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Chapter 5

Use all your senses



OVERVIEW

In this chapter, you will:

- ✓ explore the potential of Sensory Learning;
- ✓ understand how to use your senses (such as movement, hearing, visualizing . . .) to make learning easier;
- ✓ get plenty of opportunities to practise this effective learning technique.

Sensory learning

A smell, a photo, a taste, a few notes from a song, the movement of a dance, the feel of a piece of fabric can instantly set off a flood of memories from the past. This is the secret of a very powerful memory technique. You are far more likely to remember information if:

- you can deliberately fix whatever you want to remember to a sound, an image or a sensation;
- you process it in several different ways – sight, sound and movement.

These strategies build up very strong memory traces in several sites of the brain – the more the merrier. For example, if you need to fix something in your mind, you can use a combination of the following:

- watch a CD or computer animation;
- draw a cartoon;
- visualize the process in your own body;
- colour in the different parts of a diagram;

- make a Bodymap;
- learn it to music;
- explain it to somebody else;
- read it aloud to yourself or record it;
- reorganize your notes in different ways;
- write out lecture notes in your own words;
- read about it;
- label a flow chart/diagram.



Activity: Learning the names of body movements and positions

- 1 Make yourself a poster from the diagrams on page 83. You may want to do this by increasing the size to A3 on a photocopier.
- 2 Look at the pictures one by one, and practise each move, repeating its name **at the same time**. Remember: **synchronizing** sight, movement and sound is important.
- 3 If you record your own voice and play it back, you will set down a very strong memory trace. So:
 - record the names of the different body positions onto a recording device/MP3 player. Remember to leave a long enough interval between each word, so that you are able to practise the movement several times. You might also like to record some music in the background.
 - play your recording as often as you need to, and give your mind and body a good workout. The more exaggerated the movement, the more likely you are to remember it . . . Does this sound weird to you? Never mind! This technique really works.
- 4 Stick up your poster somewhere where you will often see it.
- 5 Get together with other students to practise the moves and test each other on the names.

