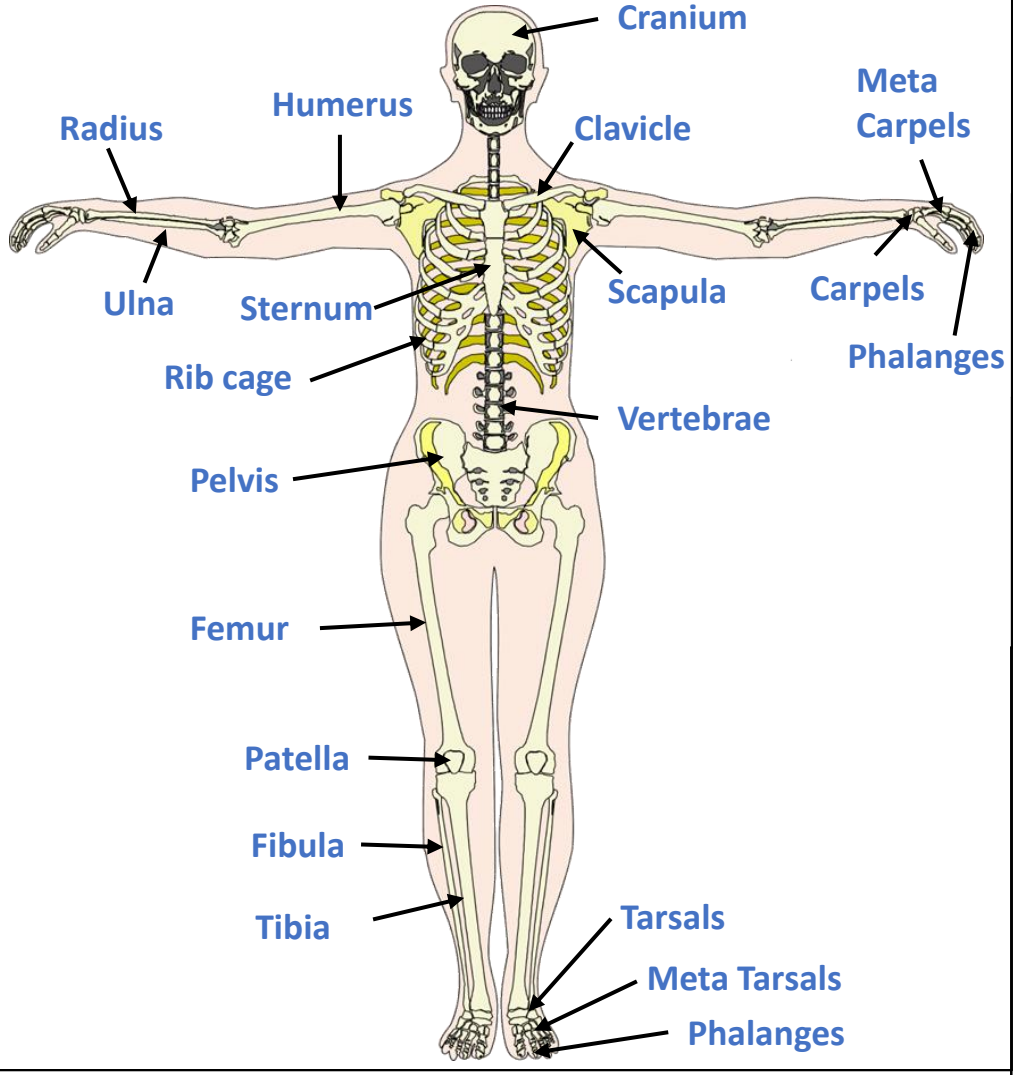
1.1a – The Skeletal System Knowledge Organiser



Types of Connective Tissue:

Ligaments (BO-LI-BO) – Connects BONE to BONE & Stabilises the joints

Tendons (MU-TE-BO) – Connects MUSCLE to BONE & Helps muscles create movement

Cartilage (Shock absorber) – Reduce friction between the bones and act as a shock absorber

Types of Synovial Joints:

Ball & Socket Joint

E.G: *Shoulder, Hip*

Hinge Joint

E.G: *Elbow, Knee*

Articulating Bones (Hinge)

Elbow Joint

Humerus, Radius & Ulna

Knee Joint

Femur, Patella & Tibia

Articulating Bones (Ball & Socket)

Shoulder Joint

Humerus & Scapula

Hip Joint

Pelvis & Femur

COMPNENTS of a Synovial Joint:

Synovial Joints have …

- Ligaments
- Tendons
- Cartilage

They also have…

- Joint Capsule:

Outer covering, that holds the bones together and protects the joint

- Synovial Membrane:

Inner lining of the joint capsule which produces synovial fluid

- Synovial Fluid:

Fluid which surrounds the joints, lubricating it, allowing for easy movement

6 FUNCTIONS of the Skeletal System:

- **Posture**

Skeleton provides a different shape and posture **E.G** size and width of people

- **Support**

Without the skeleton the body would be nothing. **E.G.** Vertebrae helps hold the body

- **Movement**

Bones and muscles work together to create movement (muscles contact moving the bones)

- **Protection**

Bones protect our vital organs e.g. Rib cage protects heart, Cranium protects brain

