

# Activity I

Label the muscles of the head and neck.

Occipitalis

Masseter

Frontalis

Temporalis

Corrugator

Procerus

Mentalis

Orbicularis oculi

Levator labii superioris

Nasalis

Levator anguli oris

Orbicularis oris

Zygomaticus minor

Zygomaticus major

Depressor labii inferioris

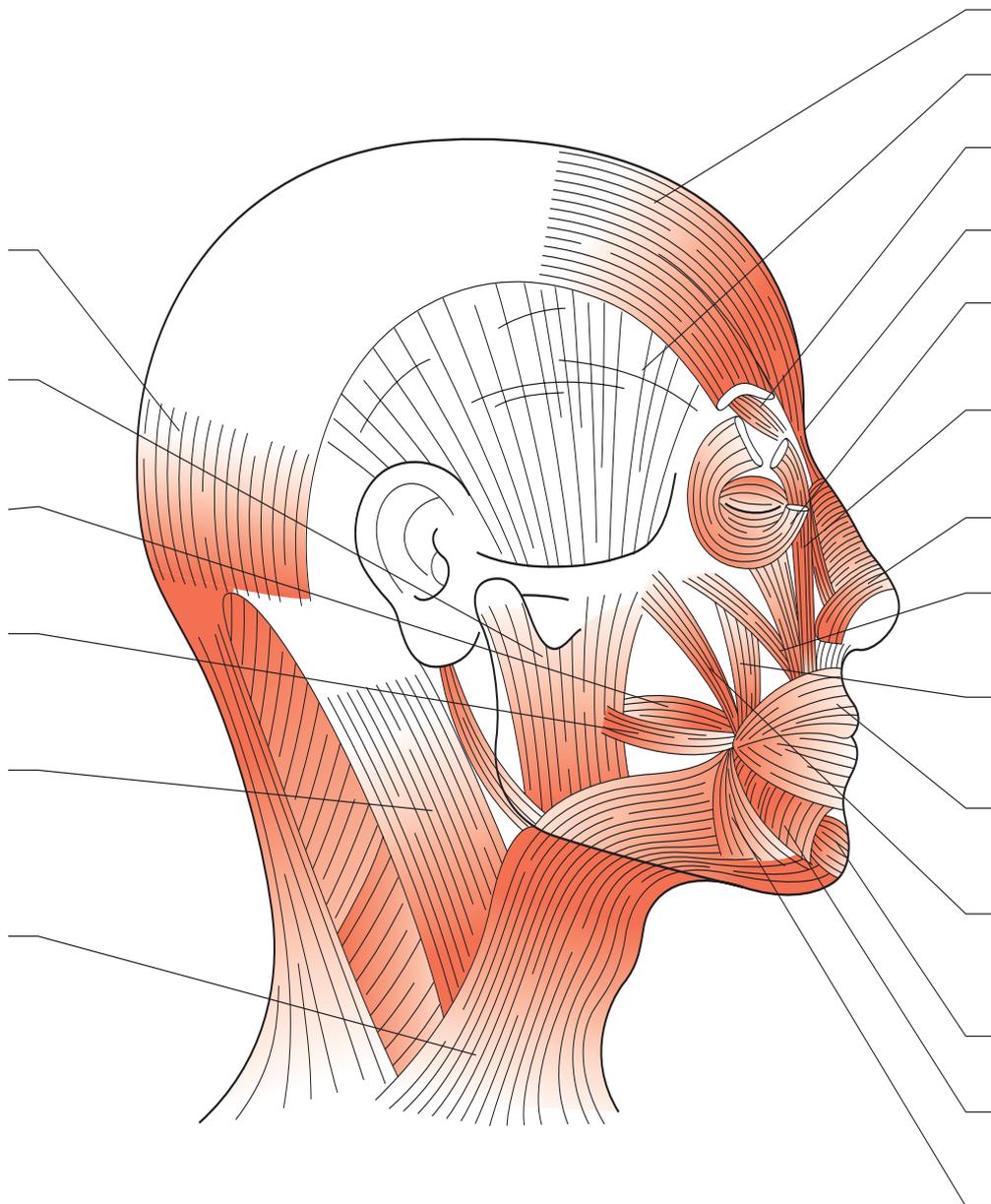
Depressor anguli oris

Risorius

Buccinator

Platysma

Sternocleido mastoid



# Activity 2

Label the muscles of the shoulder.