Body movements and positions

Shoulder



abduction



adduction



flexion



extension



medial rotation



lateral rotation

Elbow



flexion



extension

Forearm



supination



pronation

Wrist



flexion



extension

Trunk



flexion



extension



lateral flexion



rotation



supine

prone

Hip



abduction



adduction



flexion



medial rotation



lateral rotation



circumduction

Knee



extension



flexion

Ankle



plantar flexion

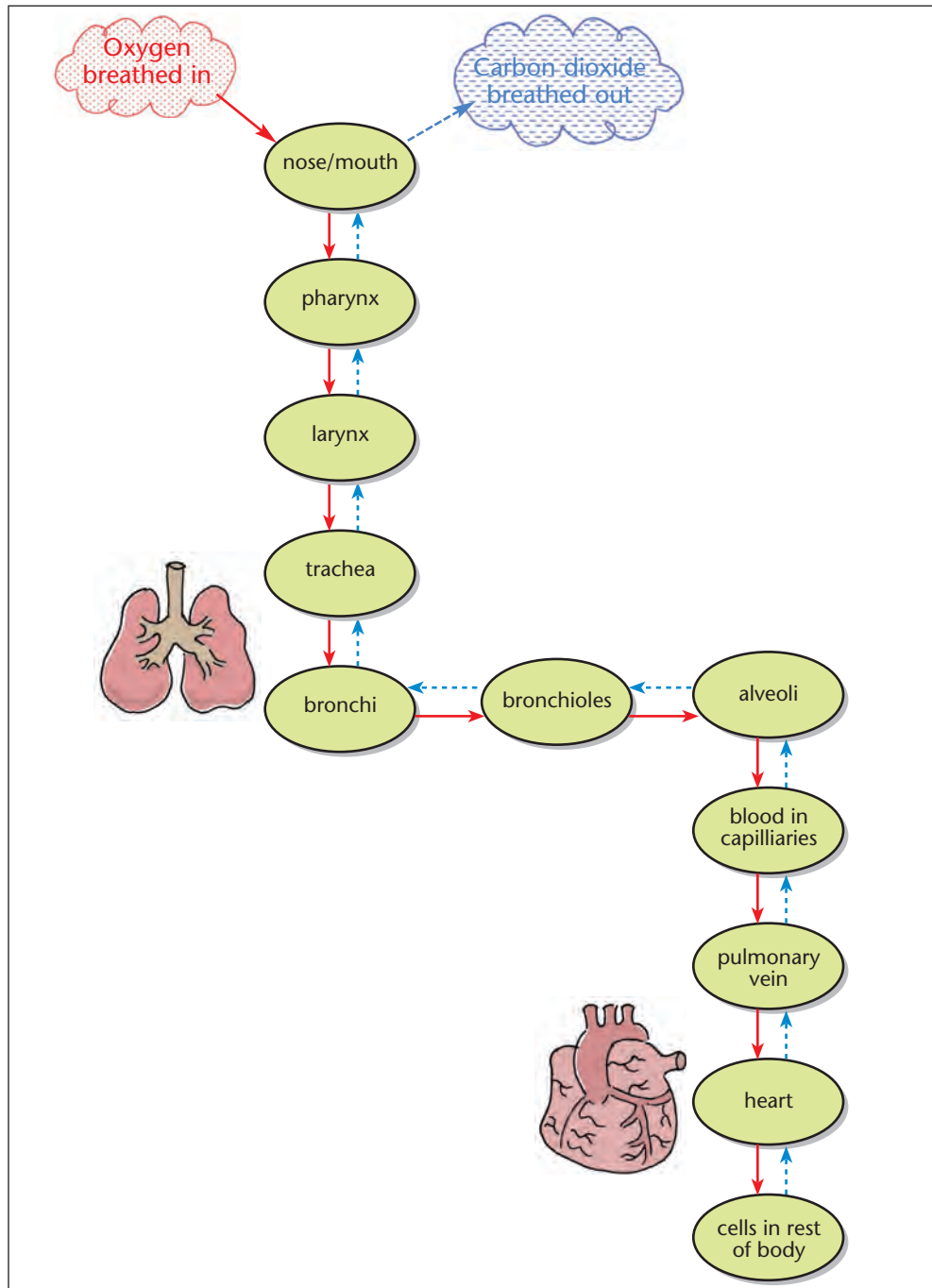


dorsi flexion



Activity: The respiratory system

Look carefully at the flowchart of the respiratory system. Now cover it up and practice labelling the blank chart on the next page in pencil.



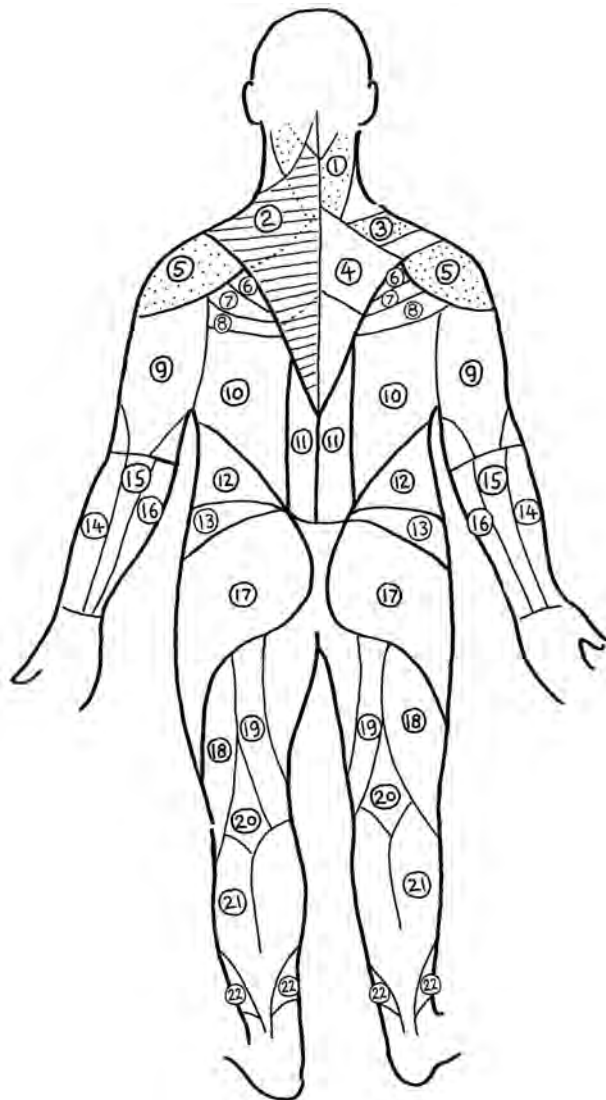


Activity: Posterior muscles

Training your auditory, visual and motor memories to work together is a very powerful learning technique. Can you write the names of the **Posterior Muscles** in pencil on this simplified diagram? The answers are on page 87.