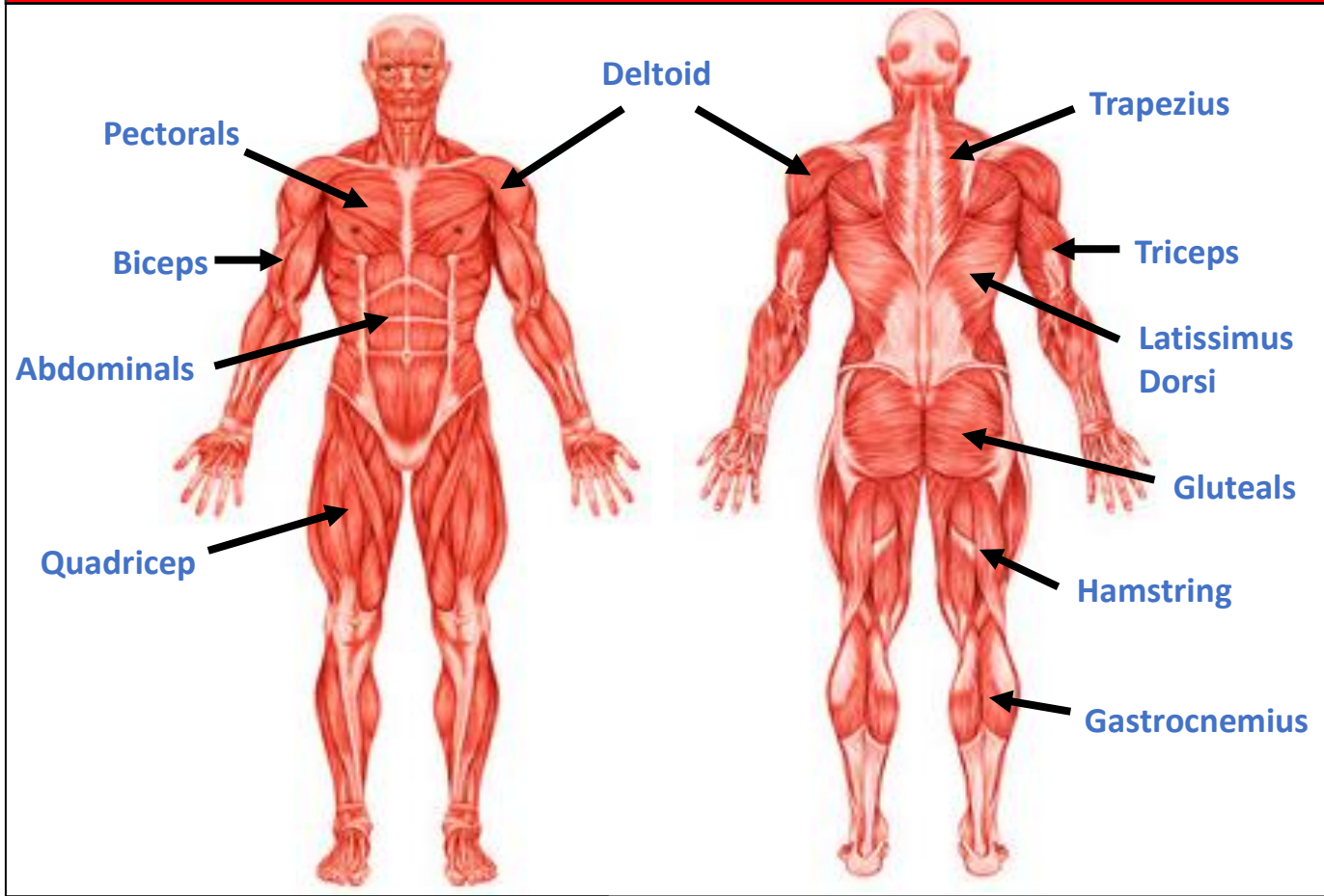
- **Blood Cell Production**

Blood cells are produced in the bone marrow found in our long bones e.g. Femur, Humerus, Rib Cage etc

- **Mineral Storage**

Bones store minerals such as calcium and magnesium, benefitting in bone health

1.1a – The Muscular System Knowledge Organiser



Antagonistic Pairs: Muscles work in pairs to create movement

Agonist: The muscle **contracting** and creating the movement (A.K.A Prime mover)

Antagonist: The muscle that is **relaxing** and **lengthening** (allowing the movement to occur)

Fixator: Any muscles that **support the agonist** in creating movement

Antagonistic Pairs:

ELBOW (Flexion)	KNEE (Flexion)
Bicep (Agonist)	Hamstrings (Agonist)
Triceps (Antagonist)	Quadriceps (Antagonist)
ELBOW (Extension)	**KNEE (Extension)**
Triceps (Agonist)	Quadricep (Agonist)
Bicep (Antagonist)	Hamstring (Antagonist)

Types of Movement:

Flexion - The closing of a joint **OR** Decreasing the angle at a joint

E.G Upward phase of a bicep curl **OR** Bending the knee when shooting in football

Extension - The opening of a joint **OR** Increasing the angle at a joint

E.G Movement at the elbow when throwing a dart **OR** straightening of the legs when jumping in a set shot

Abduction - Movement of a limb AWAY from the midline of the body

E.G Upward phase of a lateral raise **OR** outward phase of the butterfly stroke

Adduction - Movement of a limb TOWARDS the midline of the body

E.G Movement at the shoulder when making a rugby tackle **OR**

Rotation – Clockwise or anticlockwise movement around a joint/axis

E.G Movement at the hip during a golf swing **OR** movement at the shoulder during a backhand in tennis

Circumduction – Movement of a limb, hand or foot in a circular motion

E.G Movement at the shoulder during the front crawl **OR** Movement at the hip during a beam routine

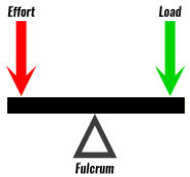
1.1c – Movement Analysis Knowledge Organiser

Components of a Lever System:

Fulcrum
- **Joints** act as pivots/fulcrums

Load
- The **weight of the body Parts** or **the objects that need to be moved** are known as the load

Effort
- **Muscles** provide the effort in order to move the load

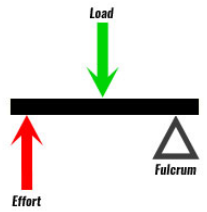


1st Class Lever System

The **FULCRUM** is in the middle (in between the load & effort)

Sporting E.G

Heading the ball in football (**N**eck is the fulcrum)

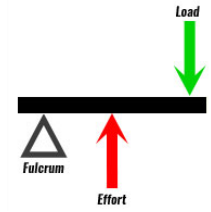


2nd Class Lever System

The **LOAD** is in the middle (in between the fulcrum & effort)

Sporting E.G

Take off phase of long jump (**A**nkle is the fulcrum)



3rd Class Lever System

The **EFFORT** is in the middle (in between the fulcrum & load)

Sporting E.G

Bicep Curl (Elbow is the fulcrum)

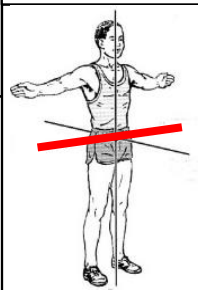
Acronym for Lever Systems:

F	L	E
1	2	3
N	A	B

Planes & Axes

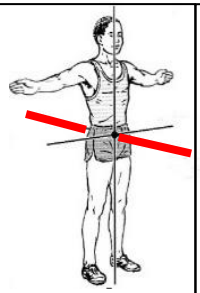
Planes: Imaginary lines which the body moves along

Axis: Straight line which an object rotates around



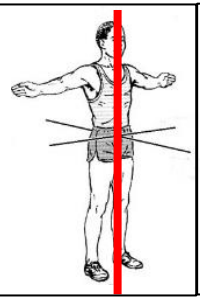
TRANSVERSE Axis:
- Through the **SIDE** of the body to the other **SIDE**
- Flexion & Extension

E.G Front Flip, Forward Roll



FRONTAL Axis:
- Through the **FRONT** to the **BACK** of the body
- Abduction & adduction

E.G Cartwheel OR Side steps

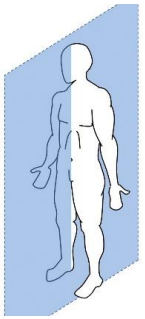


LONGITUDINAL Axis:
- Through the **TOP** to the **BOTTOM** of the body
- Rotation

E.G Hammer Throw, Pirouette

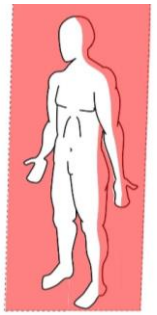
Acronym for Planes & Axes:

Plane	Type Of Movement	Axis
Sagittal Salah	Flexion & Extension Fails , Every	Transverse Time
Frontal Fat	Abduction & Adduction Animals, Are	Frontal Freaky
Transverse Tender	Rotation Roast	Longitudinal Lamb



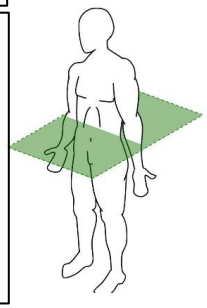
SAGITTAL Plane:
- Splits the body **SIDE to SIDE**
- Flexion & Extension

