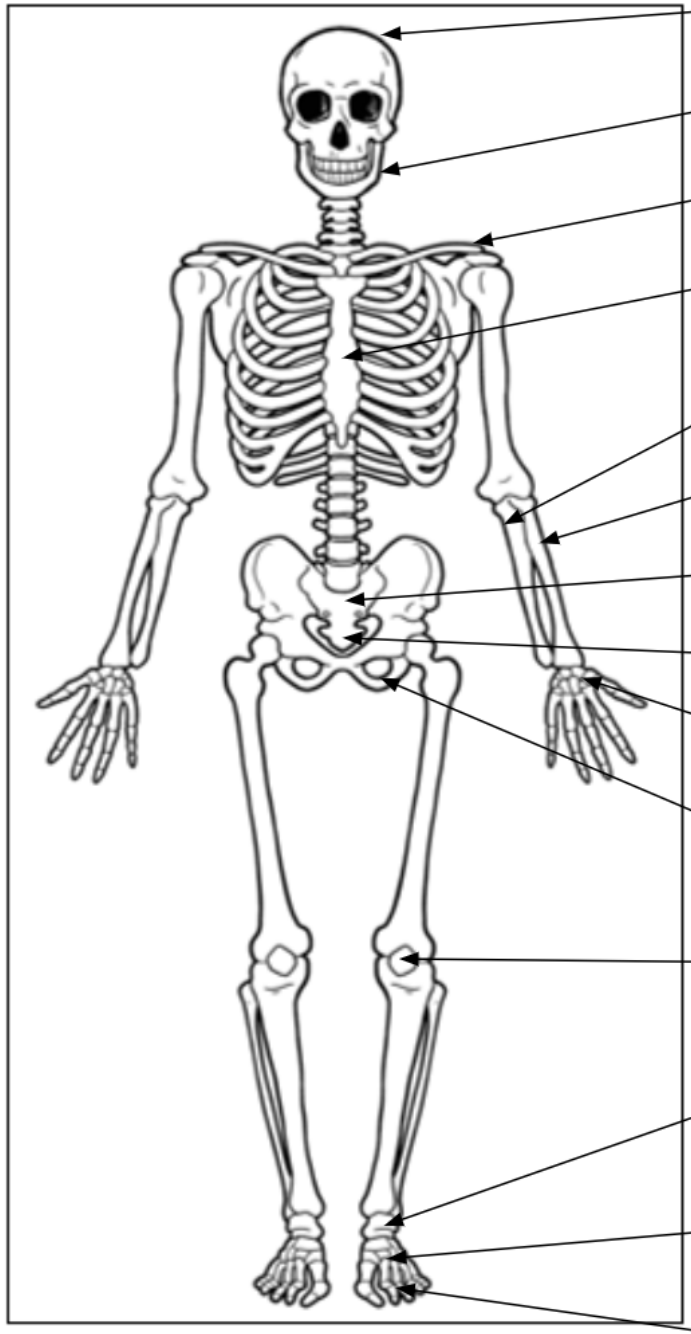
Getting ahead in A level Physical Education