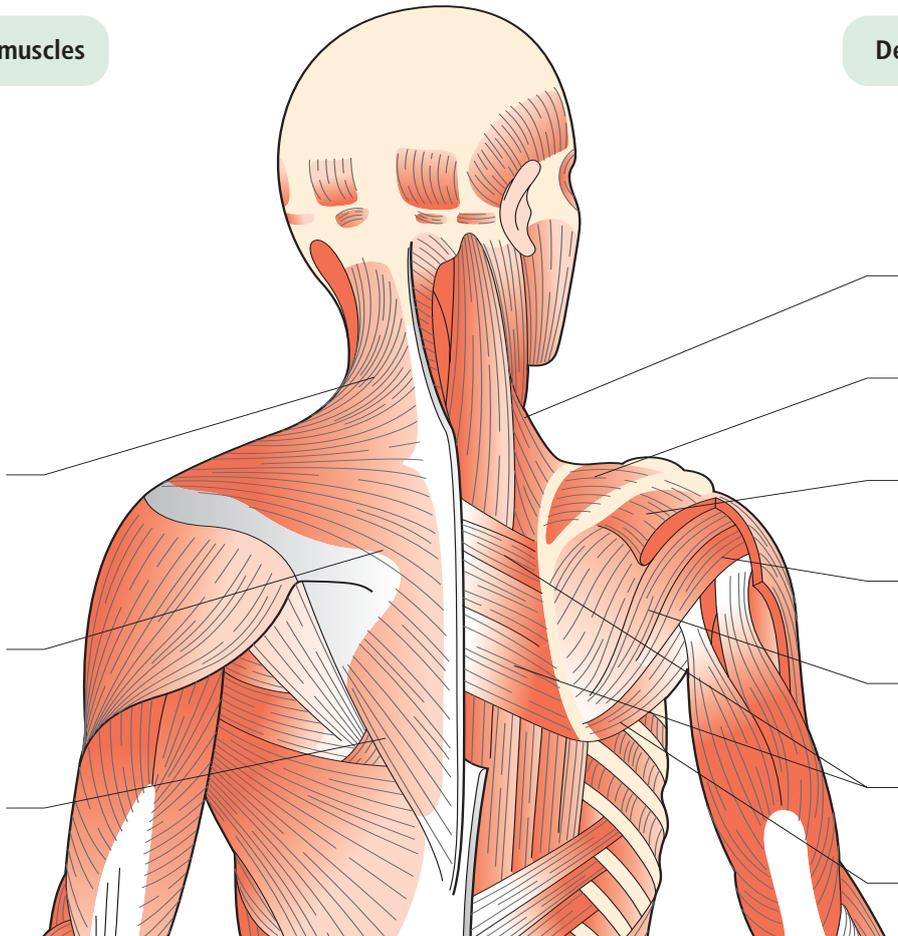
Upper fibres of trapezius  
Levator scapula  
Rhomboids  
Supraspinatus

Infraspinatus  
Teres major  
Teres minor

Deltoid  
Middle fibres of trapezius  
Lower fibres of trapezius

Surface muscles

Deep muscles



# Activity 4

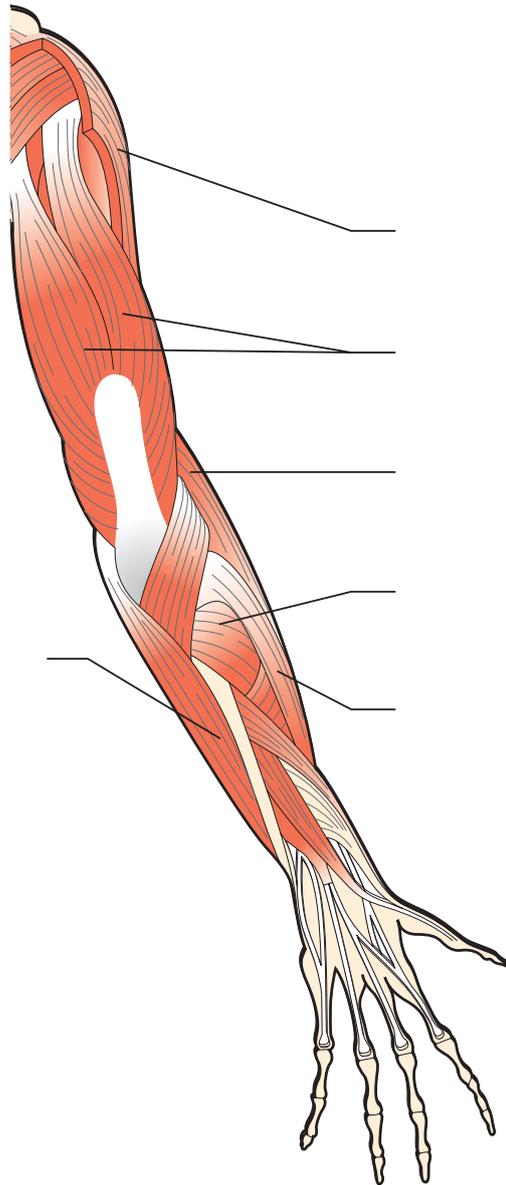
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Label the deep muscles of the posterior of the upper limb.