E.G Running, Bicep Curl



FRONTAL Plane:
- Splits the body **FRONT and BACK**
- Abduction & adduction

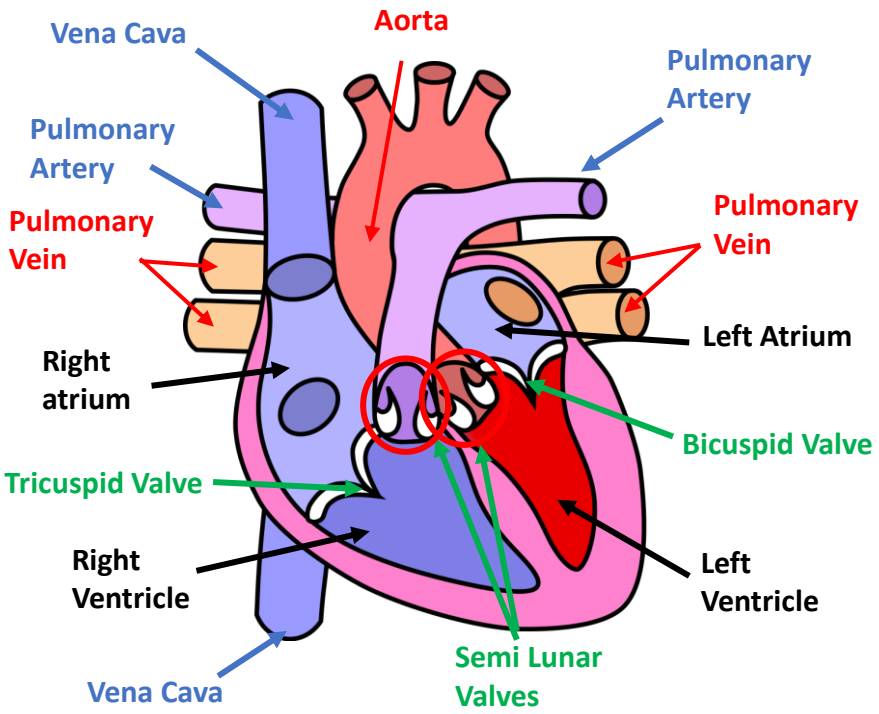
E.G Cartwheel OR Side steps



TRANSVERSE Plane:
- Splits the body **TOP and BOTTOM**
- Rotation

E.G Golf Swing

1.1d – Cariovascular System Knowledge Organiser



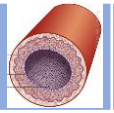
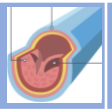
Double Circulatory System:

- Systemic Circuit → Transports oxygenated blood from the heart around the body and deoxygenated blood back to the heart
- Pulmonary Circuit → Transports deoxygenated blood from the heart around the lungs and oxygenated blood back to the heart

Pathway of Blood:

1. Blood starts in the **RIGHT ATRIUM.** Blood flows to the **RIGHT VENTRICLE**, through the **TRICUSPID VALVE**
2. From the **RIGHT VENTRICLE**, the ventricles **contract** and the deoxygenated blood is pumped out of the heart to ***the lungs*** via the **PULMONARY ARTERY.**
3. The blood gets oxygenated and returns to the heart, into the **LEFT ATRIUM** via the **PULMONARY VEIN**
4. Blood flows from the **LEFT ATRIUM** to the **LEFT VENTRICLE** through the **BICUSPID VALVE**
5. Once in the **LEFT VENTRICLE,** the ventricles contract and blood is pumped out to ***the body and the working muscles*** via the **AORTA**
6. Once the working muscles have used the oxygen, the deoxygenated blood is pumped back to the **RIGHT ATRIUM** via the **VENA CAVA**

Blood Vessels:

Blood Vessels	Arteries 	Veins 	Capillaries
Structure	- Smooth muscle layer - Vasodilate and Vasoconstrict - **Thick** Outer Wall - **Thick** Inner Wall - **Narrow** Lumen	- **Thin** Outer Wall - **Thin** Inner Wall - **Wide** Lumen - Pocket valves to prevent backflow	- **Single cell thick** wall 
Function	- Carries oxygenated blood **AWAY** from the heart - Deals with HIGH pressure	- Carries deoxygenated blood **TOWARDS** the heart - Deals with LOW pressure	- Allow **gaseous exchange** to take place around muscles and alveoli

Blood Shunting:

Vasodilation → This occurs when the artery walls **INCREASE** in their diameter (get wider) in order to increase blood flow

Vasoconstriction → This is when the artery walls **DECREASE** in their diameter (gets narrower) in order to decrease blood flow.

Key Definitions:

Heart Rate **(HR)** → The number of heart contractions per minute (bpm)

Stroke Volume ***(SV)*** → Volume of blood ejected out of the left ventricle **per beat** (ml)

Cardiac Output ***(Q)***→ Volume of blood ejected out of the left ventricle **per minute** (L/min)

Q = HR x SV

1.1d – Respiratory System Knowledge Organiser

Components of Respiratory System

1. Nasal Cavity

2. Larynx

3. Trachea

4. Bronchi

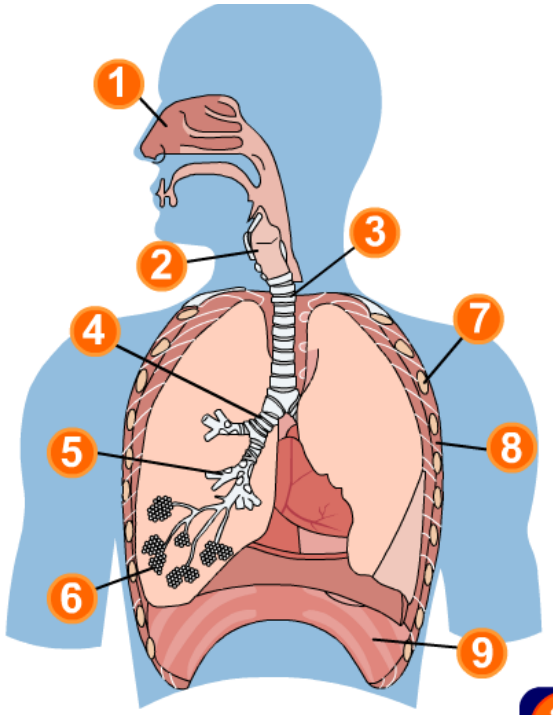
5. Bronchioles

6. Alveoli

7. Rib Cage

8. Intercoastal Muscle

9. Diaphragm



Pathway of Air:

Nasal Cavity/Mouth

↓

(Larynx)

↓

Trachea

↓

Bronchi

↓

Bronchioles

↓

Alveoli

Gaseous Exchange:

- The exchange of **OXYGEN** and **CARBON DIOXIDE,**
- **Oxygen** passes from the alveoli into the bloodstream
- **Carbon Dioxide** passes from the bloodstream, back to the alveoli
- In the **alveoli** sacs in the **lungs,**
- By a process of **DIFFUSION,**
- From an area of **HIGH** concentration to an area of **LOW** concentration

Mechanics of Breathing:

INHALATION:

- ***Intercoastal Muscles*** CONTRACT, pulling the rib cage UP & OUT.
- ***Diaphragm*** CONTRACTS and FLATTENS
- ***INCREASES*** the chest cavity (space in the chest)
- ***DECREASES*** the pressure in the lungs

This causes the air (O2) to be drawn into the lungs!

EXHALATION:

- ***Intercoastal Muscles*** RELAXES, dropping the rib cage DOWN & IN.
- ***Diaphragm*** RELAXES and returns to normal dome shape
- ***DECREASES*** the chest cavity (space in the chest)
- ***INCREASES*** the pressure in the lungs

This causes the air (CO2) to be forced out of the lungs!

Respiration:

The transport of air from outside, INSIDE to the cells

AEROBIC:

Glucose + Oxygen → ENERGY + CO_2 + Water

E.G. *Marathon runner, Rower, Cyclist*

ANAEROBIC:

Glucose → ENERGY + Lactic Acid

E.G. *Sprinter, Hammer Throw, Golf, Tennis serve*

Key Definitions:

Breathing Rate/Frequency (f):

The frequency of breathing/No. of breaths inhaled or exhaled per minute (BPM)

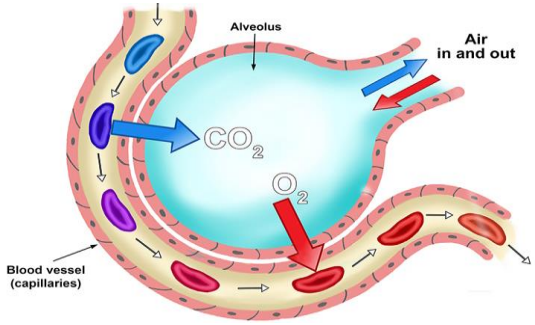
Tidal Volume (TV):

The volume of air inhaled **or** exhaled per breath

Minute Ventilation (VE):