SUMMER TASK

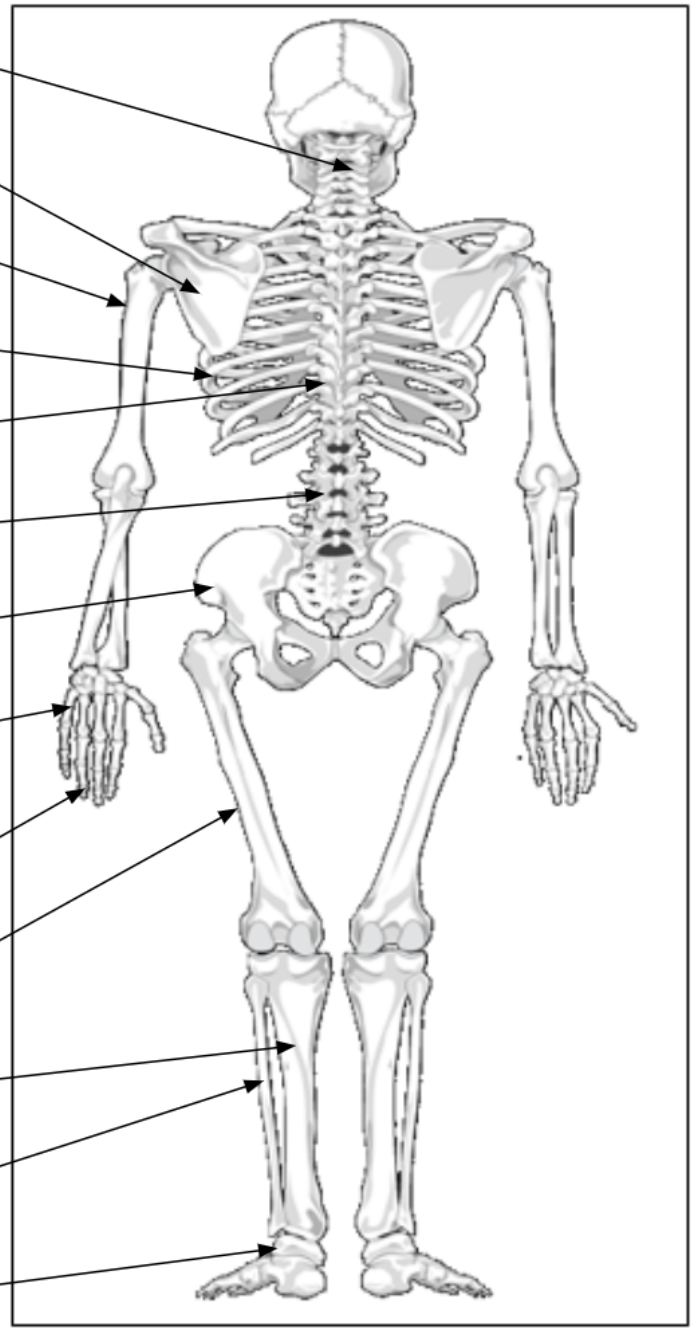
SECTION A: APPLIED ANATOMY & PHYSIOLOGY

Handout 1 & 2 Guidance

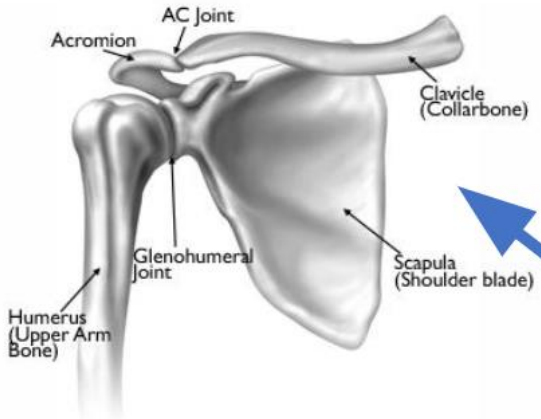


Cranium
Mandible
Clavicle
Sternum
Ulna
Radius
Sacrum
Coccyx
Carpals
Ischium
Patella
Talus
Metatarsals
Phalanges (toes)

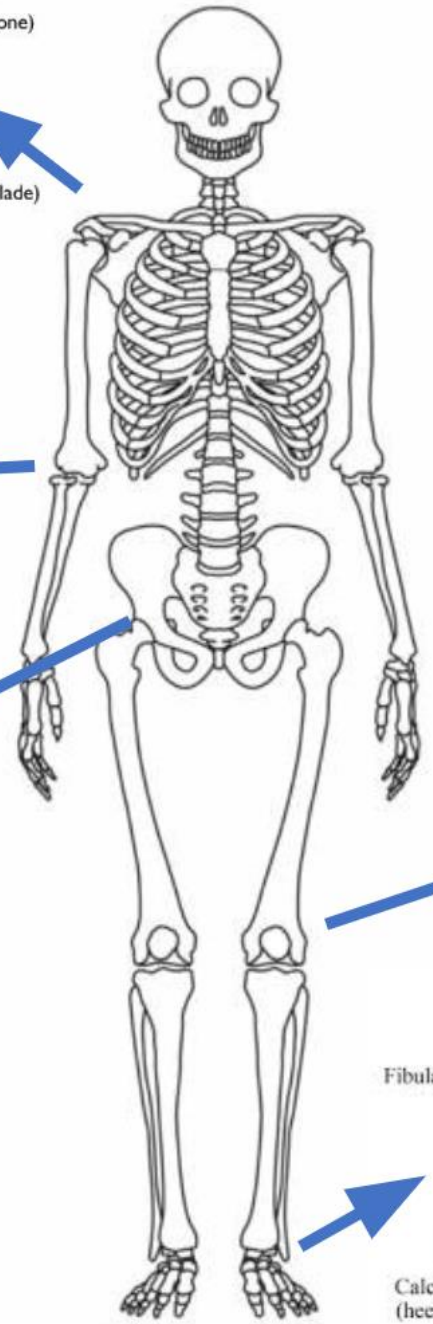
Cervical vertebrae
Scapula
Humerus
Ribs
Thoracic vertebrae
Lumbar vertebrae
Pelvis
Metacarpals
Phalanges (fingers)
Femur
Tibia
Fibula
Tarsals

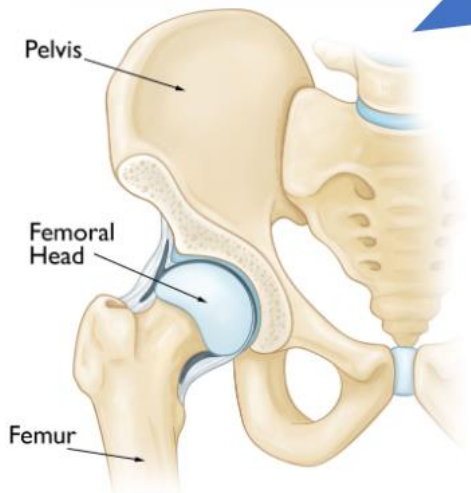


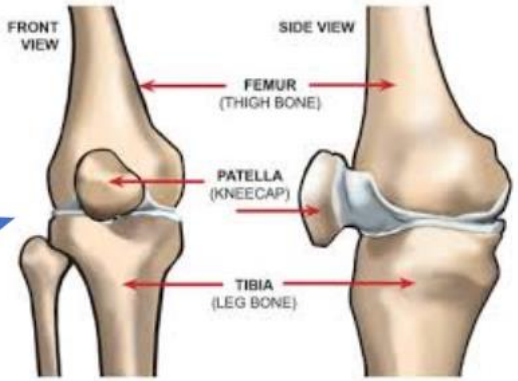
JOINTS


AC Joint
Acromion
Clavicle
(Collarbone)
Glenohumeral
Joint
Scapula
(Shoulder blade)
Humerus
(Upper Arm
Bone)


humerus
biceps muscle
biceps tendon
triceps muscle
anterior band
ulna
radius




Pelvis
Femoral
Head
Femur


FRONT
VIEW
SIDE VIEW
FEMUR
(THIGH BONE)
PATELLA
(KNEECAP)
TIBIA
(LEG BONE)


Fibula
Tibia
Calcaneous
(heel bone)
Talus

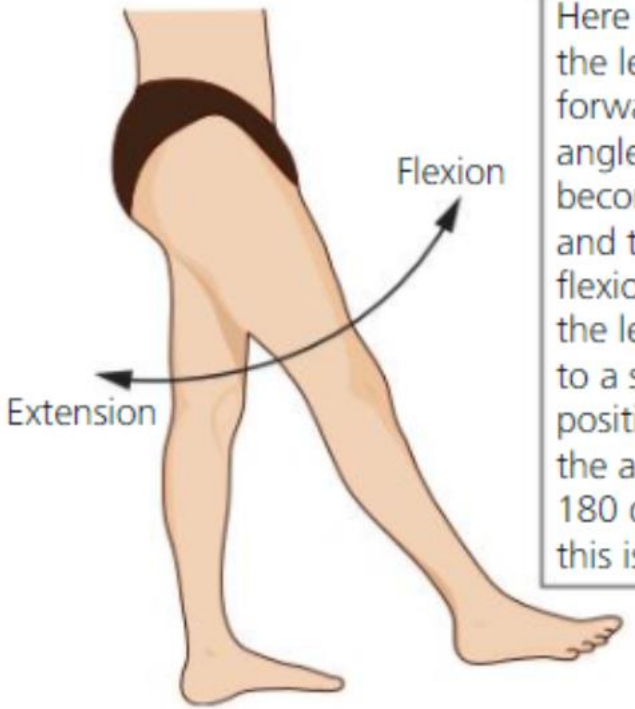
Synovial Joints & their Articulating Bones

What does Articulating mean?