Extensor carpi radialis  
Extensor carpi ulnaris

Deltoid  
Brachioradialis

Supinator  
Triceps



# Activity 5

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Label the superficial muscles of the anterior of the lower limb.

Sartorius

Tibialis anterior

Adductor longus

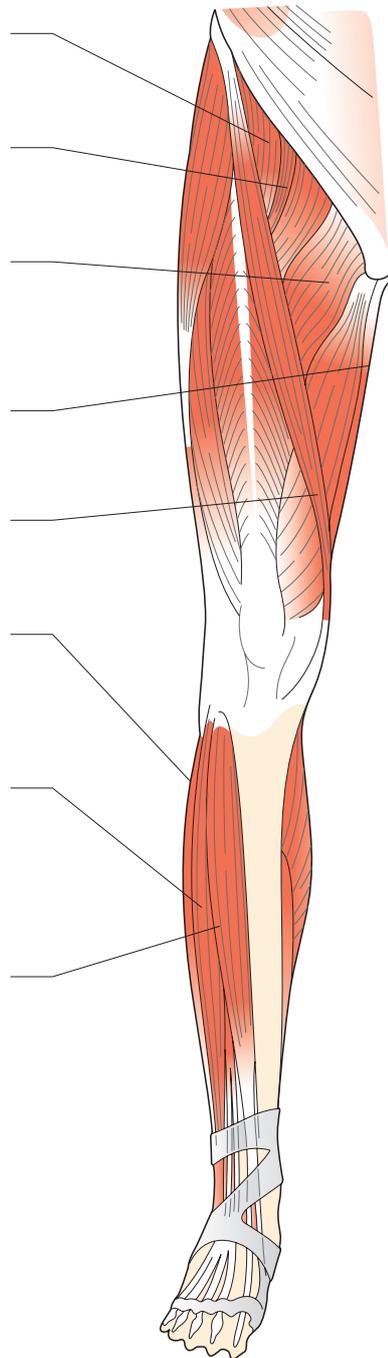
Iliopsoas

Gracilis

Peroneus longus

Extensor digitorum longus

Pectineus



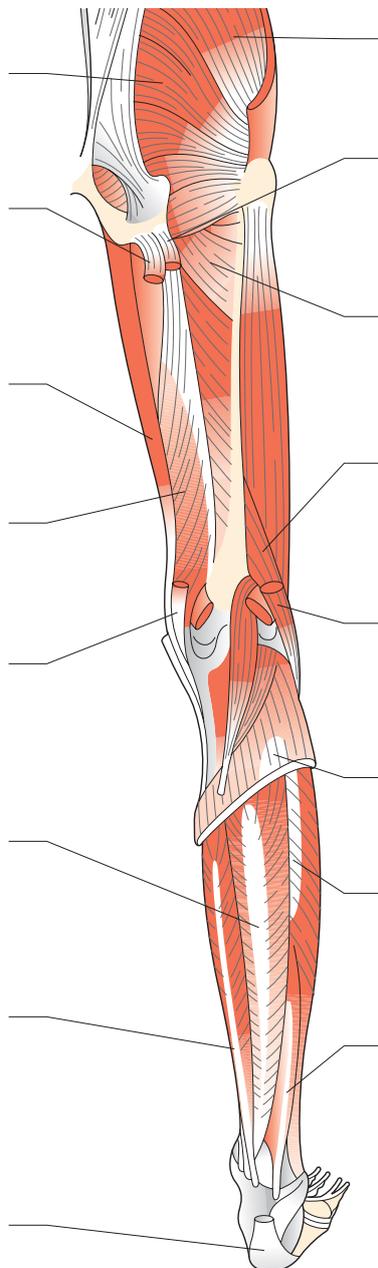
# Activity 6

Label the deep muscles of the posterior of the lower limb.

Flexor hallucis longus  
Soleus  
Gracilis  
Semimembranosus  
Achilles tendon  
Peroneus longus

Flexor digitorum longus  
Tibialis posterior  
Piriformis  
Tendon of semitendinosus  
Adductor magnus

Short head of biceps femoris  
Gluteus minimus  
Tendon of long head of biceps femoris