Volume of air inhaled or exhaled per minute

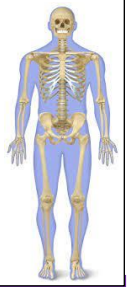
VE = Tidal Volume x Breathing rate



1.1e – Effects of Exercise Knowledge Organiser

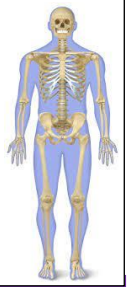
SHORT-TERM Effects of Exercise: SKELETAL SYSTEM

- ***NO short-term effects of exercise***



LONG-TERM Effects of Exercise: SKELETAL SYSTEM

- ***Increased bone density***
  - Increased bone strength
  - Decreased risk of injury
  - Protect against **osteoporosis**



SHORT-TERM Effects of Exercise: MUSUCLAR SYSTEM

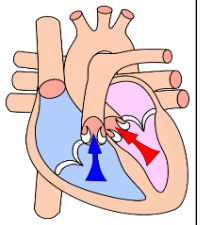
- ***Increased muscle temperature***
  - Increased speed of chemical reactions
  - Increased flexibility & range of motion at a joint
  - Decreased risk of injury
- ***Increased production of lactic acid***
  - Decreased rate of chemical reactions
  - Increased muscular fatigue & pain

LONG-TERM Effects of Exercise: MUSUCLAR SYSTEM

- ***Hypertrophy of muscles & Increased muscular strength***
  - Increased fast twitch muscle fibre size
- ***Increased muscular endurance and resistance to fatigue***
  - Increased slow twitch muscle fibre size
  - Can train longer and at a harder intensity

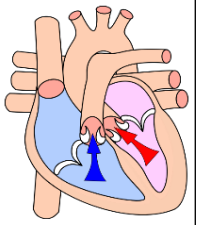
SHORT-TERM Effects of Exercise: CARDIOVASCULAR SYSTEM

- ***INCREASED HR***
- ***INCREASED SV***
- ***INCREASED cardiac output***
- ***Redistribution of blood flow to the muscles***



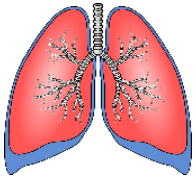
LONG-TERM Effects of Exercise: CARDIOVASCULAR SYSTEM

- ***Hypertrophy of the heart***
- ***DECREASED resting HR***
- ***INCREASED resting SV***
- ***INCREASED cardiac output***
- ***INCREASED speed of recovery***
- ***Capillarisation***
  - Increased number of capillaries surrounding the alveoli



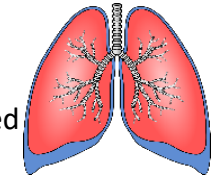
SHORT-TERM Effects of Exercise: RESPIRATORY SYSTEM

- ***INCREASED breathing rate***
- ***INCREASED tidal volume***
- ***INCREASED minute ventilation***
- ***INCREASED volume of O2 to the muscles***



LONG-TERM Effects of Exercise: RESPIRATORY SYSTEM

- ***INCREASED aerobic capacity***
- ***DECREASED resting breathing rate***
- ***INCREASED tidal volume***
- ***INCREASED minute ventilation***
- ***INCREASED strength of respiratory muscles***
  - Increased force of contraction leads to an increased volume of chest cavity and lungs volumes



1.2a – Components of Fitness Knowledge Organiser

CARDIOVASCULAR ENDURANCE

Definition:

The ability of the body to exercise continuously without tiring

Fitness Test:

Multi Stage Fitness Test (Bleep Test)

12 Minute Cooper Run

STRENGTH

Definition:

The amount of force a muscle can exert against a resistance

Fitness Test:

1 Rep max test

Hand Grip Dynamometer

SPEED

Definition:

The ability to move all or part of the body quickly

Fitness Test:

30m Sprint Test

AGILITY

Definition:

The ability to change direction at speed (whilst maintaining balance & speed)

Fitness Test:

Illinois Agility Test

Pneumonic to help remember…

Can	→	Cardiovascular Endurance
Simple	→	Strength
Simon	→	Speed
And	→	Agility
Fat	→	Flexibility
Chug	→	Co-Ordination
Really	→	Reaction Time
Make	→	Muscular Endurance
Poisonous	→	Power
Beverages	→	Balance

Components of Fitness

FLEXIBILITY

Definition:

The amount or range of movement that you have around a joint

Fitness Test:

Sit & Reach Test

CO-ORDINATION

Definition:

The ability to move different limbs at different times or do more than one task effectively at the same time

Fitness Test:

Wall Toss Test

BALANCE

Definition:

The ability to maintain equilibrium, whether stationary or moving

Fitness Test:

Standing Stork Test

POWER

Definition:

The ability to produce a maximal force at speed/quickly

Speed X Strength

Fitness Test:

Standing Vertical Jump

Standing Broad Jump

MUSCULAR ENDURANCE

Definition:

The ability of the muscle or muscle groups in the body to repeatedly contract or keep going without rest or tiring

Fitness Test:

Press Up Test

Sit up Test

REACTION TIME

Definition:

Time taken to respond to a stimulus

Fitness Test:

Ruler Drop test

1.2b – Principles of Training Knowledge Organiser

SPECIFICITY

Definition:

Matching the training to the needs of the sporting activity and athletes

Description:

Training can be made specific to an athletes …

- Muscles/Muscles groups used
- Components of fitness needed by the sporting activity
- Skills and movement patterns used in the sport

PROGRESSION

Definition:

GRADUAL increases in exercises and intensity in order for the body to adapt

Description:

- GRADUAL increase in exercise intensity enables the body to make changes/adaptations, to become fitter
- The GRADUAL increase also minimises risk of injury

OVERLOAD

Definition:

A **greater than normal** stress that is applied on the body for training adaptations to take place

Description:

- Involves pushing the athlete past their comfort zone
- Athletes need to work harder than normal to **force** the adaptations to occur

REVERSIBILITY

Definition:

Any adaptation of training will be lost as a result of NOT training

Description:

- If a performer stops training (Injury or loss of interest), adaptations are usually lost

ADAPTIVE OVERLOAD

ADAPTIVE OVERLOAD *refers to:*

- ***How*** a training session can be adapted a made more or less difficult to suit the athletes needs

4 WAYS TO ADAPTIVE OVERLOAD:

FREQUENCY ➡ How **OFTEN** an athlete trains

INTENSITY ➡ How **HARD** an athlete trains

TIME ➡ How **LONG** an athlete trains

TYPE ➡ What an athlete **DOES** when training

PRACTICAL APPLICATION

25-year old Olympic swimmer

S.P.O.R.

SPECIFICITY – Athlete will focus on cardiovascular endurance and power as well as majority of training will be done in the pool

PROGRESSION – Increasing the distance swam in the pool after **each week** by 0.5km

OVERLOAD – Increasing the distance swam in the pool after **each session** by 0.5km

REVERSIBILITY – IF performer stops training due to loss of interest or injury sustained, progress and adaptations will be LOST

F.I.T.T.

FREQUENCY – Increasing the number of training days (INCREASE from 3 to 5 training days)

INTENSITY – Increasing the speed/intensity or increasing the number of laps performed

TIME – Increasing the time swimming (work time) or decreasing the rest time

TYPE – Changing the type of training from continuous to interval or fartlek training

1.2b – Methods of Training Knowledge Organiser

Weight Training

Definition:

Involves the use of resistance to overload muscle groups and force adaptations that grow muscle tissue

Advantages:

- Increases the strength of the muscle/muscles groups targeted
- Can be adapted easily to suit different sports

Disadvantages:

- **Muscle soreness after exercise because of the high stress levels**
- **Poor technique, can increase the risk of injury**

Pneumonic to help remember…

What	→	Weight Training
If	→	Interval Training
Cows	→	Continuous Training
Could	→	Circuit Training
Fly	→	Fartlek Training
Proper	→	Plyometric Training
High	→	High Intensity Interval Training (HIIT)

HIIT Training

Definition:

Form of interval training where you can use maximum effort for work intervals and an active, low intensity rest period

Advantages:

- Good for people who don't have much time – HIIT workouts are short
- Effective to help with fat loss without losing muscle
- Easy to adapt to different sports

Disadvantages:

- Can be tiring and it can be hard to find motivation to push to maximum effort

Interval Training

Definition:

Involves distinct periods of work followed by periods of

Advantages:

- Quick and easy to set up
- Can mix aerobic and anaerobic exercises which replicates team games

Disadvantages:

- Can be hard to continue after fatiguing

Continuous Training

Definition:

Involves exercising at a steady, constant rate, without a period of rest

Advantages:

- Highly effective for long distance as it best matches the requirement of the event
- No specialised equipment need

Disadvantages:

- Can become boring
- Doesn't improve anaerobic

Plyometric Training

Definition:

Training that involves rapid 'bouncy and explosive' movements to increase POWER

Advantages:

- Easy to set up
- Only form of training that directly improves an athletes POWER

Disadvantages:

- Demanding on the muscles, increased risk of injury

Circuit Training

Definition:

Incorporates different stations to stress/overload different muscles/muscle groups

Advantages:

- No expensive/specialised equipment needed
- Can be adapted to suit the training needs of the athlete/sport.