Bones that meet and move at the joint

JOINT	JOINT TYPE	ARTICULATING BONES
Ankle	Hinge	Talus, tibia, fibula
Knee	Hinge	Femur, tibia
Hip	Ball and socket	Pelvis, femur
Shoulder	Ball and socket	Scapula, humerus
Elbow	Hinge	Radius, ulna, humerus

JOINT ACTIONS



Here you can see the leg moving forward so the angle at the hip becomes smaller and this is hip flexion. Moving the leg back down to a standing position increases the angle to 180 degrees and this is hip extension.

Figure 5 Hip flexion and extension

This is hyper-extension as the leg has been moved past the standing position, increasing the angle at the hip even more.

Figure 6 Hip hyper-extension

FLEXION, EXTENSION & HYPEREXTENSION - Hip

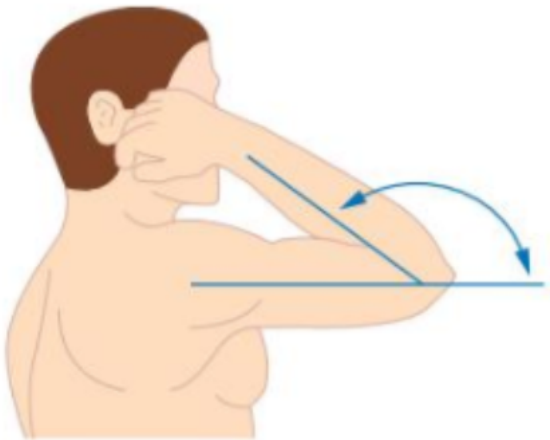