# Activity 7

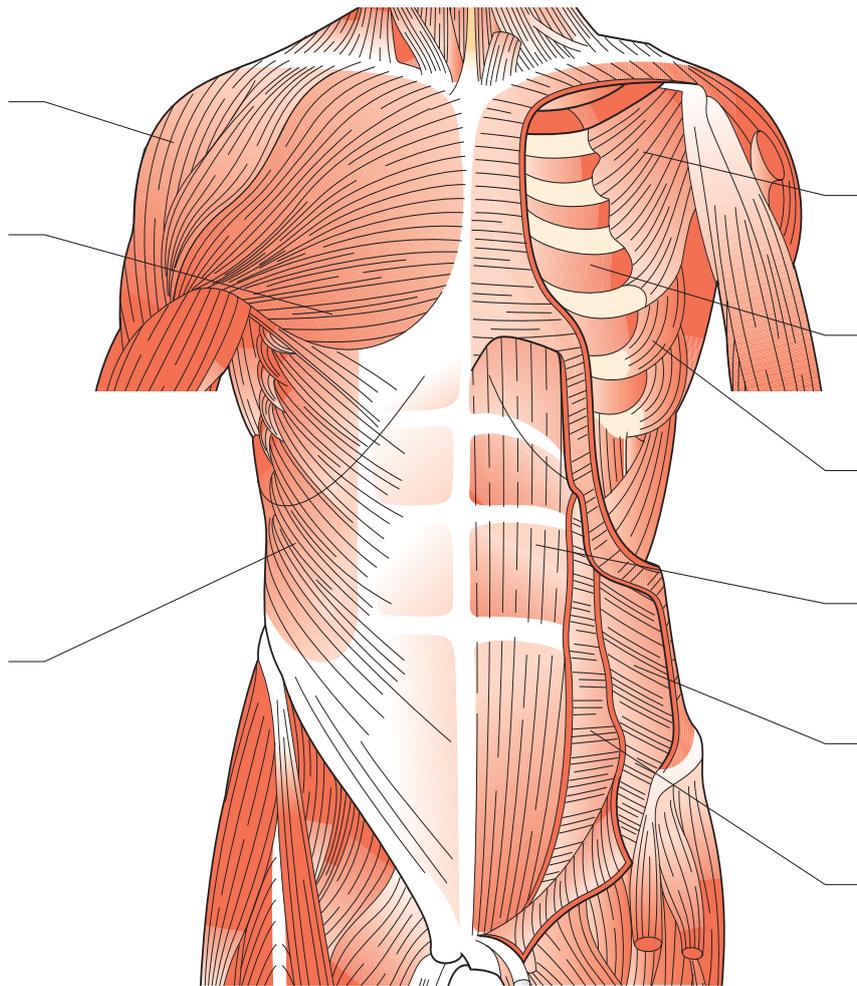
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Label the muscles of the anterior of the trunk.

Pectoralis major  
Rectus abdominis  
Serratus anterior

External obliques  
Transversus abdominis  
Pectoralis minor

Internal obliques  
Deltoid  
Internal intercostal



# Activity 8

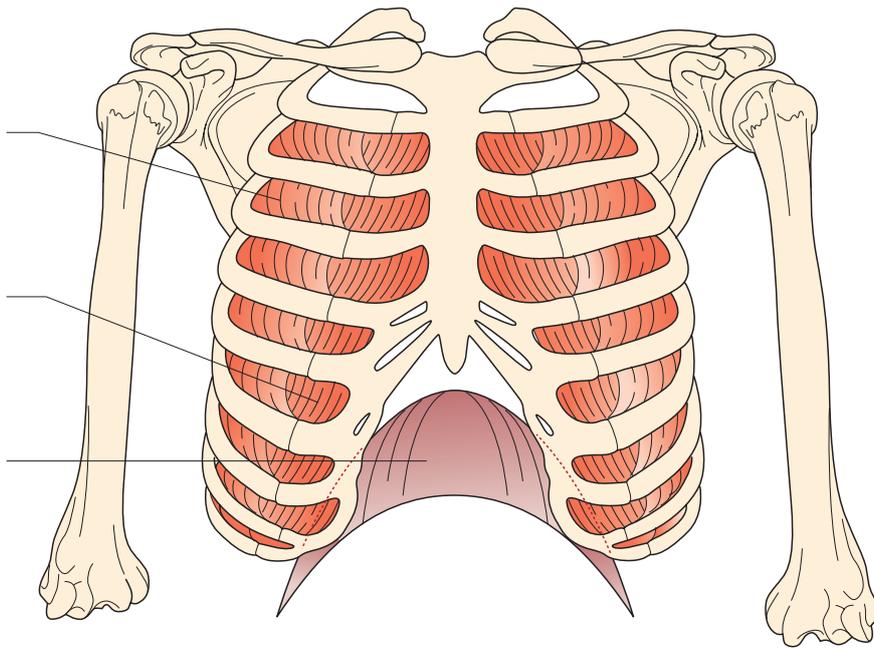
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Label the muscles of respiration.

Diaphragm

External intercostals

Internal intercostals



# Activity 9

Label the muscles of the posterior of the trunk.