Disadvantages:

- Can take a while/long time to set up

Fartlek Training (SPEED PLAY)

Definition:

Type of continuous training that involves changes in intensity E.G changes in speed or intensity throughout the workout

Advantages:

- Easily adaptable to different sports and levels of fitness

Disadvantages:

- Differing intensities mean it is hard to track someone's progress and effort
- Easy to skip the hard bits

1.2b – Warm up & Cool Down Knowledge Organiser

Warm Up COMPONENTS (P.M.S.D.S.)

Pulse Raiser

- Exercises that **slowly** increase heart rate and **gradually** increase body temperature

E.G. Jogging, Cycling, Skipping etc

Mobility

- Exercises that take the joints through their **full range of movement**

E.G. Arm swings, Hip circles, High knees etc

Stretching

- Developmental stretches that can increase in difficulty or dynamic stretches that involve ballistic movements

E.G. Open & Close the gate, groin walks, toe touches

Skill Rehearsal

- Involves practising and rehearsing common movement patterns and skills used in the activity

E.G. passing/dribbling drills for football

Dynamic Movements

- Exercises that movements that show a change of speed & direction

E.G. shuttle runs

Cool Down Benefits

- Helps the body's transition back to a resting state
- **Gradually** LOWERS heart rate
- **Gradually** LOWERS body temperature
- Circulates blood & oxygen
- **Gradually** REDUCES breathing rate
- INCREASES the removal of waste products
- Reduced risk of DOMS (Delayed Onset of Muscles Soreness
- Reduced risk of blood pooling

Low-Intensity Exercises

- Exercises that GRADUALLY lowers the heart rate and body temperature

E.G. Easy movement exercises, light running/jogging

Warm Up Benefits

- Preparing the body for physical activity
- INCREASED body temperature
- INCREASED HEART RATE
- IMPROVED flexibility of muscles
- IMPROVED pliability of ligaments & tendons
- INCREASE blood flow and oxygen to muscles
- INCREASE speed of muscular contraction

Cool Down COMPONENTS

Stretching

- Includes steady and static stretches

E.G. Hamstring stretch, quadricep stretch, gastrocnemius stretch

1.2c – Injury Prevention Knowledge Organiser

RISK → The chance that someone will be harmed by the hazard

HAZARD → Something that has the potential to harm

Clothing & Footwear

- Clothing should be comfortable, that allows **full range of movement**
- Make sure nothing can get caught e.g. jewellery, watches etc
- Footwear that will **protect and cushion** landing (ankle/knee joints)
- Studded footwear to **help prevent slipping** and injury yourself

Lifting equipment safely

- Make sure you use the correct technique to lift and carry things
- Correct technique being…

Bend at the knees, rather than the back

- You may need training for specialised pieces of equipment **e.g.** trampolines

Prevention of Injury
FACTORS
(CLAWP)

Appropriate level of competition

- Exercises with people at a similar levels as yourself (W.A.G.S)
- **W**eight
- **A**ge
- **G**ender
- **S**kill level

You need to compete in the correct **WEIGHT, AGE, GENDER & SKILL LEVEL**

Personal Protective Equipment (PPE)

- All equipment which is intended to be worn or held by a person at which protects them against one or more risks
- **E.Gs** Headguards and gumshields in rugby

Gloves and Helmet in cricket

Warm up & Cool Down

- Follow the **5 components** of a warm up and the **2 components** of a cool down
- ***WARMING UP*** → Prepares the muscles and joints for movements that will happen during the activity
- ***COOLING DOWN*** → Help prevent muscle stiffness and soreness

Hazards – SPORTS HALL

- Badly stored equipment
- Walls
- Slippery/Hard floors
- Trips Hazards
- Other/Too many Participants

Hazards – FITNESS CENTRE

- Broken equipment or incorrect use
- Free weights
- Badly stored equipment
- Other/Too many Participants

Hazards – PLAYING FIELDS

- Pitch surface e.g. bumps/holes
- Litter e.g. broken glass or animal faeces
- Semi permanents equipment e.g. goal posts
- Fencing
- Other/Too many Participants

Hazards – ARTIFICAL OUTDOOR AREAS

- Surface of the pitch e.g. Astro burn
- Litter e.g. broken glass or animal faeces
- Semi permanents equipment e.g. goal posts
- Fencing
- Other/Too many Participants

Hazards – SWIMMING POOL

- Water
- Chemicals in the water
- Surface surrounding the pool
- Weather (if outdoors)
- Other/Too many Participants

2.1a – Engagement Patterns in Physical Activity and Sport Knowledge Organiser

Physical Activity and Sport – *Current Guidelines*:

- At least ***60 minutes*** of moderate – vigorous physical activity (MVPA) **EACH DAY** for those **aged 5-18yrs old**.
- At least ***150 minutes*** of moderate – vigorous physical activity (MVPA) **EACH WEEK** for those **aged 19+yrs old**.

Current trends in Participation

Sport England	A national organisation working to increase participation and sporting habits for life
DCMS	The government department responsible for policy related to sport
National Governing Bodies (NGB's)	A national organisation responsible for the organisation nd administration of each sport E.G. the FA, RFU, England gymnastics
Physical Activities and Sports	The most popular physical activities/sports to among adults are: → Walking → Swimming → Keep Fit, Yoga, Aerobics or dance aerobics → Cycling → Cue sports (Pool, Snooker, Billiards)

Strategies to improve participation

PROMOTION
Promoting and increase awareness of opportunities in sport and physical activity , choices and role models

PROVISION
Ensuring that their is appropriate provision E.G. facilities, equipment and coaching are available to access.

ACCESS
Ensuring that people can actively engage with physical activity and sport

Trends in Physical Activity – Social Groups:

➢ Age

As peoples age INCREASES, participation rates in sport DECREASE
- 16-25yr olds → 56% take part in PA a week
- 26+ yr olds → 36% take part in PA a week

➢ Gender

Men participate more in sport than women.
- 10% more men participate in sport than women

➢ Disability

Participation rates are LOW however they are **INCREASING**.
- Around 17% are taking part in sport regularly a week