Figure 7 Elbow flexion and extension

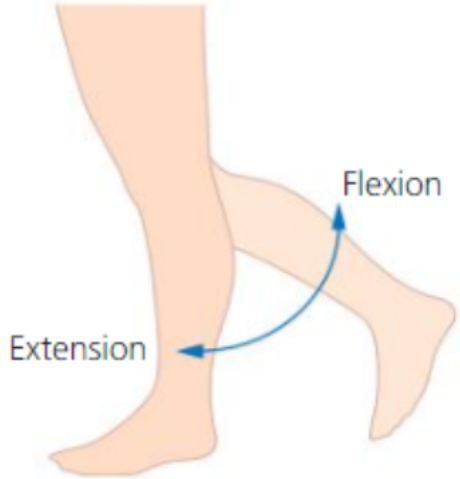


Figure 8 Knee flexion and extension

FLEXION & EXTENSION
– Elbow & Knee

Figure 9 Ankle plantar-flexion and dorsi-flexion

PLANTAR-FLEXION & DORSI-FLEXION – Ankle

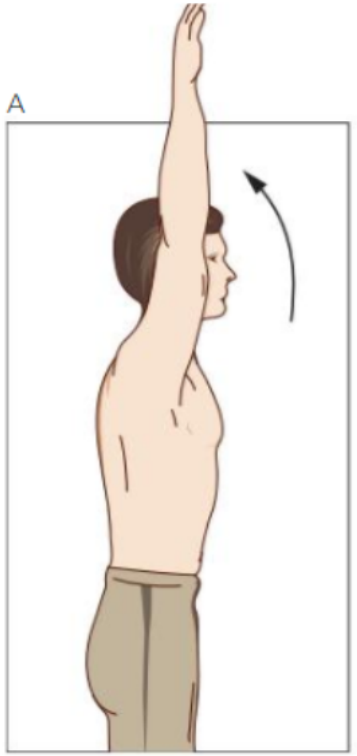


Figure 10 Shoulder flexion

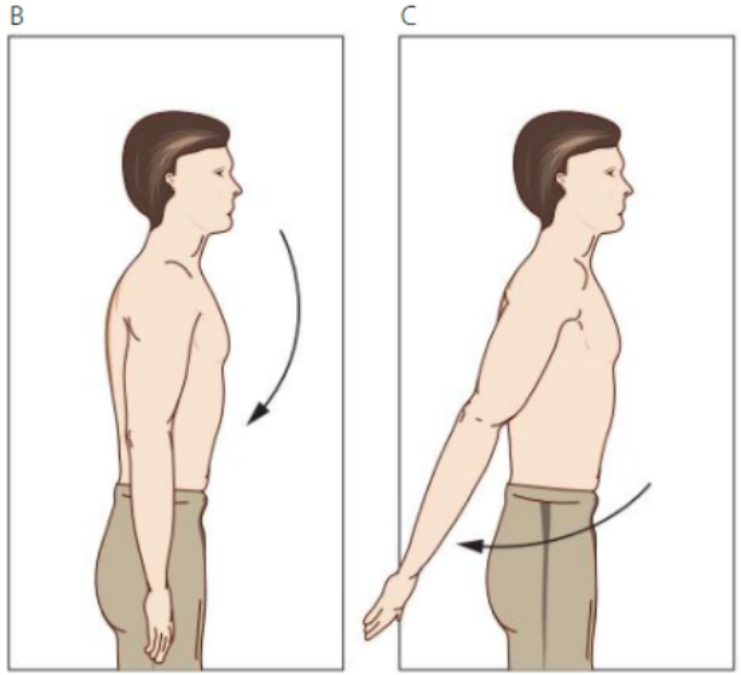
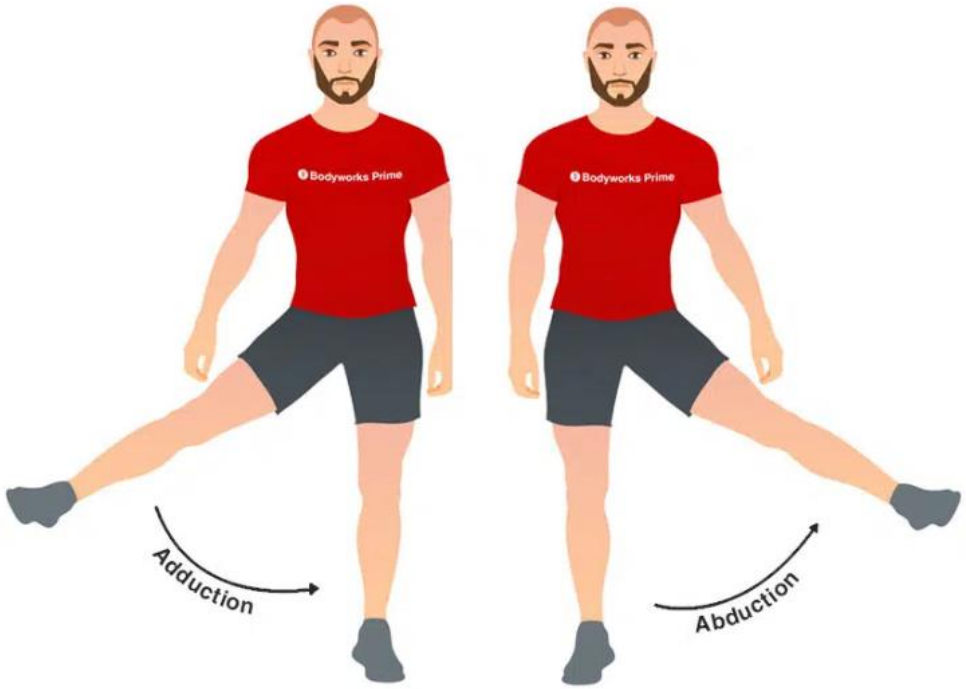
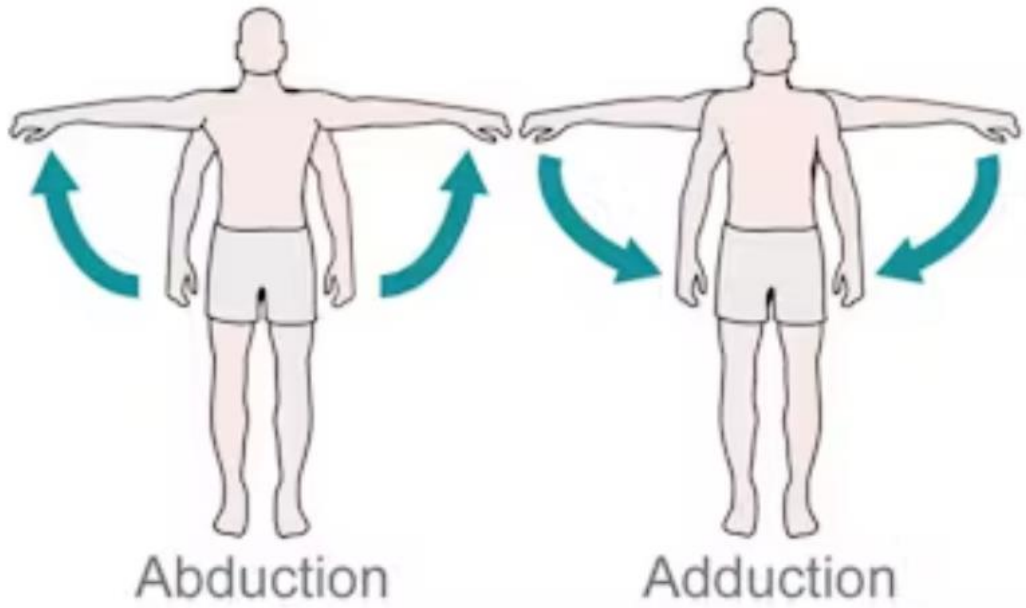


Figure 11 Shoulder extension and hyper-extension

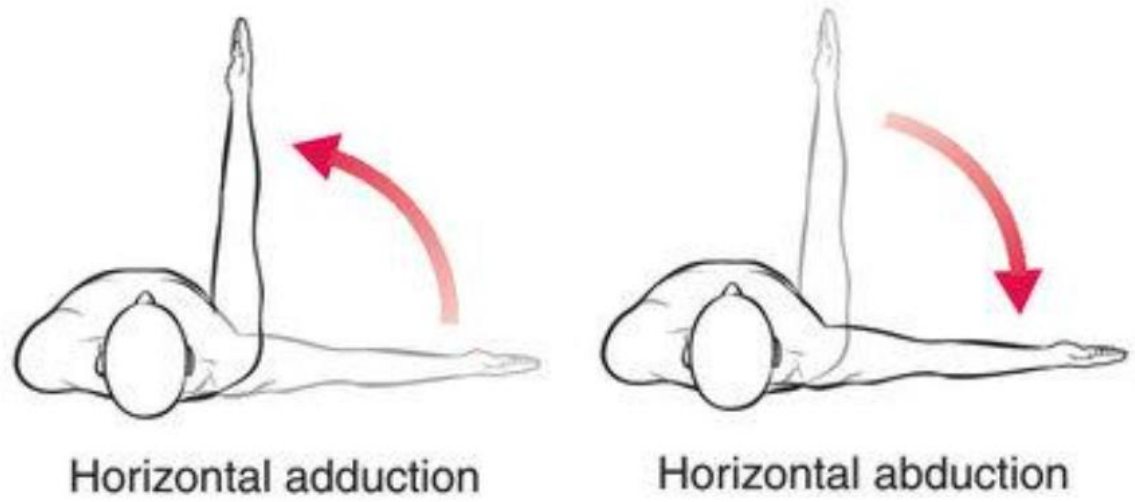
When the arm goes forward it is flexion (A) and the angle is 180 degrees. When the arm moves backwards to the side of the body it is extension and the angle is 0 degrees (B). Moving the arm back further is hyper-extension (C).

