# *CLEETHORPES ACADEMY HOME LEARNING*

## *Year 10: Btec PE*

We Are ***CARING*** We Are ***CURIOUS*** We Are ***CREATIVE***

# SELF QUIZZING

## OUR EXPECTATIONS

- The act of self-quizzing supports retrieval. Retrieval is important because the more we revisit knowledge and ideas, the more likely we are to remember it. The more we remember, the greater sense we can make of our learning.
- You should spend a minimum of *30 minutes a night* focusing on a specific subject's retrieval activity.
- You should bring your completed work to form, every Tuesday, where your work will be checked and additional retrieval activities will be completed to support your retention of the information studied at home.
- Failure to complete the activities each week, will result in further sanctions.

## WHAT YOU SHOULD DO

- Each night, select a subject to focus on.
- Read the subject's information really trying hard to remember what you have read. You might want to highlight and add your own notes to the information you have been given.
- Once you are confident that you can recall the information without having to recheck, use the following blank page to write down everything you can remember, using a black or blue pen. Don't worry if you can't remember everything
- In form time, your tutor will ask you to check through your work and use a green pen to "gap fill" any information you may have missed.
- Your tutor will also ask further questions in relation to the information you have read each week, to further support your retention of new knowledge.
- You will be rewarded with carrot points for your efforts each week.

# WEEK 1

Sports Clothing

Waterproof Clothing

**What is waterproof clothing?**
Waterproof clothing shields athletes from rain, snow, and wind, allowing them to train and compete in various weather conditions.
Stay dry and feel more comfortable.
Will help thermoregulation of the body, it will
help keep you warm by staying dry.
Wearing waterproof gear can enhance comfort by preventing the discomfort associated with wet heavy clothing, such as chafing and heaviness.

**Modern Advancements/Technology:**
Gore-Tex® is a porous material, but not a fabric. It is similar in that it allows air to pass through it, but the pores are small enough that water molecules cannot pass through because of their size.

**Compression Clothing**
Designed to reduce the drag caused by air as an object moves though it therefore able to travel faster more aerodynamic .
Improves muscle recovery, improved circulation of blood around to the muscles helps them replenish and repair quicker.
Reduces inflammation and soreness of muscles.
Improves removal of waste products, compression clothing helps the body to remove lactic acid by facilitating increased blood flow.
Improves muscle stability leading to improved energy cost while exercising meaning it can contract more efficiently.
Improve joint stability help.

**Thermal Clothing**
Maintain body temperature, more comfortable.
Keep muscles warm leading to less injuries. Cold muscles and connective tissue have less elasticity and are therefore more prone to injury.
Muscles are warm and can perform at peak performance. Cold muscles and connective tissue have less elasticity and are therefore more prone to injury.

# Week 2

*Sports Footwear*

***Hiking vs Trail Running***

- Durable
- More Stable higher collar to help ankle stability.
- Protect against elements

- Lighter weight
- More comfortable
- Breathable
- More flexible

*Helping Performance – Weight Lifting Shoes*
*Stability: The Romaleos feature a rigid structure that provides excellent stability during lifts. This helps in maintaining proper form and balance, especially during heavy lifts.*

*Elevated Heel: The shoes typically have an elevated heel that allows for a greater range of motion in the ankles. This is beneficial for squats and Olympic lifts, as it helps lifters achieve better depth and positioning.*

*Strap System: The dual strap system ensures a secure fit, preventing foot movement within the shoe. This helps maintain foot alignment and stability during heavy lifts.*

Running Trials

Weight/Gym Training

Olympic Weightlifting

Sprinting

# Week 3

*Sports Facilities and Officials Equipment*

- ***Outdoor facilities – 3G Football pitch, Astroturf, Tennis Courts, Grass pitches***
- ***Indoor running track***
- ***Indoor Sports Hall***
- ***Gym***
- ***Swimming Pools – Leisure Centres***

***All weather surface 3G/4G***
*Synthetic surfaces are practical and easy maintenance, athletes can play and train on them whatever the weather.*
***Altitude chamber***
*Simulates training at altitude, gets them used to performing at heights where there is less O2. Also helps body become more efficient at using oxygen.*
***Anti gravity Treadmill***
*Train without pain and reduce stress to joints and muscles. Rehabilitate injuries with less pain and less impact.*