Alternatively, it is extremely useful to photocopy this blank template onto transparent plastic and write on it with water-soluble felt tips that rub or wash off. You can use this template over and over again until your exams are over. See pages 88–9 for examples of templates for the posterior and anterior muscles.

You can make these templates for all the subjects that you need to revise.



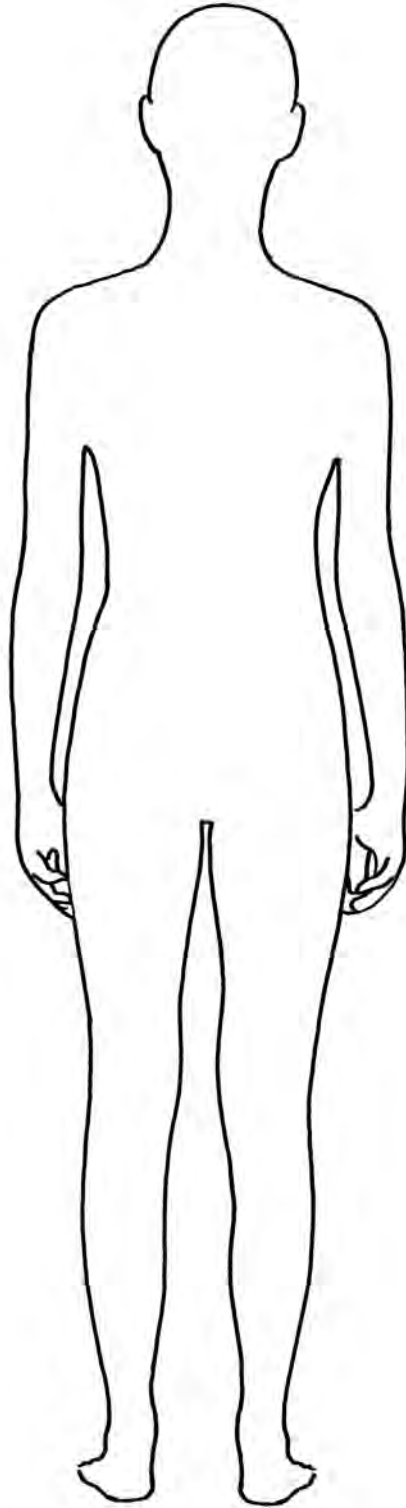
22 POSTERIOR MUSCLES

Note that most of the muscles on the left e-x-t-e-n-d!

- | | |
|---|--|
| 1 Splenius capitis
■ Extends head | 3 Supraspinatus
■ Abducts arm |
| 2 Trapezius
■ Extends head
■ Lifts/draws back scapula | 4 Rhomboid
■ Draws back scapula |
| 5 Deltoid
■ Extends
■ Flexes
■ Abducts arm | 6 Infraspinatus |
| 9 Triceps
■ Extends elbow | 7 Teres minor
■ Both laterally rotate humerus |
| 10 Latissimus dorsi
■ Extends
■ Adducts
■ Medially rotates humerus | 8 Teres major
■ Medially rotates humerus |
| 11 Erector spinae
■ Extends spine | 12 External obliques
■ Flex and
■ Rotate trunk |
| 14 Extensor carpi radialis | 13 Gluteus medius
■ Abducts and
■ Medially rotates femur |
| 15 Extensor carpi digitorum | 18 Biceps femoris |
| 16 Extensor carpi ulnaris
■ Extend wrist | 19 Semitendinosus |
| 17 Gluteus maximus
■ Extends
■ Laterally rotates femur | 20 Semimembranosus
■ Flex knee
■ Extend hip |
| | 21 Gastrocnemius |
| | 22 Soleus
■ Flex foot |