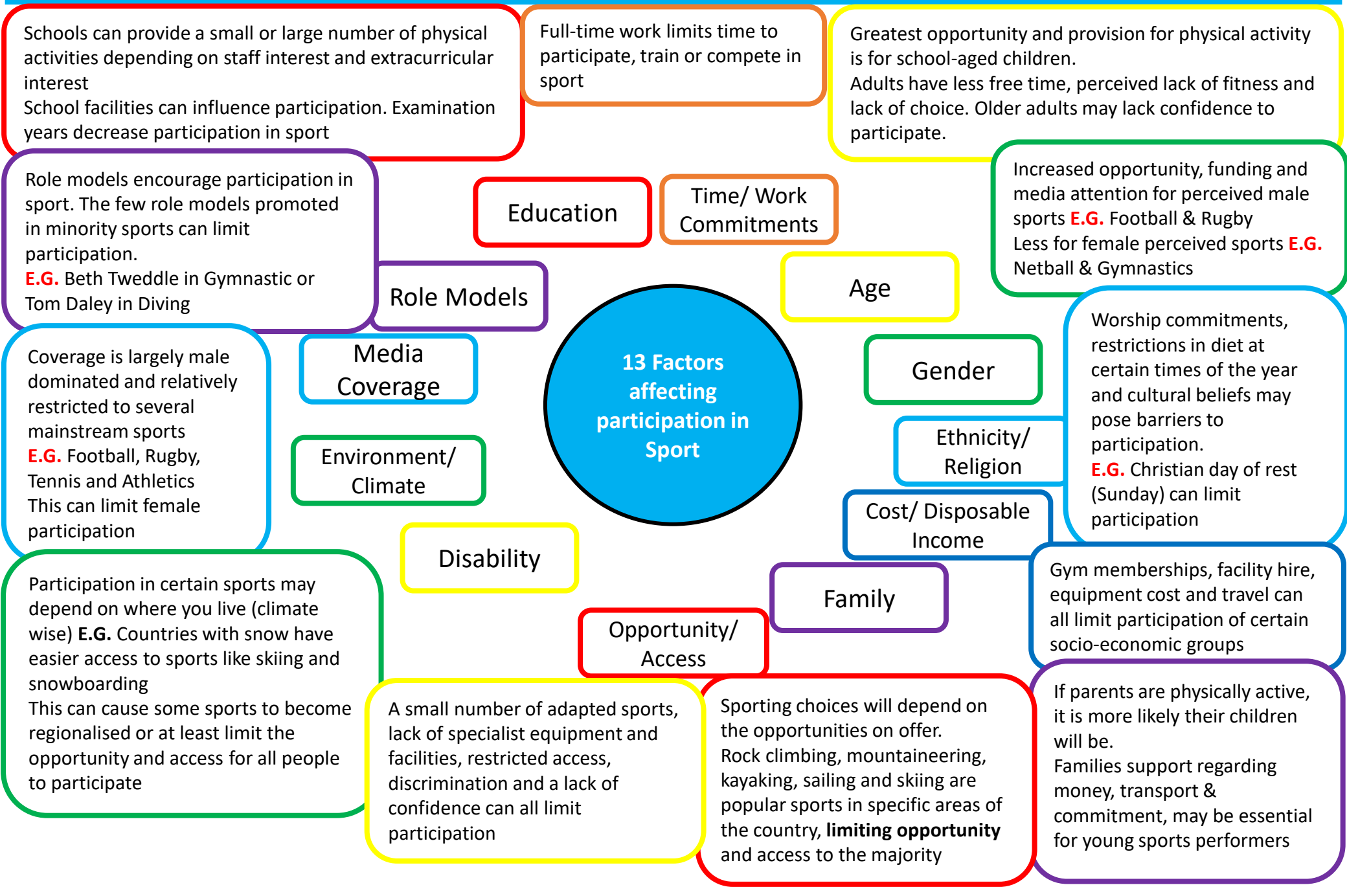
➢ Ethnicity/Religion

Participation among black and minority ethnic adults is INCREASING however white British adults have highest participation rates

➢ Socio- Economic Status

Most affluent workers/professionals have the highest participation rates in sport compared to lower affluent workers e.g. manual laborers/unemployed people

2.1a – Engagement Patterns in Physical Activity and Sport Knowledge Organiser



2.1b – Commercialisation Knowledge Organiser

Definition of Commercialisation:
The process by which a new product is introduced and made available to be bought or sold for a financial profit

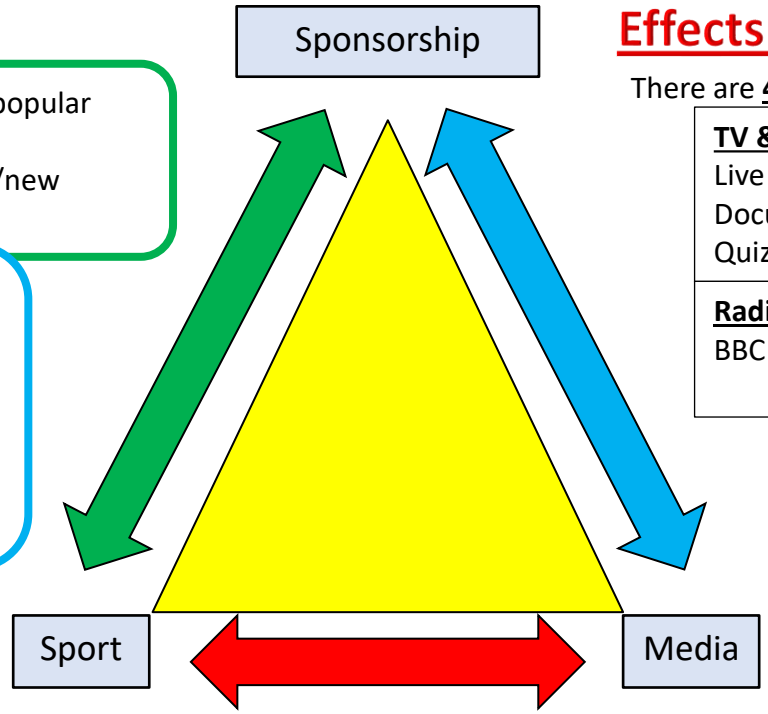
- Throughout the years, sport in general has become ***commercialised***
- Sport is now a ***global product***
- Big sports/sporting events attract huge ***media interest*** and ***sponsorship details***

The Golden Triangle:

- Businesses pay money in sponsorship to popular sportspeople/teams to receive publicity.
- Sport relies on this money to fund wages/new stadiums or players.

- Businesses pay money in sponsorship to access a sports audience through media coverage.
- This money allows the media to cover more sports, use higher quality presenters/facilities and implement technology.

- Sport uses media to gain viewers to increase popularity.
- The media broadcast sport as it is very popular and will engage viewers/readers.



Effects of Media on Sport:

There are **4 main types** of media when it comes to sport:

TV & Cinema: Live coverage, Documentaries, News, Quiz shows & Advertising	**Newspapers & Magazines:** Scores, Factual updates (e.g. transfers), analysis & discussions
Radio: BBC Talk sport	**Internet & Social Media:** Websites and applications that help people create, share and discuss content

Positives:
- Increases participation
- Generates funding
- Makes sport more entertaining
- Makes games fairer
- 24-hour worldwide coverage
- Increases national pride
- Promotes minority sports
- Promotes good role models and breaks stereotypes
- Creates sports stars on and off the field

Negatives:
- Too much focus on the sport. More people would rather watch than participate (Decrease in participation)
- Pay per view limits access
- Poor role models highlighted
- Minority sports have limited coverage
- Controls or changes sport
- Damaging press coverage: intrusion into players personal lives, pre match hype

Effects of Sponsorship on Sport:

Positives	Negatives
- Increased funding - Allows full-time training - Gives financial security - Pays for competitions or facilities	- Bad image for sport if linked to fast food or alcohol - Pressure of sponsor demands - Only a few or top sports/top teams receive sponsorship Sponsorship easily lost

2.1c – Ethical Issues in Sport Knowledge Organiser

Definition:
Ethical, appropriate, polite and fair behaviour while participating in a game or athletic event; also known as fair play

Sportsmanship

Examples:
- Shaking hands with your opponents and the referee after a game
- Swapping shirts at the end of a football game
- Accepting a bad decision and continuing to play the game
- Apologising when winning a shot in tennis after hitting the net

Sportsmanship helps to:
- Make an activity enjoyable
- Encourage a good atmosphere and friendliness
- Support the officials and umpires and helps the game to flow
- Raise the status of the sport and provide good role models