***Cryotherapy Chamber***
*Standing in this chamber at sub zero temperatures has many benefits. These include improved muscle soreness and recovery, reduced pain and improved sleep.*
*Sauna*
*The benefits of a sauna include increased recovery, increased relaxation, flushes toxins and relieves stress.*

***Whistle -*** *Control and signal to players, stop the game.*
***Microphone and earpiece -*** *Communicate to other officials*
***Computer assisted technology -*** *Make accurate decisions using computer software.*
***Video assisted decision making -*** *Review and make accurate decisions reviewed by other official's playback of game.*
***Flags -*** *Signal to fellow officials and players, buzzer button at the bottom that sends a signal to the referee.*

# Week 4

## Disability Sports

**Archery**
**Badminton**
**Boccia**
**Goalball**
**Shooting**
**Table Tennis**
**Wheelchair Basketball**
**Wheelchair Rugby**
**Wheelchair Fencing**
**Sitting Volleyball**

*These sports are different because there has needed to be a change in equipment or rules in order for someone to take part and access the sport.*

*This might be the use of a wheelchair, use of a guide, change in equipment, might be the athlete has lost the use of a limb.*

*However, most of the sports are still the same it is just an equal opportunity for individuals to take part in sport*

**Specialised equipment**
*Everyone has an equal opportunity to take part in sport*
*Makes the sport accessible*
*Gives individuals a level playing field to compete against similar people.*

**Wheelchair Tennis**
*Wheels tilted inwards*
*Less bulky*
*No arm rests*
*Extra wheels at the front and the back for stability*
*Lower back rest*
*Footrest is further back*
*Legs are strapped in*

# Week 5

## Performance Analysis

*Where you look at your performance and get information that helps understand the performance.*
*Helps to identify strengths and weaknesses within a performance.*
*Video footage, heart rate monitors and stat analysis monitors*
*Can help make more accurate decisions.*
*Can make the game safer to play.*
*Can help to improve performance with more focused feedback.*
*Improvement kit is more comfortable, efficient and safe.*
*Creates more engagement in the sport due to available places to view and camera angles.*

**Is it useful?**

- *Can help identify weaknesses in a performance*
- *Can help to slow down a movement to analysis in more detail*
- *Can help to provide effective tactics*
- *Help to review a performance*

**Sports Analysis Equipment**

*Smart Watches*
*Heart Rate Monitors*
*Video Footage*
*GPS*
*Sports Sensors*

**Smart Watches**

*Some are stylish and are more for life technology (wallet, text messages, steps), others are for specific sports.*
*Track heart rate, Split times, Maps, Track different sports (swimming), Track your sleep etc.*

***Hear Rate Monitors***

*See the intensity in which you are working.*
*Ensure that you are working in the correct target heart rate zone.*
*Measure recovery rate.*
*Monitor overall fitness – resting heart rate.*

# Week 6

## Limitations to technology

*Time*
*Access to technology*
*Cost of the technology*
*Accuracy of data provided by equipment*
*Usability – specific training required*

**Time**
*Take a long time to set up*
*Wastes time during the session if it does not work properly*
*Have to have extra staff to keep an eye on it to make sure it is running smoothly*
*Long time to analysis the data afterwards.*

**Access**
*Not all clubs can afford the technology.*
*Not all clubs have the infrastructure like the wi-fi to be able to deal with the equipment.*
*Not all clubs have the extra staff to be able to man the technology and coach the individuals.*

***Cost***
*Can be vary expensive for specialised equipment.*
*Some lower levels clubs can not afford the equipment.*
*Can put people off buying them and leave them at a disadvantage.*
*Makes the club membership prices higher to cover the cost.*

**Accuracy**
*If the person using the data has not set it up 100% correct then this could make the data unreliable.*
*If you are re-testing you need to ensure that you are setting the equipment up the same each time.*
*The equipment needs to be in full working order so that it can produce good results.*

***Usability***
*Sometimes you require specific training to be able to understand how to use it.*
*Some people are not very good with technology with can make it more difficult to use.*
*The cost of the training costs as well as the equipment itself.*
*Some equipment is not as easy as it seems and can be quiet complicated.*

# Week 7

## Warm Ups

***A warm up is…….***
*A period or act of preparation for a match, performance, or exercise session, involving gentle exercise or practice*

***Examples;***
*Increasing your pulse by running around the sports all or football pitches*
*Using the cross trainers or rowing machines for 5 minutes at a low to medium intensity*
*Dynamic stretches before a PE lesson*
*Pulse raiser that is specific to a sport e.g. lateral passing within your team in rugby*