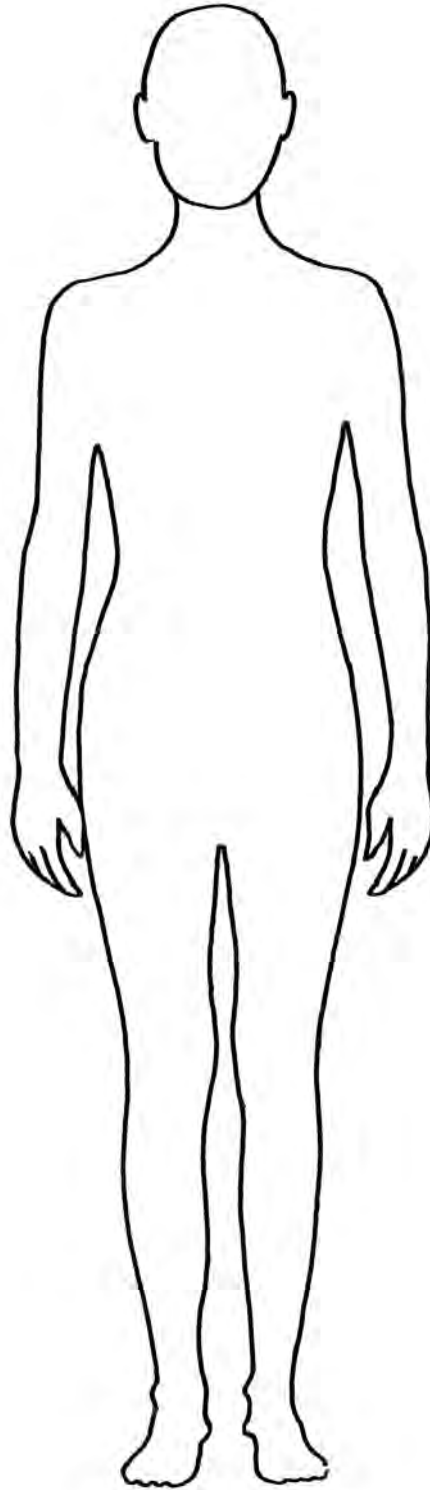
Template: posterior muscles

Photocopy this onto paper, or better still onto transparent plastic. Then use water-soluble pens to practise drawing in and labelling the muscles, until you know them without looking at the answers to help you!



**Template:
anterior muscles**

Photocopy this onto paper, or better still onto transparent plastic. Then use water-soluble pens to practise drawing in and labelling the muscles, until you know them without looking at the answers to help you!