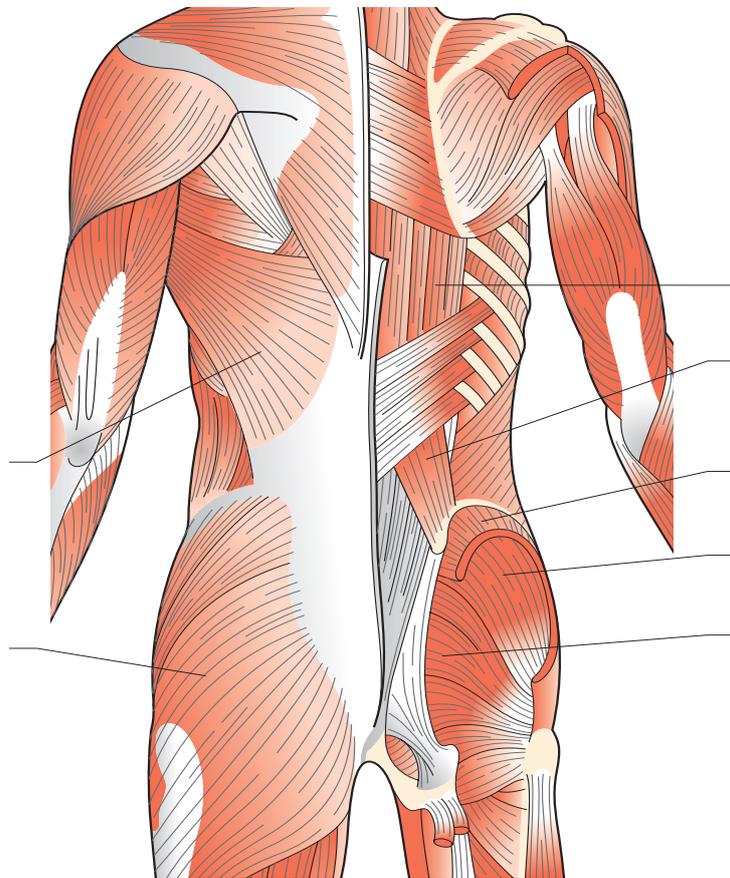
Gluteus minimus  
Erector spinae  
Latissimus dorsi