FLEXION, EXTENSION & HYPEREXTENSION – Shoulder





ADDUCTION & ABDUCTION
– Hip & Shoulder



HORIZONTAL ADDUCTION & HORIZONTAL ABDUCTION – Hip & Shoulder

Joint Action definitions

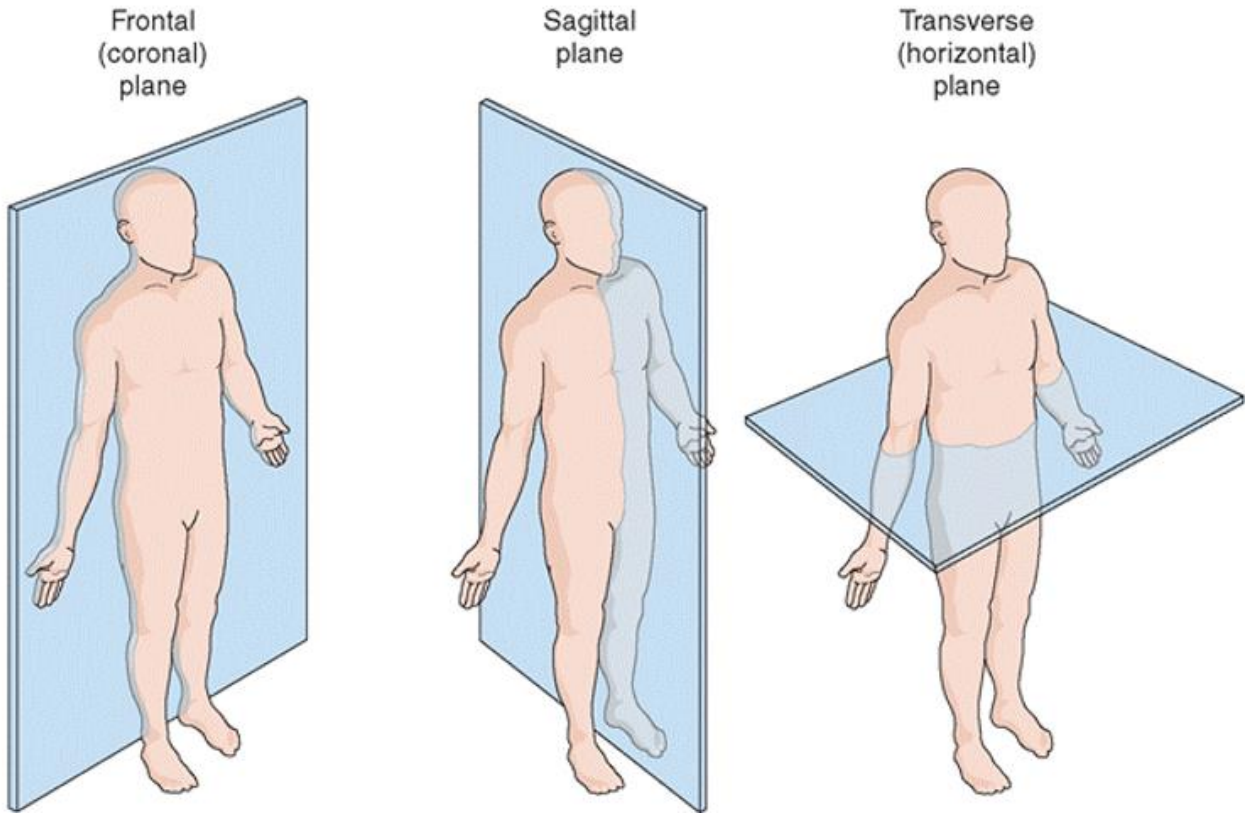
JOINT ACTION	DEFINITION
Flexion	Decreasing the angle between the bones of a joint
Extension	Increasing the angle between the bones of a joint
Plantar-flexion	Pointing the toes/ pushing up onto your toes
Dorsi-flexion	Pulling the toes up to the shin
Hyper-extension	Increasing the angle beyond 180 degrees between the bones of a joint
Adduction	Moving a limb towards the mid-line of the body
Abduction	Moving a limb away from the mid-line of the body
Horizontal adduction	Movement of a limb forwards while it is held parallel to the ground
Horizontal abduction	Movement of a limb backwards while it is held parallel to the ground

JOINTS & THEIR MOVEMENTS - SUMMARY

JOINT	JOINT TYPE	ARTICULATING BONES	JOINT MOVEMENTS
Shoulder	Ball and socket	Humerus and scapula	Flexion Extension Hyper-extension Abduction Adduction Horizontal abduction Horizontal adduction
Elbow	Hinge	Humerus, radius and ulna	Flexion Extension
Hip	Ball and socket	Femur and pelvis	Flexion Extension Hyper-extension Abduction Adduction Horizontal abduction Horizontal adduction
Knee	Hinge	Femur and tibia	Flexion Extension
Ankle	Hinge	Tibia, fibula and talus	Dorsi-flexion Plantar-flexion