Definition:
Human behaviour that is against your society's norms and values. This behaviour is often against the law/illegal in nature

Deviance

Examples:
- Taking Performance Enhancing Drugs (PED's) such as **anabolic steroids/beta blockers** or **stimulants**
- Using a two footed tackle to purposely foul or endanger an opponent in football
- Using sandpaper to soften a side of the cricket ball in cricket

Players can resort to Gamesmanship/ Deviance because:
- Wanting an unfair advantage over the competition
- The importance of winning a high-status competition (for example a cup final)
- Pressure from fans, team-mates or sponsors

Gamesmanship

Definition:
Where the laws of the game are interpreted in ways which are not illegal but are not in the spirit of the game to gain an advantage

Examples:
- Whispering in a player's ears to distract them from scoring
- Pausing the server in tennis by untying and then re-tying their shoe-laces
- Faking an injury during a game to give your team an extra-long rest

2.1c – Ethical Issues in Sport Knowledge Organiser

Performance Enhancing Drugs (Think A.B.S)

Name of Drug	Examples of Performers that would use:	Effects of Performance	Negative side effects on the body
Anabolic Steroids	Power events such as: ✓ Weightlifters ✓ Athletic throwers ✓ Sprinters ✓ 50m Swimmers	▪ Increased muscle mass and strength ▪ Increased speed of recovery ▪ Increased intensity and duration of training and performance	➢ Aggression and mood swings ➢ Acne and hormonal problems ➢ Liver damage and heart failure
Beta-Blockers	Accuracy sports such as: ✓ Snooker ✓ Archery ✓ Shooting ✓ Darts	▪ Decreased blood pressure ▪ Decrease heart rate ▪ Decrease muscle tremors ▪ Decrease anxiety	➢ Dry mouth ➢ Dizzy spells ➢ Tiredness ➢ Stomach Problems
Stimulants	✓ Motor sport drivers ✓ Sprinters ✓ Long-distance cyclists	▪ Increased alertness, focus and concentration ▪ Increased use of fats and endurance of performance	➢ Sleep problems ➢ Anxiety ➢ Stomach problems

Violence in Sport

Emotional intensity of an important game
This may include a local derby or rival, pre-match hype or rowdy spectators causing tension in the crowd

Abuse or provocation
This can cause retaliation from gamesmanship behaviour, another players deviance, a hostile crowd or a bad tackle

Lack of Discipline in Sport
This includes lack of punishments, players can get away with it or copying behaviour of role models

Nature of the Game
The may happen due to body contact, checking and rules of the game (**E.G.** ice hockey), equipment which can be used as weapons (**E.G.** sticks in hockey) and kit that dehumanises players (**E.G.** American footballers)

Anger or Frustration at poor officiating
This includes bad refereeing decisions, lack of time, poor score or poor performance

Other reasons include:
- **Pressure from the media**
- **Frustration of losing a game**
- **Side effects/use of drugs**
- **To gain an advantage/hurt your opponent**

2.2 – Classification of Skill Knowledge Organiser

Define MOTOR SKILL:
An action or task with a target requiring voluntary limb and/or body movement to achieve it

DIFFICULTY Continuum:
A classification scale to rate how **simple** or **complex** a skill is

Sub routines → Different parts of a skill
Judgements → Decisions to be made

Skilful Movement:
Where a predetermined objective is accomplished with maximum efficiency with a minimum outlay of energy

5 Characteristics of skilled movements (C.A.P.E.-F)

- ***CO-ORDINATED***

The skill is performed with control, using limbs, senses and movements at the same time.
E.G. Tennis player can successfully throw, hit and jump when serving.

- ***AESTHETIC***

The skill looks pleasing to the eye
E.G. A dancer performs a split leap with technique that looks good

- ***PREDETERMINED***

A skill that has a clear objective or goal.
E.G. A dancer knows the routine well before starting

- ***EFFICIENT***

A skill that is performed without wasting time or energy.
E.G. A swimmer uses a perfect technique in the freestyle to move through the water without energy in the fastest time possible

- ***FLUENT***

The skill is performed in one flowing movement.
E.G. A gymnast performs a cartwheel and backward walkover without stopping

The more judgements and decisions a performer has to make to perform the skill, the more complex it becomes.
It will be closer to the complex end of the difficulty continuum rather than the simple end.
E.G. A basketball layup would be considered a COMPLEX skill due to the number of decisions and sub routines required
Whereas a sprint start in athletics would be considered a SIMPLE skill due to the number of decisions required.

Simple **Complex**

ENVIRONMENTAL Continuum:
A classification scale to rate how **open** or **closed** OR affected by the environment a skill is

Environmental factors
E.G. Opposition players, weather conditions, external factors

The more affected by the environment a skill is, the more open the skill becomes.
It will be closer to the open end of the environmental continuum rather than the closed end of the continuum.
E.G. Dribbling in football would be considered as an **OPEN** skill due how the external environment impacts the skill being performed (e.g. the defenders)
Whereas a gymnast floor routine would be considered as a **CLOSED** skill due to how the external environment has limited impact on the skill or routine

Open **Closed**

Goal Setting & SMART Targets

Why is Goal Setting IMPORTANT (M.A.P.):

- **Motivate performers.** A goal can inspire and drive performers to achieve their potential.

E.G. a weightlifter's goal of completing one additional repetition per set drives them to go further

- **Adhere to exercise**. A goal can push people to stick with an exercise programme.

E.G. attend all three training sessions this week and you should hit your target of 1kg weight loss

- **Improve/Optimise performance**. A goal can lead to a higher level of performance over time.

E.G. a coach gives an athlete a goal to knock off 0.5 seconds from their 400m lap time

Mental Preparation (P.I.M.S.)

Positive thinking:

A.K.A. Positive self-talk. This is when performers talk to themselves or think positively about future efforts

Imagery:

Creation of pictures in a performers' mind to get a feeling of the movement, relax or get a feeling of pleasure

Mental Rehearsal:

Going through the activity in your mind to form a mental image of the skill about to be performed. This can help to learn a new skill, improve existing skills and control anxiety

Selective Attention:

When a performer concentrates on relevant information and ignores distractions.

- **Performance Goals →** Directed to the performance or technique of the activity. **E.G.** Aim to toss the ball higher in the air during a tennis serve to more accurately serve
- **Outcome Goals →** Goals that are directed to the end result. **E.G.** The tennis serve lands IN or OUT

SMART Goals/Targets

- Specific

Goals should be clear, focused and specific about what you want to achieve

E.G. a boxer/fighter has an aim of losing 10kg before a fight 6 weeks out.

- Measurable

Goals should be assessed regularly to know how well a performer is doing

E.G. A coach should be able to measure how much quicker a marathon runner is able to run 1 5k/10k in training

- Achievable

Goals should be challenging enough but realistic and within the performer's capability .

E.G. A netball team scoring 12 goals in the first 1/4, might set a goal of 13-15 in the 2nd 1/4.