***Why is it important?***
*Mentally prepare the participant for the sport or physical activity*
*Increased temperature within the body to make the muscles more pliable*
*Increases heart rate*

***What's included?***
*Pulse Raiser*
*Mobiliser*
*Preparation Stretches*

***Pulse Raiser***
*This is light exercise that slowly increases the heart rate and gradually increases body temperature. For example, jogging, skipping, cycling.*

***Mobiliser***
*Activities that take the joints through their range of movement starting with small movements and making these bigger as the warm-up progresses*

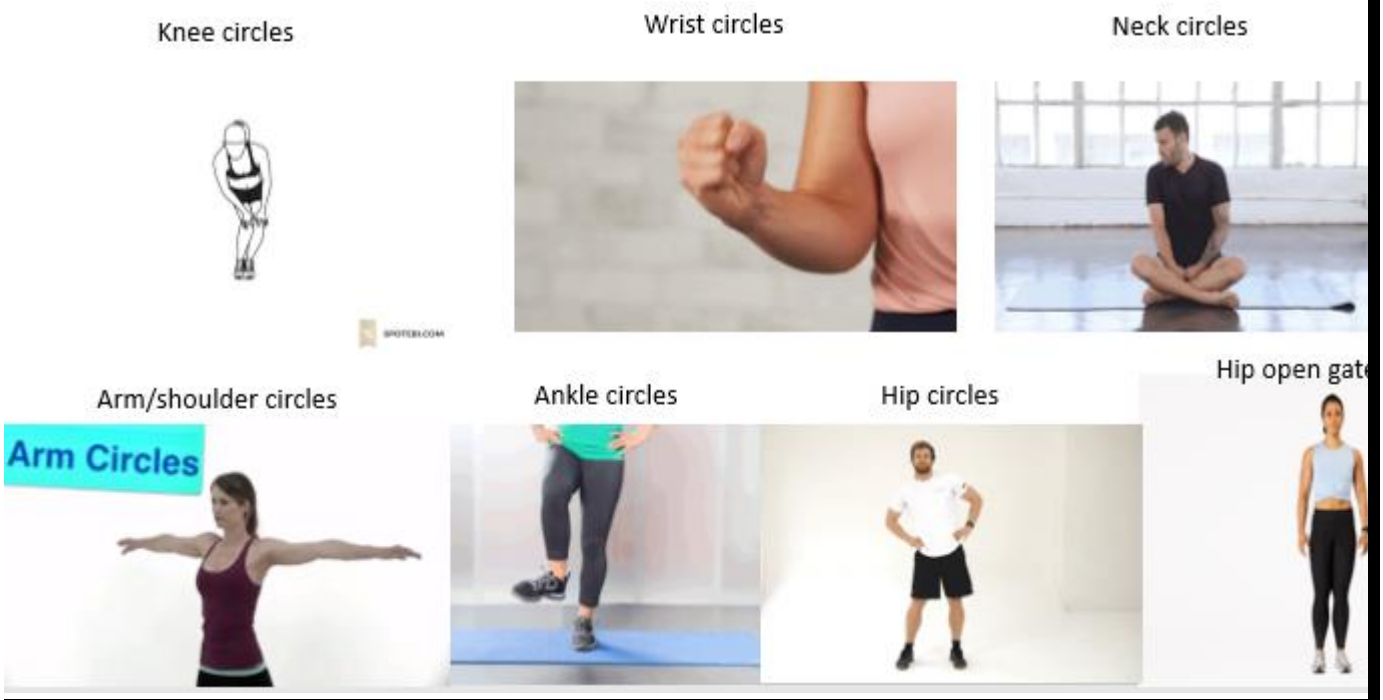
***Preparation Stretches***
*Activities to stretch the main muscles that will be used in the physical activity.*

# Week 8

## Mobilisers

### What is a mobiliser?

*Activities that take the joints through their range of movement starting with small movements and making these bigger as the warm-up progresses.*



