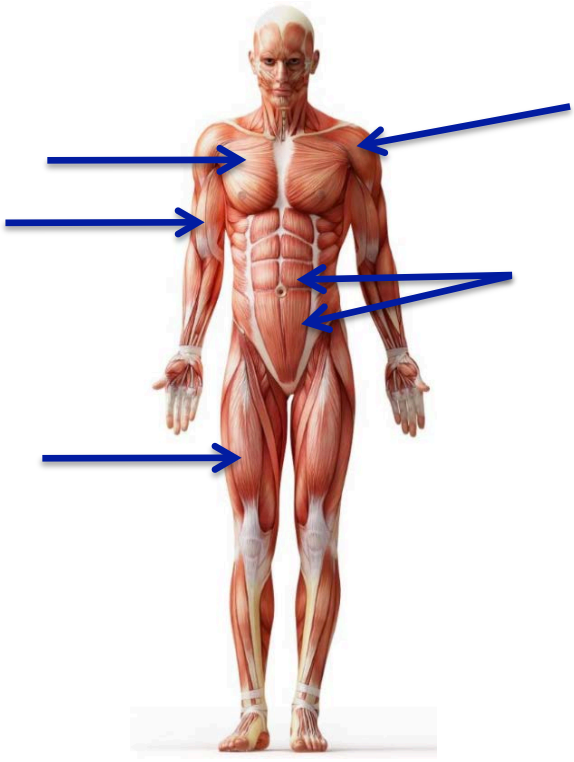
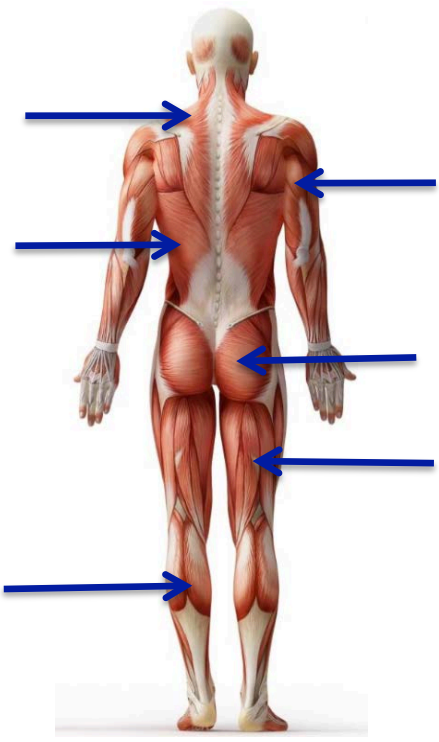
THE STRUCTURE AND FUNCTION OF THE MUSCULAR SYSTEM (1.1B)

What do I need to know?	How do I feel about this?		
	Confident	Average	Unsure
Know the location of: • Deltoid • Trapezius • Latissimus dorsi • Pectorals • Biceps • Triceps • Abdominals • Quadriceps • Hamstrings • Gluteals • Gastrocnemius			
Know what an agonist / antagonist is, be able to apply sporting examples.			
Describe a fixator muscle.			
Explain what an antagonistic muscle pair is and give examples.			

LABELLING MUSCLES OF THE BODY

Label the muscles below.





ANTAGONISTIC MUSCLE PAIRS

Explain what an agonist is.

……

……

Explain what an antagonist is.

……

……

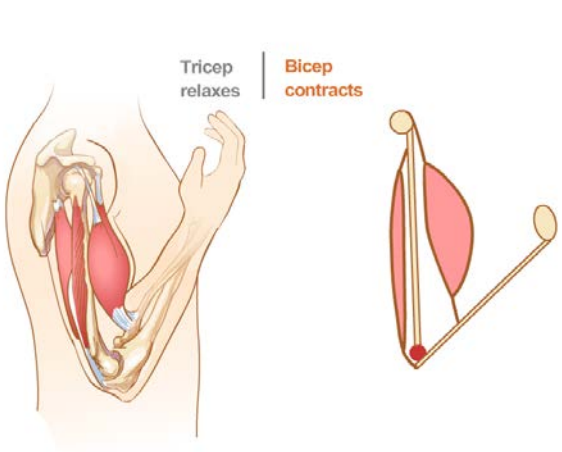
Explain what an antagonistic muscle pair is and give some examples.