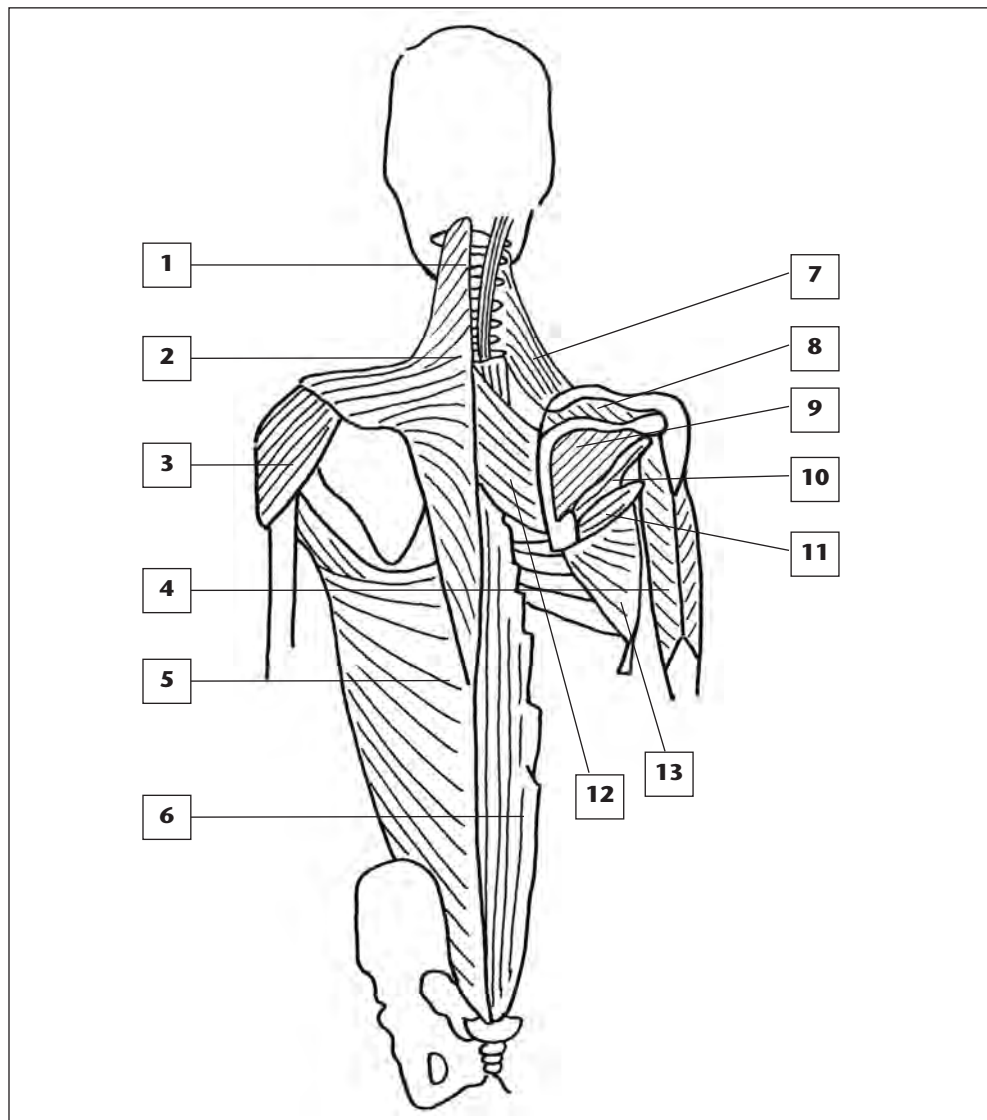




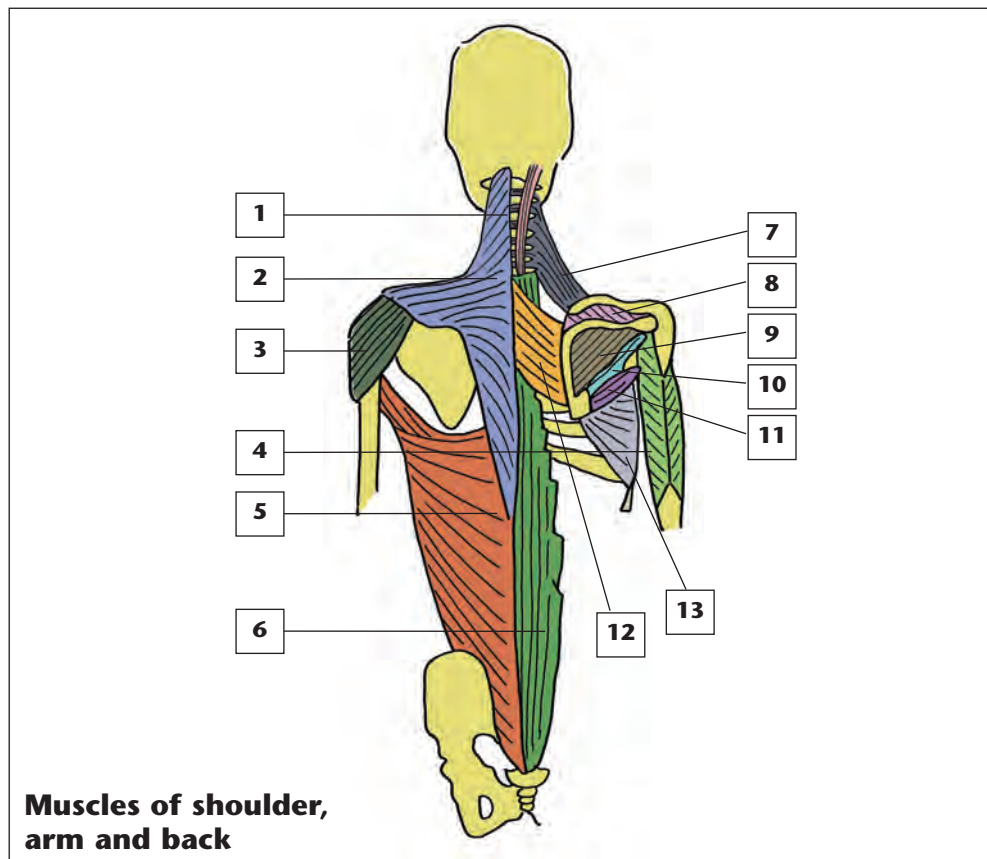
Activity: Colour-coding and labelling shoulder, arm and back muscles

The more different senses you use to remember facts, the more secure they will be in your memory. Here you will use hearing, movement and sight (colour, shape, layout etc.).