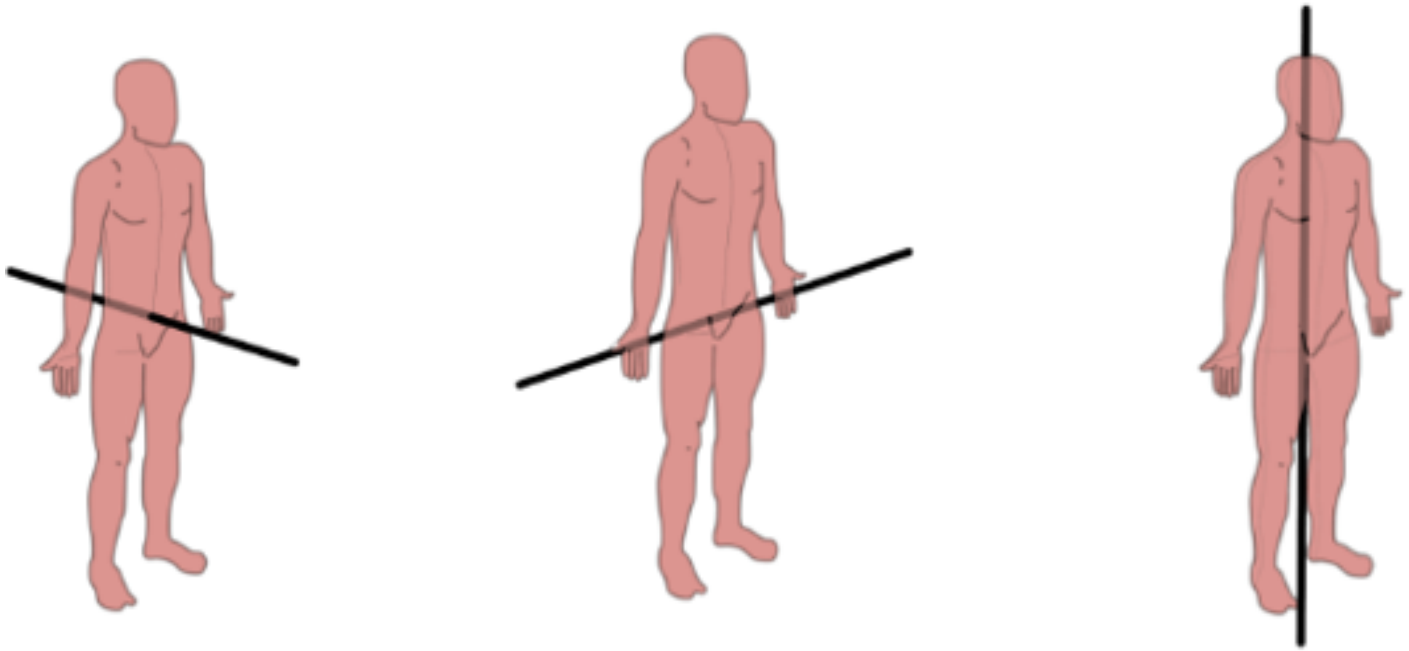
PLANES

To help explain joint action, it is possible to view the body as having a series of imaginary lines running through it. These are referred to as **PLANES of movement** and divide the body up in **three** ways:



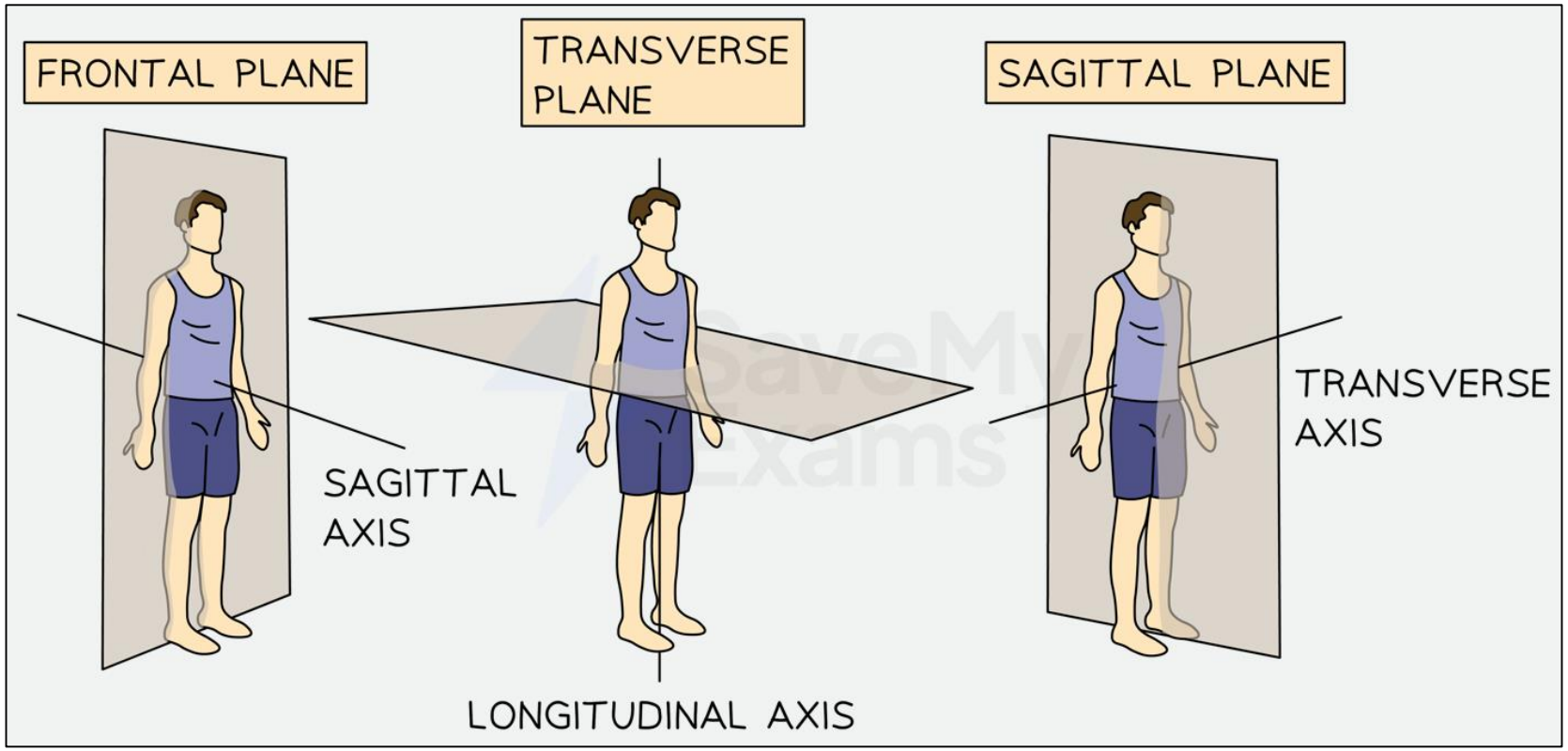
AXES

There are **three axes** of movement about which **rotation** occurs:



JOINT ACTIONS RELATED TO PLANES AND AXES

The joint action taking place can be related to both planes and axes.