Quadratus lumborum  
Gluteus maximus

Piriformis  
Gluteus medius

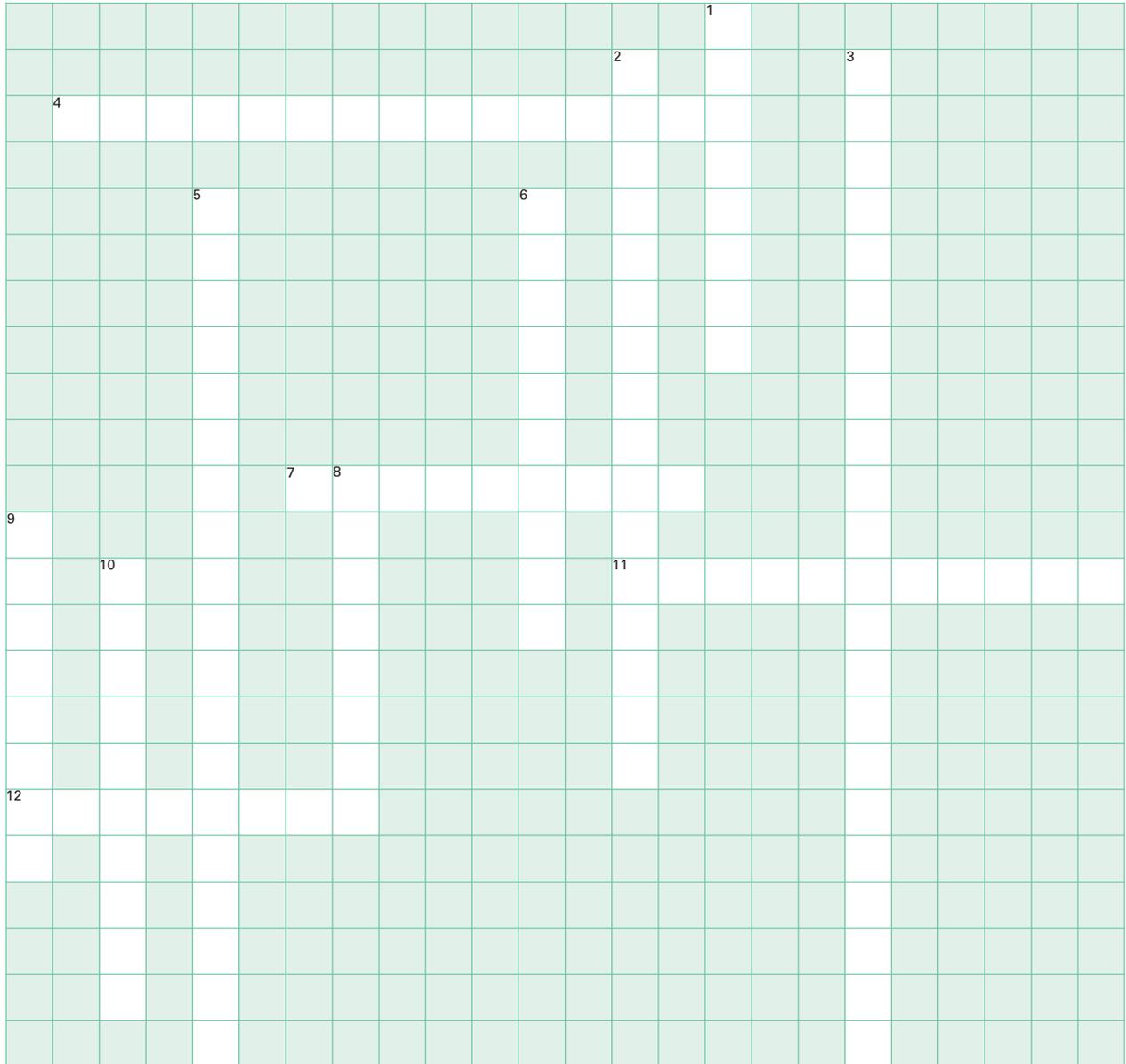
Surface muscles

Deep muscles



# Activity 12

Complete the crossword.



## Across

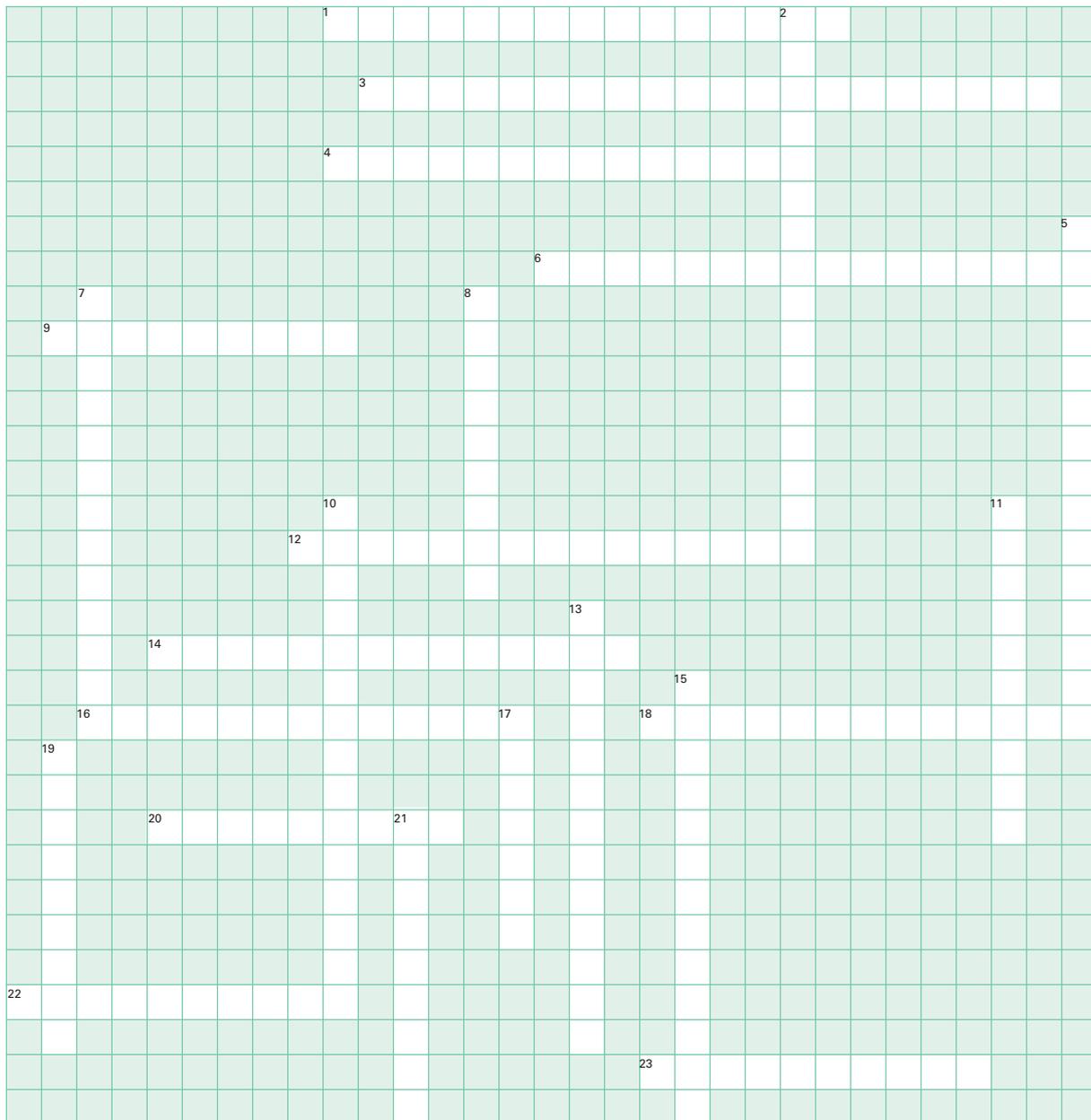
4. circular muscle surrounding mouth (11, 4)
7. muscle used to express surprise
11. muscle attached to frontalis muscle via a tendon
12. muscle positioned over centre of lip

