four conditions a substance must meet for its flavour to be perceived. *The substance must be sapid, soluble, sufficiently concentrated and come into contact with the taste buds of the gustatory papillae.*

4. Fill in the following table:

Receptor organ	Stimulus	Processor	Signal	Conductor	Analyzer
Nose	Odour	Olfactory epithelium	Nerve impulse	Olfactory nerve	Olfactory area of the brain
Tongue	Taste	Taste buds	Nerve impulse	Cranial nerves and brain stem	Taste area of the brain

Student textbook, pages 188 and 189

The Skeleton (pages 173 to 181)

- The terms below correspond to the parts of the skeleton. Match each term with the correct name of the bone.

Head	Upper limb(s)
Trunk	Lower limb(s)

- Humerus *Upper limb*
 - Scapula (shoulder blade) *Upper limb*
 - Occipital bone *Head*
 - Iliac bone *Trunk*
 - Mandible *Head*
 - Vertebra *Trunk*
 - Rib *Trunk*
 - Tibia *Lower limb*
 - Sternum *Trunk*
 - Ulna *Upper limb*
 - Fibula *Lower limb*
- Indicate which part of the skeleton performs each of the following functions:
 - It protects the heart, lungs and spinal cord. *Trunk*
 - It is used for prehension. *Upper limbs*
 - It protects the encephalon and provides a passageway for the sensory and motor nerves. *Head*

- The terms below correspond to the parts of the long bone. Match each term with the correct description below:

Articular cartilage
Growth cartilage
Diaphysis
Epiphysis
Yellow bone marrow
Red bone marrow
Compact bone
Periosteum

- Central, elongated part of the bone *Diaphysis*
- Reserve of calcium and phosphorous *Compact bone*
- End of the long bone, usually rounded in shape *Epiphysis*
- Protective surface of the epiphysis *Articular cartilage*
- Tissue in the epiphysis responsible for the bone's growth (length) *Growth cartilage*
- Area where the bone's growth (thickness) occurs *Periosteum*
- Area where blood cells are produced in spongy bone, and in the middle of long bones in young people *Red bone marrow*
- Lipid reserve inside the bone in adults *Yellow bone marrow*

Muscles (pages 183 to 185)

4. Indicate whether each muscle described is a cardiac, smooth or striated (skeletal) muscle.
- a) Muscle at the top of the thigh
Striated (skeletal)
 - b) Muscles of the tongue *Striated (skeletal)*
 - c) Muscles in the walls of the bronchi
Smooth
 - d) Muscles of the atria in the heart
Cardiac

5. The terms below correspond to the parts of the muscle. Match each term with the correct description below:

Muscle cell
Epimysium
Tendon
Belly

- a) Membrane (connective tissue) that completely surrounds the muscle
Epimysium
 - b) String of whitish connective tissue that attaches the end of each muscle to a bone *Tendon*
 - c) Largest part of the muscle, in the middle *Belly*
 - d) Fibre that constitutes the muscle
Muscle cell
6. Name the three properties of muscle fibres. *Excitable, contractile and elastic*

Joints (pages 186 to 188)

7. Match each structure of the mobile joint with the correct description below:

Articular cartilage
Ligament
Synovia

- a) I am a fluid that lubricates the joint. *Synovia*
 - b) I protect the bone surfaces from friction. *Articular cartilage*
 - c) I connect the bones of a joint.
Ligament
8. Indicate which type of joint movement is defined by the following sentences. Use the word list below:

Abduction
Flexion
Rotation
Extension
Adduction

- a) The limb bends. *Flexion*
- b) The limb comes closer to the body's axis. *Adduction*
- c) The limb rotates on its axis.
Rotation
- d) The limb unbends. *Extension*
- e) The limb moves away from the body's axis. *Abduction*