- 1 Study the diagram of the **shoulder, arm and back muscles**, repeating the names of the muscles aloud. See p. 91
- 2 Label and colour in the diagram below: one colour for each muscle.
- 3 Check your answers are correct. If not, start again straight away . . .



	Muscle	Function	Additional functions
1	Splenius Capitis	<i>extends head</i>	
2	Trapezius	<i>extends head</i>	<i>lifts, draws back scapula</i>
3	Deltoid	<i>extends arm</i>	<i>flexes, abducts arm</i>
4	Latissimus Dorsi	<i>extends arm</i>	<i>adducts, medially rotates arm</i>
5	Triceps	<i>extends elbow</i>	
6	Erector Spinae	<i>extends spinal column</i>	
7	Levator Scapulae	<i>lifts scapula</i>	
8	Supraspinatus	<i>abducts arm</i>	
9	Infraspinatus	<i>laterally rotates humerus</i>	
10	Teres Minor	<i>laterally rotates humerus</i>	
11	Teres Major	<i>medially rotates humerus</i>	
12	Rhomboid	<i>draws back scapula</i>	
13	Serratus Anterior	<i>draws forward scapula</i>	





Activity: Labelling view of the brain

- Read the definitions below.
- Then label the blank diagram in pencil.
- Check your answers on the next page.
- Repeat until perfect!

Cerebellum: below the back of the cerebrum – it regulates balance, movement, posture, and muscle coordination.

Cingulate Gyrus: in the medial part of the brain – it functions as an integral part of the limbic system, which is involved with emotions, learning, and memory.

Corpus Callosum: a large bundle of nerve fibres that connect the left and right sides (hemispheres) of the brain.

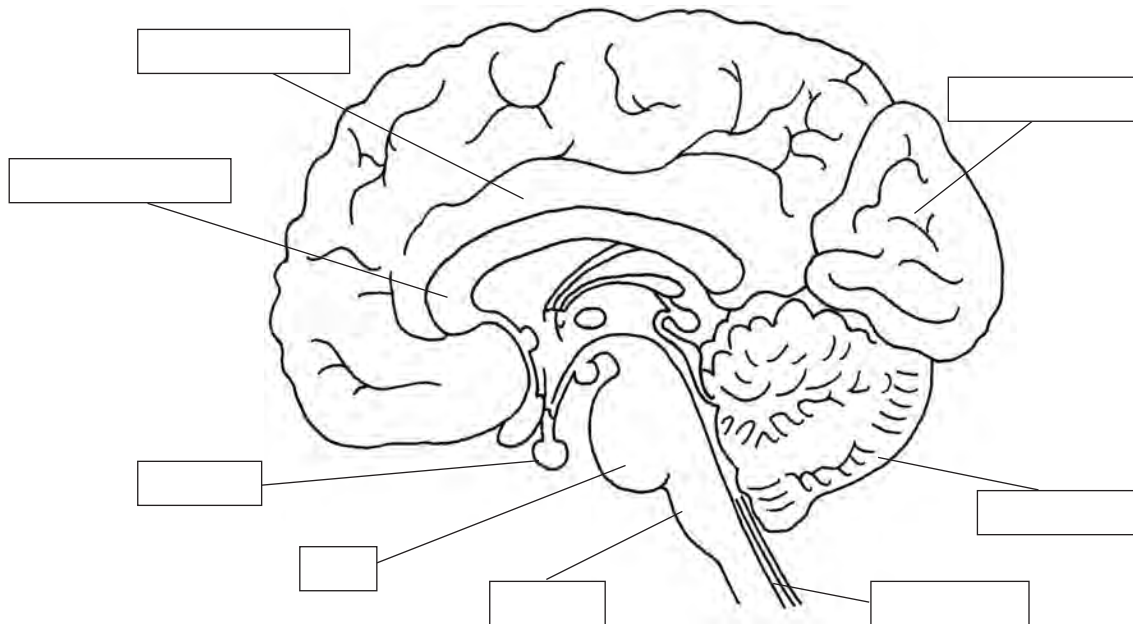
Medulla Oblongata: in the lowest section of the brainstem at the top of the spinal cord – it controls automatic functions such as breathing and heartbeat.