PLANE (direction) and AXIS (turning force)		
FRONTAL PLANE about a SAGITTAL AXIS (Frosty Snowman)	**TRANSVERSE PLANE about a LONGITUDINAL AXIS** (TwiLight)	**SAGITTAL PLANE about a TRANSVERSE AXIS** (Soft Teddy)
Abduction & Adduction (shoulder & hip)	Horizontal abduction & Horizontal adduction (shoulder & hip)	Flexion, Extension & Hyper-extension (shoulder, elbow, hip, knee) Plantar-flexion & Dorsi-flexion (ankle)

SECTION B:
SKILL ACQUISITION

Handout 3 & 4

Guidance

Selective attention (Handout 3)

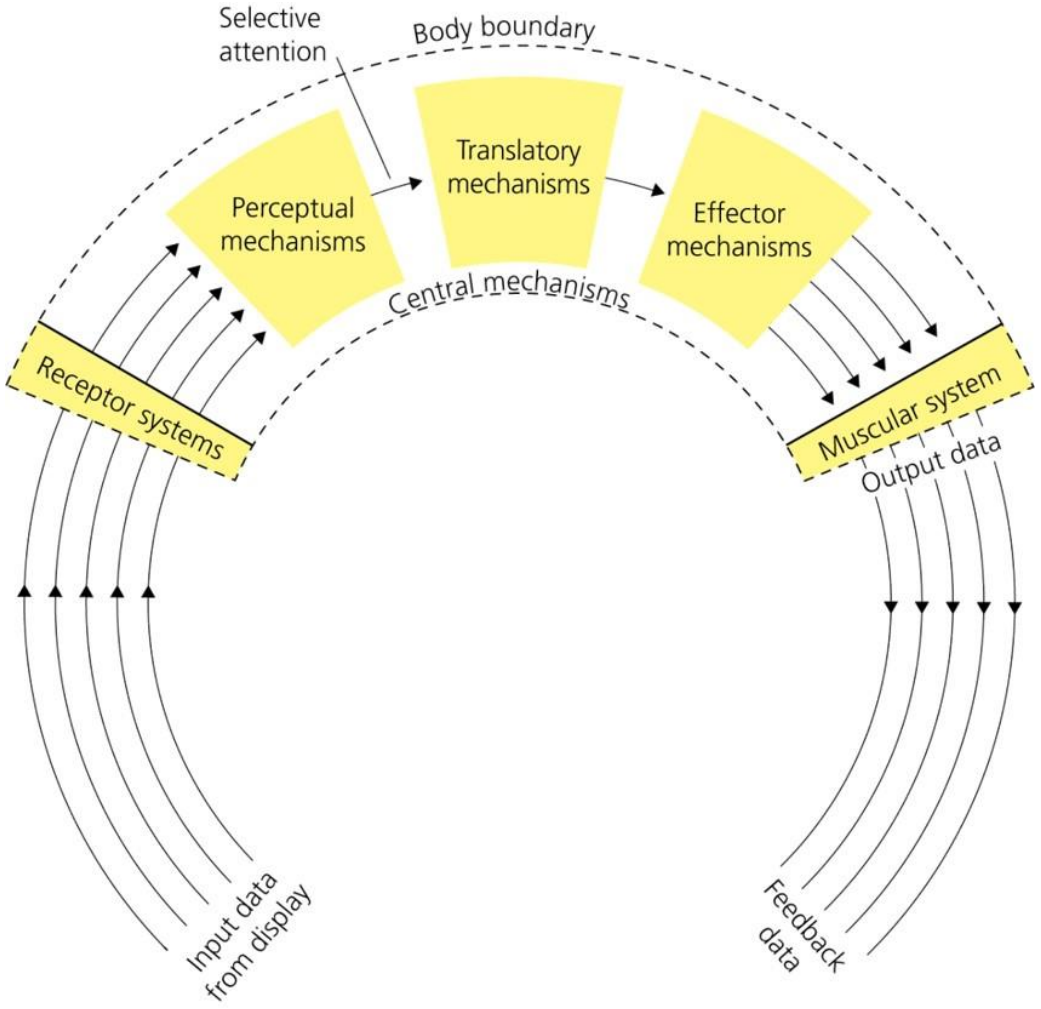
Selective attention in sport refers to an athlete's ability to focus on **relevant information** while filtering out distractions, a crucial skill for performance improvement. This skill allows athletes to concentrate on the task at hand, ignoring irrelevant sensory input or thoughts, which is particularly helpful in dynamic, fast-paced situations.

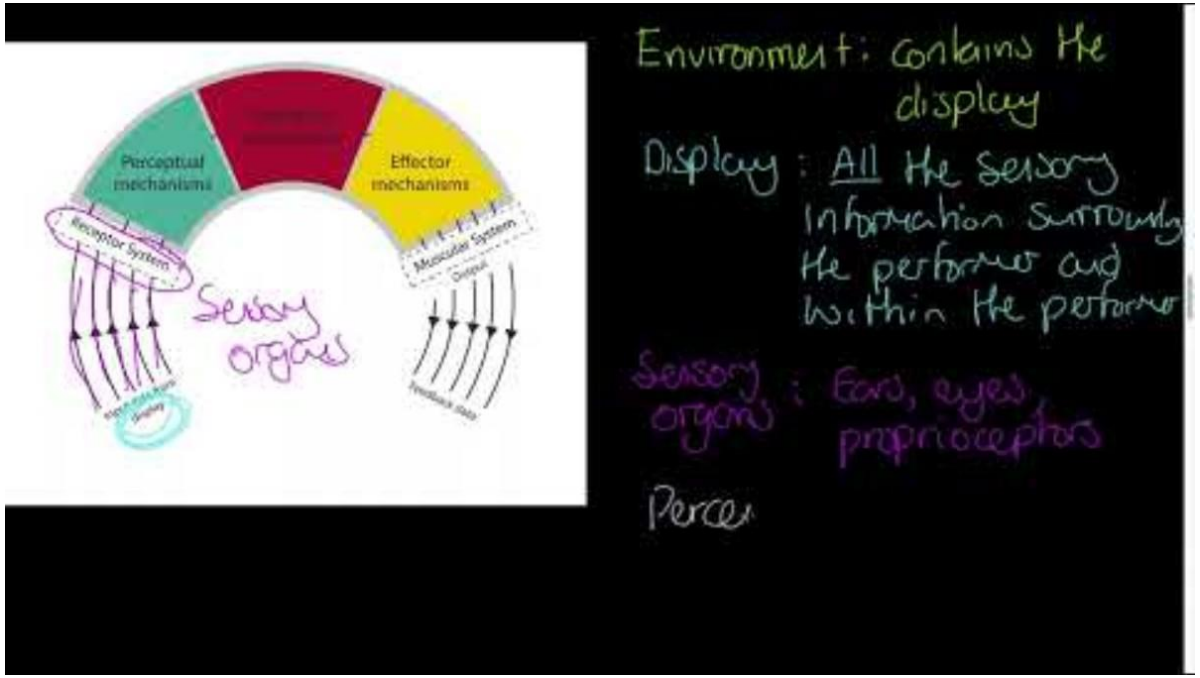
How can it be developed?