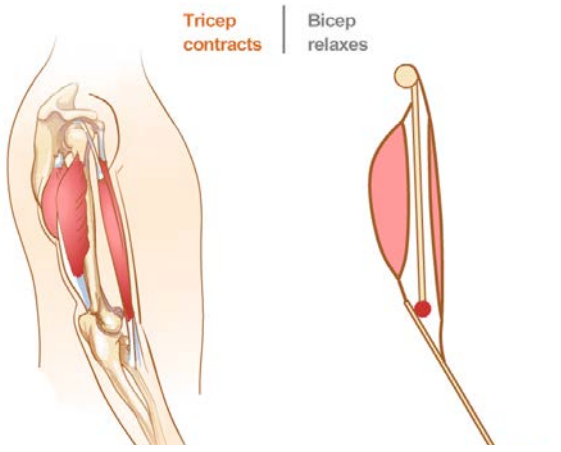
……

……

……

……





FIXATOR/SYNERGIST

Describe what a fixator or synergist muscle does.

……

……

MUSCULAR SYSTEM EXAM QUESTIONS

Answer **all** the questions.

1. Which one of the following physical activities might benefit the pectoral muscles the most?

(a) Sit-ups ☐

(b) Straight leg stretches ☐

(c) Press-ups ☐

(d) Continuous running ☐

[1]

2. Identify the type of joint found at the knee. Explain the role of the quadriceps and the hamstrings in flexing the knee.

Type of joint

Role of quadriceps

Role of hamstrings

---

[4]

3. Which one of the following muscle groups is found in the arms?

(a) Abdominals ☐

(b) Triceps ☐

(c) Latissimus dorsi ☐

(d) Trapezius ☐

[1]

4. Which one of the following is the role of the synergist in muscle movement?

(a) This is the prime mover of the muscle movement ☐

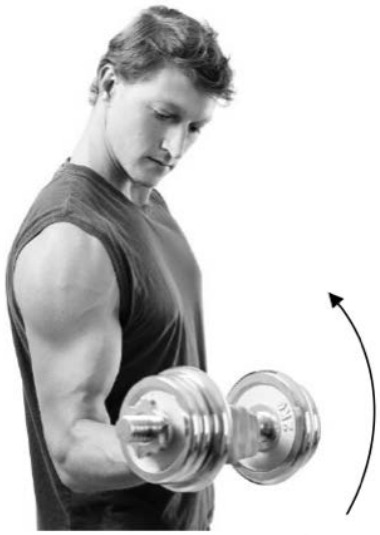
(b) This is the antagonist that opposes movement of the agonist ☐

(c) This stabilises the movement at the joint ☐

(d) This ensures that all movements can take place at the same time ☐

[1]

5. The image below shows someone performing a bicep curl.



Name the agonist and the antagonist muscles used when performing this move.

Agonist:

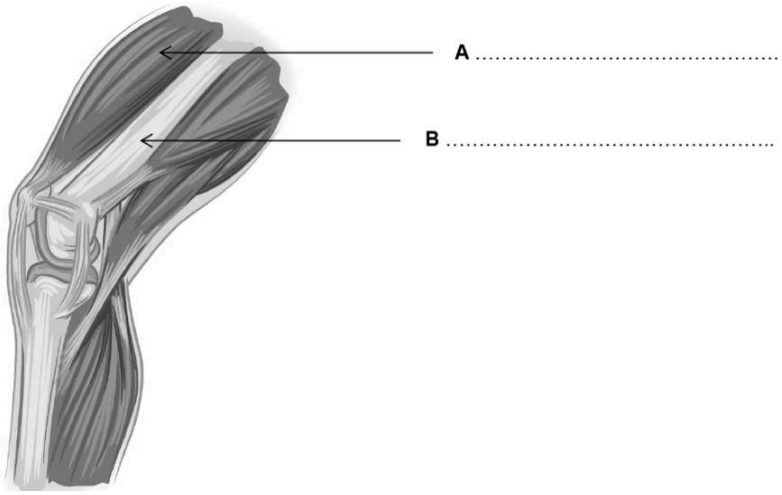
Antagonist:

---

[1]

6. Fig. 1 shows a diagram of the knee. Label the muscle group A and the bone B.

Fig. 1



[2]

END OF QUESTION PAPER

MOVEMENT ANALYSIS (1.1C)

What do I need to know?	How do I feel about this?		
	Confident	Average	Unsure
Know three classes of lever and be able to apply sporting examples.			
Know the definition of mechanical advantage.			
Know the location of planes of movement and applying sporting examples (frontal, transverse, sagittal)			
Know the location of axis of rotation and applying sporting examples (frontal, transverse, longitudinal)			

HELP WITH  LEVERS

Remember 'EFL the ELF FEL'!!

E: Effort
F: Fulcrum/Pivot
L: Load

1ST CLASS LEVER

Help (found in): Neck and elbow extension.
Descripton: when the fulcrum is between the effort and the load.

Diagram

Sporting examples:

……

……

2ND CLASS LEVER

Help (found in): plantar and dorsi flexion
Descripton: when the load is between the fulcrum and the effort.

Diagram

Sporting examples:

……

……

3RD CLASS LEVER

Help (found in): other movements except **elbow extension**.
Descripton: effort is between the fulcrum and the load.