## Down

1. main muscle of mastication
2. muscle used when blinking (11, 5)
3. muscle that raises upper lip (7, 5, 10)
5. long muscle extending from sternum to mastoid process
6. fan-shaped muscle above and in front of ear
8. muscle that creates a grinning expression
9. muscle that depresses the lower jaw as in yawning
10. main muscle of cheek

# Activity 13

Complete the crossword.



## Across

1. often referred to as the “swimmer’s muscle” (10, 5)
3. these muscles help to increase the depth of thoracic cavity (8, 12)
4. strap-like muscle connecting cervical vertebrae to scapula (7, 7)

## Down

2. broad, curved muscle at side of ribcage (8, 8)
5. this muscle can be felt as a bulge on radial side of forearm
7. large, superficial calf muscle with two bellies

**Across** (cont.)

6. muscle that dorsiflexes and inverts the foot (8, 8)
9. long muscle in leg that flexes both hip and knee
12. muscle covering the anterior of upper chest
14. largest of buttock muscles
16. the only muscle that moves head but is not attached to any vertebrae
18. this muscle pronates and flexes the forearm
20. fibres of this muscle lie in-between scapulae
22. as a group these muscles extend the knee and flex the hip
23. group of three muscles on posterior of thigh

**Down** (cont.)

8. group of four muscles on medial of thigh
10. so-called "six pack" muscle (6, 9)
11. deeply seated pelvic muscle
13. muscle located in depression above spine of scapula
15. important postural muscle that extends the spine
17. thick, triangular-shaped muscle on cap of shoulder
19. tension is commonly found in upper fibres of this muscle
21. large dome-shaped muscle separating thorax from abdomen

# Activity 15

Match the key words to the definitions in the box.

Pyruvic acid  
Actin  
Oxidation  
Protein

Adenosine triphosphate  
Muscular dystrophy  
Fibromyalgia

Hypertrophy  
Involuntary  
Sprain

Key words	Definitions
	Thinner of the two protein filaments in skeletal muscle
	Type of muscle tissue found in the digestive and urinary tracts
	Increase in the size and diameter of muscle fibres
	Chronic condition producing musculoskeletal pain, lethargy and fatigue
	Progressively crippling disease in which the muscles gradually weaken and atrophy
	20% of the composition of muscle tissue
	The combining of glucose with oxygen to release energy
	Chemical compound that stores the energy needed for muscle contraction
	A compound formed during the oxidation of glycogen
	Complete or incomplete tear in the ligaments around a joint

# Multiple-choice questions – Student book, p 139

**1. Which of the following is NOT a function of the muscular system?**

- a) movement
- b) exchanging of gases
- c) production of heat
- d) maintaining posture

**2. A voluntary muscle will only contract if a stimulus is applied to it via a**

- a) sensory nerve
- b) motor nerve
- c) mixed nerve
- d) none of the above

**3. A tendon attaches**

- a) muscle to bone
- b) muscle to ligament
- c) bone to bone
- d) none of the above

**4. Where would you NOT find involuntary muscle tissue?**

- a) stomach
- b) bladder
- c) brain
- d) heart

**5. The fuel for muscle contraction is provided by**

- a) ATP
- b) glucose
- c) pyruvic acid
- d) actin and myosin

**6. Which of the following statements is TRUE?**

- a) Upon voluntary muscle contraction muscle fibres elongate
- b) The attachment of myosin to actin requires the mineral sodium
- c) The merging of actin and myosin filaments causes the muscle fibres to shorten and thicken on contraction
- d) The force of muscle contraction depends on where the muscle fibres are located

**7. The condition muscle fatigue is caused by**

- a) insufficient oxygen
- b) exhaustion of energy supply
- c) accumulation of lactic acid
- d) all of the above