https://www.nation.sc/archive/246051/how-athletes-can-improve-their-selective-attention-in-sports

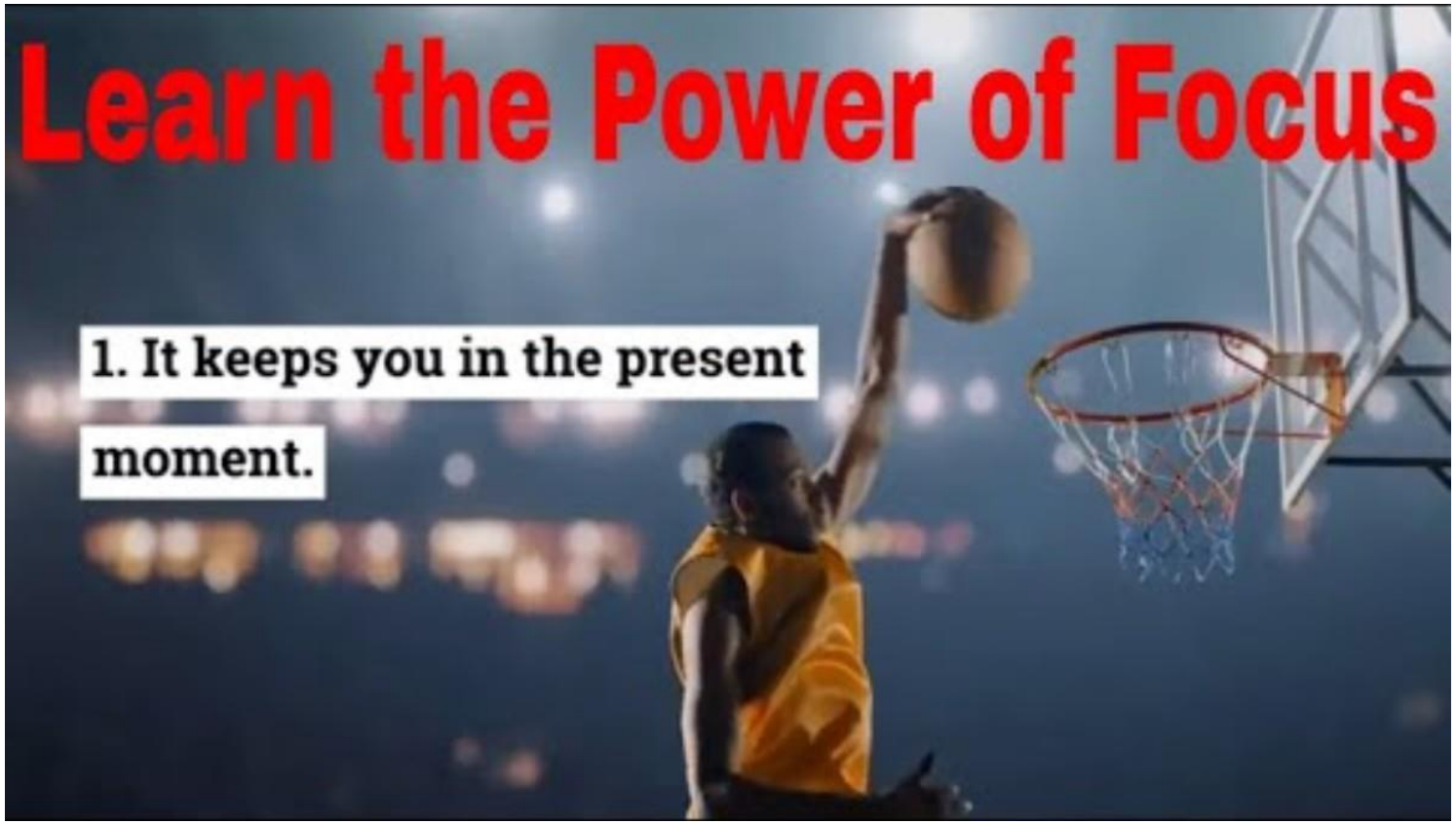
https://members.believeperform.com/imagery-in-sport-elite-athlete-examples-and-the-pettlep-model/

Whiting's information processing model





What are the benefits of good selective attention?



Skill Classification (Handout 4)

OPPOSITION, TOUCH LINE

VERY FEW VARIABLES TO THINK ABOUT.

MUSCLE INVOLVEMENT

GROSS _____ FINE

LARGE MUSCLE MOVEMENTS
LITTLE PRECISION NEEDED

HI LEVELS OF PRECISION NEEDED

SECTION C:
SPORT & SOCIETY

Handout 5 & 6

Guidance

Stereotyping, Prejudice & Discrimination

Raheem Sterling's Barriers

KICK IT OUT
TACKLING RACISM & DISCRIMINATION

Show Racism the Red Card

Sporting Equals

Initiatives to tackle Racism