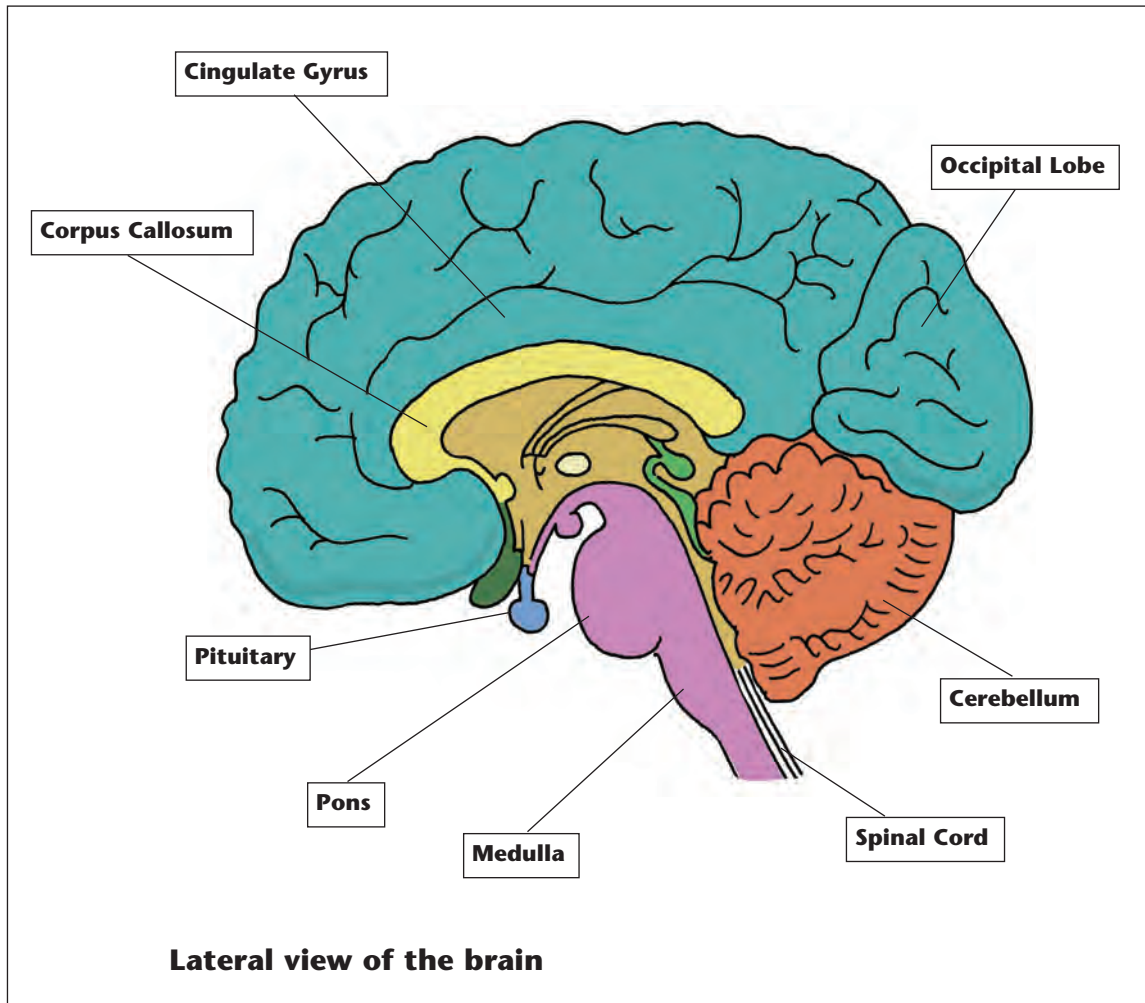
Occipital Lobe of the Cerebrum: at the back of each cerebral hemisphere – it contains the centres of vision and some reading processes.

Pituitary Gland: attached to the base of the brain – it secretes hormones.

Pons: just above the Medulla Oblongata – joins the hemispheres of the cerebellum and connects the cerebrum with the cerebellum.

Spinal Cord: a thick bundle of nerve fibres running from the base of the brain to the hip area, through the spine. It is the main pathway for information connecting the brain and the peripheral nervous system.





Did you successfully label this diagram? If so, why not use the crossword puzzle on page 125 to revise the Nervous System.