**8. The state of continuous partial contraction of muscles is known as**

- a) atrophy
- b) muscle tone
- c) hypertrophy
- d) none of the above

**9. Which of the following statements is FALSE?**

- a) During exercise there is an increased return of venous blood to the heart
- b) During exercise a muscle may receive as much as 15 times its normal flow of blood
- c) The presence of lactic acid in the blood stimulates the respiratory centre in the brain, decreasing the rate and depth of breath
- d) The rate and depth of breath remains above normal for a while after strenuous exercise has ceased

**10. Which of the following statements is TRUE?**

- a) Muscles with less than the normal degree of tone are said to be spastic
- b) Good muscle tone may be recognised by the muscles appearing firm and rounded
- c) An increase in the size and diameter of the muscle fibres leads to a condition called atrophy
- d) Poor muscle tone is a cause of muscle cramps

**11. The name of the muscle that closes the mouth is**

- a) risorius
- b) orbicularis oris
- c) orbicularis oculi
- d) levator anguli oris

- 12. The name of the muscle that turns the head to the opposite side is**
- occipitalis
  - platysma
  - sternocleidomastoid
  - frontalis
- 13. The action of the zygomaticus muscle is to**
- pull the corner of the mouth sideways and upwards
  - draw the angle of the mouth upwards
  - draw the corner of the mouth downwards
  - raise the jaw
- 14. The facial expression associated with the mentalis muscle is**
- pouting
  - smiling
  - laughing
  - grinning
- 15. The facial expression associated with the corrugator muscle is**
- puzzled
  - frowning
  - snarling
  - sadness
- 16. The position of the buccinator muscle is**
- under the corners of the mouth
  - at the sides of the nose
  - over the centre of the chin
  - in the cheek
- 17. Which of the following muscles does not have an action on the mouth?**
- levator labii superioris
  - depressor anguli oris
  - levator anguli oris
  - procerus
- 18. The main muscle of mastication in the face is**
- buccinator
  - mentalis
  - masseter
  - none of the above
- 19. The name of the large, triangular-shaped muscle in the upper back that raises the shoulder girdle is**
- splenius cervicus
  - trapezius
  - levator scapula
  - splenius capitis
- 20. The action of the rhomboid muscles is to**
- elevate and adduct the scapula
  - adduct the humerus
  - adduct the scapula
  - abduct the humerus
- 21. The muscle located in the depression above the spine of the scapula is**
- teres major
  - supraspinatus
  - teres minor
  - infraspinatus
- 22. Which of the following muscles does NOT flex the forearm?**
- biceps
  - brachialis
  - pronator teres
  - triceps
- 23. The action of the hamstring muscles is**
- flexion of the hip and knee
  - flexion of the knee and extension of the hip
  - extension of the knee and flexion of the hip
  - adduction of the thigh and flexion of the hip
- 24. The muscle that runs down the lateral aspect of the thigh and is attached to a broad sheet of tendon that strengthens the knee is**
- gracilis
  - tensor fascia lata
  - sartorius
  - piriformis
- 25. Which of the following muscles is NOT a plantar flexor of the foot?**
- gastrocnemius
  - tibialis anterior
  - peroneus longus
  - soleus

- 26. The deepest of the abdominal muscles is the**
- transversus abdominis
  - rectus abdominis
  - external obliques
  - internal obliques
- 27. The important postural muscle of the back that extends the spine is**
- latissimus dorsi
  - psoas
  - iliacus
  - erector spinae
- 28. Which of the following muscles attaches to the clavicle and sternum at one end and to the humerus at the other end?**
- serratus anterior
  - pectoralis major
  - pectoralis minor
  - platysma
- 29. Which of the following muscles is NOT involved in respiration?**
- diaphragm
  - internal obliques
  - internal intercostals
  - external intercostals
- 30. The action of the gluteus maximus muscle is**
- abduction and medial rotation of the thigh
  - extension of the hip and lateral rotation of the thigh
  - flexion and lateral rotation of the femur
  - lateral flexion of the spine
- 31. The only muscle that moves the head but does not attach to any vertebrae is**
- splenius capitis
  - splenius cervicus
  - trapezius
  - sternocleidomastoid
- 32. Which of the following muscles does NOT rotate the humerus?**
- supraspinatus
  - subscapularis
  - infrapinatus
  - teres minor
- 33. If one shoulder is elevated which muscle would you most likely find contracted?**
- pectoralis major
  - serratus anterior
  - levator scapula
  - supraspinatus
- 34. Which of the following muscles extends the big toe?**
- extensor digitorum longus
  - flexor digitorum longus
  - extensor hallicus longus
  - flexor hallicus longus