Diagram

Sporting examples:

……

……

MECHANICAL ADVANTAGE

What is this?

……

……

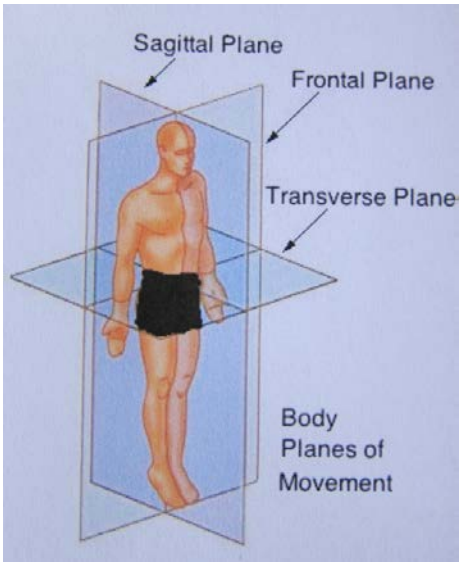
……

……

PLANES OF MOVEMENT

What are these?

Frontal plane: divides the body front and back.
Transverse plane: divides the body top and bottom.
Saggital plane: divides the body left and right.



AXIS OF ROTATION

What are they?

Frontal
Transverse
Longitudional

HELP

What are they?
FAT Teachers Really Like Sausages Especially Frankfurters

PLANES	MOVEMENTS	AXIS OF ROTATION
Frontal	Abduction	Transverese
Transverse	Rotation	**Longitudional**
Saggital	Extension/Flexion	Frontal

Write one sporting example occuring in each plane / axis.

……

……

……

……

……

……

……

……

……

MOVEMENT ANALYSIS EXAM QUESTIONS

Answer **all** the questions.

1. What class of lever is involved when performing a header in a game of football?

---

[1]

2(a). i. Name a practical example from sport of a 3rd class lever system.

---

ii. In the box below, sketch and label a diagram of a 3rd class lever system.

(b). Explain the differences between a 2nd class and a 3rd class lever system and describe how they operate to produce movement in sport.

---

[4]

3. The dancer in the picture below has performed a movement that has passed through the frontal plane.

Is this statement true or false? Draw a circle around your answer.

True False

[1]

4. Which axis of rotation will a gymnast be using when performing a cartwheel?

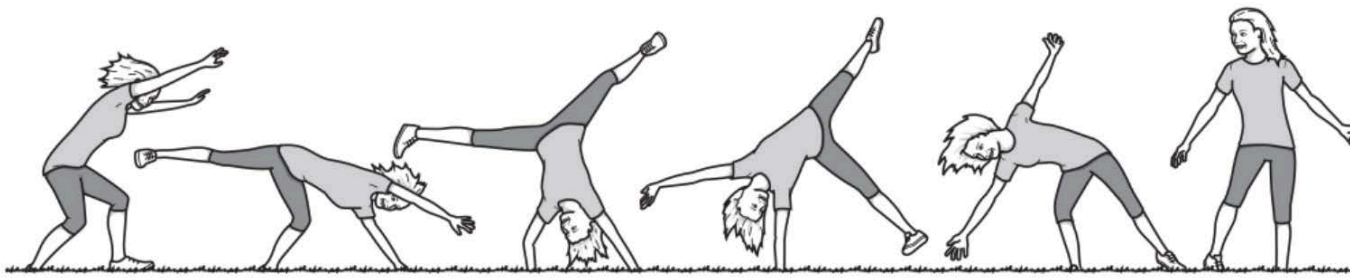
---

[1]

5 The performer in Fig. 3 has just performed a cartwheel.

Fig. 3

Fig. 3



Identify the main plane of movement that the performer has passed through during the execution of the skill shown in Fig 3.

---

[1]

6(a). Complete the following statements using words from the box below.

The volume of air moved in and out of the lungs per breath is known as .....

(b). The series of images below show a golf swing.

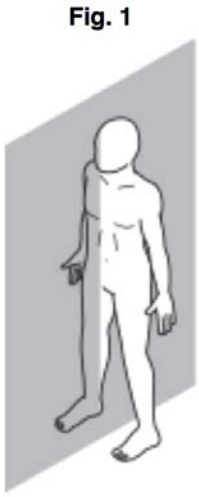
The main movement plane during a golf swing is.....

stroke volume	sagittal	rotation
minute ventilation	transverse	tidal volume

[2]

7(a). Fig. 1 shows a diagram that highlights one plane of movement.

Fig. 1



Name the plane of movement highlighted in Fig. 1 above.

---

[1]

(b). Give a practical example of a skill that passes through the plane of movement above.

---

[1]

END OF QUESTION PAPER