- Recorded →

Measurements should be logged to track progress and adapt training programmes and future goals to suit progress

E.G. A weightlifter would record the number of reps, sets and weight lifted each session to ensure there is progress

- Timed →

Short-term goals are more achievable and lead up to long-term goals. Well timed goals can also improve motivation to achieve the goal

E.G. A sprinter would give themselves 2 weeks to improve their sprint start technique (short term) to improve their overall 100m time by 0.5 secs (long term goal)

2.2 – Types of Feedback & Guidance Knowledge Organiser

Types of Guidance

Type of Guidance	Advantages	Disadvantages
Visual Guidance Uses of demonstration, video, chart or illustration to build an 'ideal' picture of what	▪ Good for beginners ▪ Easy to remember ▪ Technical model to copy ▪ Quick and effective	• Hard to get a feel for the skill if the demonstration is incorrect • Too complicated or overload the performer with information
Verbal Guidance Describes or explains how to perform a skill. Mostly used in conjunction with visual guidance to reinforce a mental picture	• Immediate and quick • Fine tuning or developing skilled movements	• Hard to create a mental picture if the information is incorrect, confusing or overloads information
Manual Guidance Gives physical support from a coach or an interview to guide the performer	• Reduces fear in dangerous situations/skills • Increases safety • Raises confidence • Gives a kinaesthetic feel to the performer	• Unrealistic feeling of the skill or kinaesthesis • Overreliance on the support • Dangerous if incorrect
Mechanical Guidance Uses equipment to guide and support a performer	• Reduces fear in dangerous situations/skills • Increases safety • Raises confidence • Gives a kinaesthetic feel to the performer	• Unrealistic feeling of the skill or kinaesthesis • Overreliance on the support • Dangerous if incorrect

Types of Feedback

Extrinsic Feedback
Feedback that comes from external sources such as sound or vision
E.G. a netball goalkeeper sees the ball go into the net

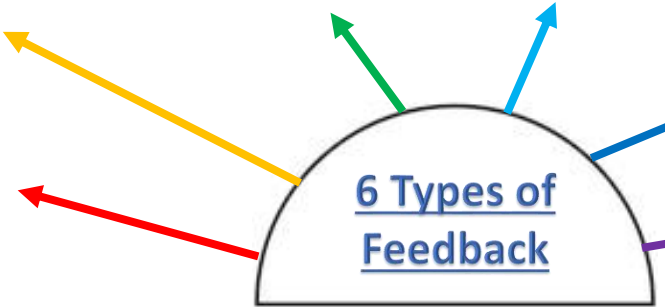
Intrinsic Feedback
Continuous feedback that comes from within the performer
E.G. Performing a handstand, athlete will **feel** if their legs are straight or bent

Knowledge of Performance
Feedback about how well a movement is executed
E.G. A coach giving feedback on a cricket batters technique

Knowledge of Results
Feedback about the end result of a response
E.G. A gymnast lands a backflip well

Poisitive Feedback
Reinforces skill learning and gives information about successful outcomes
E.G. Coach praises a footballer when they score a goal

Negative Feedback
Gives information about unsuccessful outcomes and can be used to build plans
E.G. A tennis coach saying that the grip is wrong



2.3 – Health, Fitness and Well-Being Knowledge Organiser

Define HEALTH:
State of emotional, physical and social wellbeing

Define FITNESS:
The ability to meet the physical demands place on you by the environment

Define SEDENTARY:
Describes a lifestyle that is inactive and spending a large proportion of time sitting down

Define WELLBEING:
The feeling or mental state of being comfortable, happy and healthy

Healthy & Balanced Lifestyle:
A healthy and balanced lifestyle consists of:
→ A healthy & balanced diet
→ Maintaining a healthy body weight
→ Not smoking or drinking excessively
→ Maintaining positive relationships

→ Regular exercise
→ Minimising stress

PHYSICAL Benefits of Physical activity and Sport	PHYSICAL Consequences of sedentary lifestyle
Prevents injury **E.G.** it increases the flexibility and stability of joints	**INCREASED risk of injury** **E.G.** Poor joint flexibility and stability
DECREASED risk of coronary heart disease (CHD) and high blood pressure **E.G.** DECREASING blood fats, INCREASING blood flow and circulation	**INCREASED risk of CHD and high blood pressure.** **E.G.** reduced blood flow, poor circulation and poor removal of fats in the bloodstream
Increases and maintains bone density **E.G.** stimulates new bone growth to withstand stress	**Low bone density** **E.G.** lack of bone growth or renewal which increases the chances of fractures
Prevents obesity and limits type 2 diabetes **E.G.** body fat and blood sugars are used when exercising	**Leads to obesity and type 2 diabetes** **E.G.** low energy levels, stored body fat and high circulating levels of blood sugar
Increases fitness and maintains a good pressure **E.G.** INCREASES energy levels and strengthens core muscles to0revent lower back pain	**Poor fitness & posture** **E.G.** low energy levels, weakness, easily out of breath and a weak core

EMOTIONAL Benefits of Physical activity and Sport	EMOTIONAL Consequences of sedentary lifestyle
INCREASED self esteem & confidence **E.G.** exercise releases endorphins that elevates mood	**DECREASES self esteem and confidence** **E.G.** Poor body image
Goal management for stress **E.G.** stress can be relieved through endorphins	**Poor management of stress** **E.G.** lack of ways to manage stress
Positive body image **E.G.** Happy self-image raises self esteem	**Negative body image** **E.G.** Negative feelings towards body shape/size can decrease self-esteem

SOCIAL Benefits of Physical activity and Sport	EMOTIONAL Consequences of sedentary lifestyle
INCREASES friendship groups **E.G.** opportunity to meet new people, share experiences	**Small friendship group** **E.G.** potential lack of social interaction
INCREASES sense of belonging **E.G.** Opportunity to feel part of a team	**Feeling isolated** **E.G.** feel isolated and not part of a community
Socially active **E.G.** increased opportunities for social gathering, occasions and interactions	**Loneliness** **E.G.** Potential lack of people to tal;k to and interact with

2.3 – Diet & Nutrition Knowledge Organiser

Define BALACNED DIET:

A diet that contains the correct proportion of nutrients, and levels of energy that the body needs

Different diets for different athletes:

Different types of activities require different balances of nutrients

- Endurance athletes require a **high carbohydrate diet**
- Activities requiring muscle growth, will require diets **high in protein**

Macronutrients

CARBOHYDRATES: (55% of a balanced diet)

- Main source of energy production for the body.
- They circulate in the blood as glucose, and are stored in the muscles as **glycogen**
- ***Simple Carbohydrates:*** Simple sugars (**E.G. fruit juice or honey**)
- ***Complex Carbohydrates:*** Complex starches (**E.G. Breads, Pasta, Rice**)

PROTEINS: (15% of a balanced diet)

- Essential for growth and repair of the body, muscles and cells and production of haemoblogin
- Aid in the recovery after a intense training session
- Made from ***amino acids***
- Examples include **Meat**, **Fish**, **Eggs** and **Beans**

FATS: (No more than 30% of a balanced diet)

- Provide more energy than carbohydrates for low intensity exercise e.g. **endurance athletes** (takes longer to break down)
- Insulate the body to keep it warm and cushions vital organs to help prevent injury
- ***Saturated fats:*** **Meats**, **Cakes & Confectionary**, **Dairy products**
- ***Unsaturated fats:*** **Oily fish**, **nuts** , **olive oil**

Micronutrients

FIBRE:

- Helps the large intestine function normally
- Good exercise and fibre helps to reduce the risk of diabetes and obesity
- Examples include **Cereals**, **Beans**, **Seeds/Nuts** and **Beans**, **Fruit & Vegetables**

VITAMINS & MINERALS:

- Vitamins are required and help your bones, teeth, skin and other tissues grow.

E.G. Vitamin A (Growth & Vision), Vitamin D (Strong Bones)

- Minerals are essential for making haemoglobin, bones health and energy production.

E.G. Calcium (Bones, Teeth & Muscle contraction), Iron (Making red blood cells)

WATER:

- Enables chemical reactions to take place in the body and transportation of substances around the body
- Essential before, during and after training sessions, especially **during hot weather**
- Certain foods can be good for hydration as well for example, **Watermelons, Cucumbers, Apples & Watercress**

Specialist Nutritional Strategies:

CARBOHYDRATE LOADING:

- Athletes may carbohydrate-load, in the lead up to an event/competition in order to maximise carbohydrate (glycogen) stores.
- This INCREASES energy production and delay fatigue, improving performance

SPORTS DRINKS & HYDRATION:

- Sports drinks contain glucose (sugar) and electrolytes (salts) which can top up energy stores and prevent dehydration
- Dehydration can lead to DECREASED stroke volume, INCREASED heart rate. This puts greater strain on the heart, leading to early fatigue.