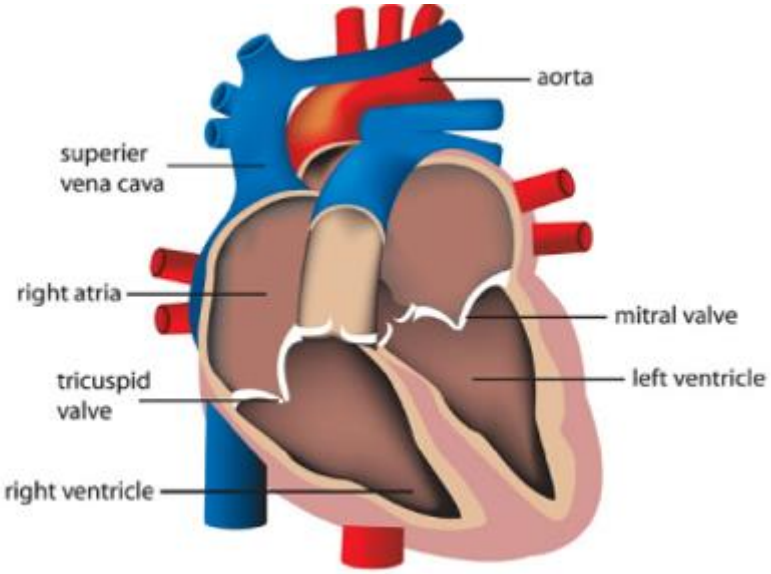

*A mobiliser is important because it helps maintain the health and function of the joints. These exercises can help to increase range of motion, allow the joint to move smoothly, reduce stiffness, improve flexibility and prevent injuries.*

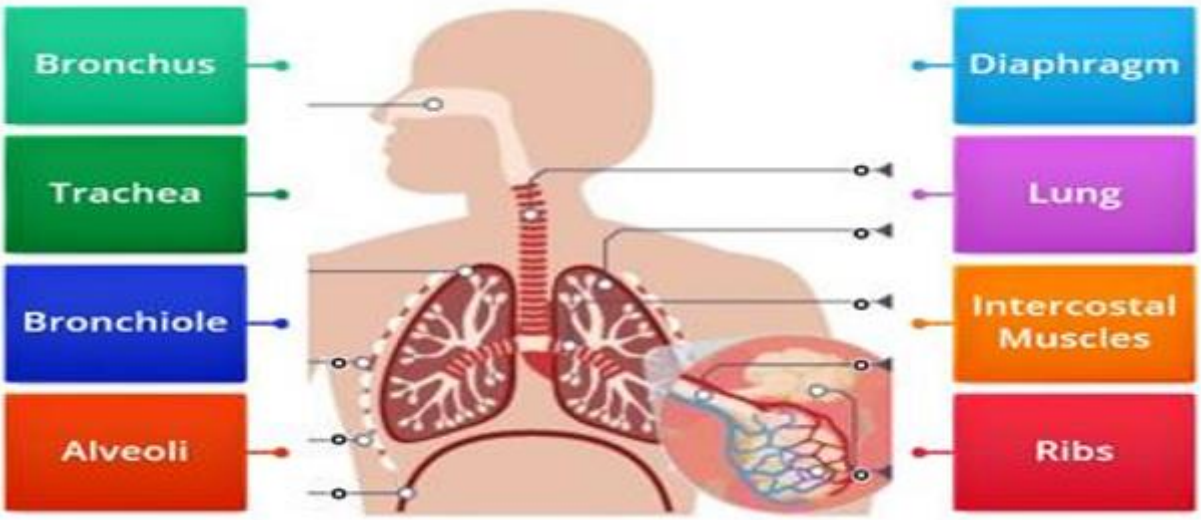
**Mobilisers have the following impact on our cardiorespiratory system;**

*Increased production of synovial fluid in the joints*
*Increase lubrication of joint*
*Increase range of movement at the joint,*
*Acts a shock absorber protects the bones*
*Nourishes the joint/cartilage keeping it healthy .*
*Slight decrease in heart rate as intensity of exercise lowers from pulse raiser*
*Slight decrease in breathing rate as intensity of exercise lowers from pulse raiser*

# Week 9

## Cardiorespiratory System




*The cardiorespiratory system consists of the heart and blood vessels, which work with the respiratory system (the lungs and airways).*

# Week 9

## Cardiorespiratory System

***Why do we need the cardiorespiratory system?***

*The cardio-respiratory system works together to get oxygen to the working muscles and remove carbon dioxide from the body.*
*During exercise the muscles need more oxygen in order to contract and they produce more carbon dioxide as a waste product.*

**Body Responses to exercise:**

*Increased heart rate*
*Increased breathing rate*
*Increased depth of breathing*
*Increased supply of oxygen to the working muscles*
*Increased removal of carbon dioxide.*

**Cardiorespiratory Effects:**

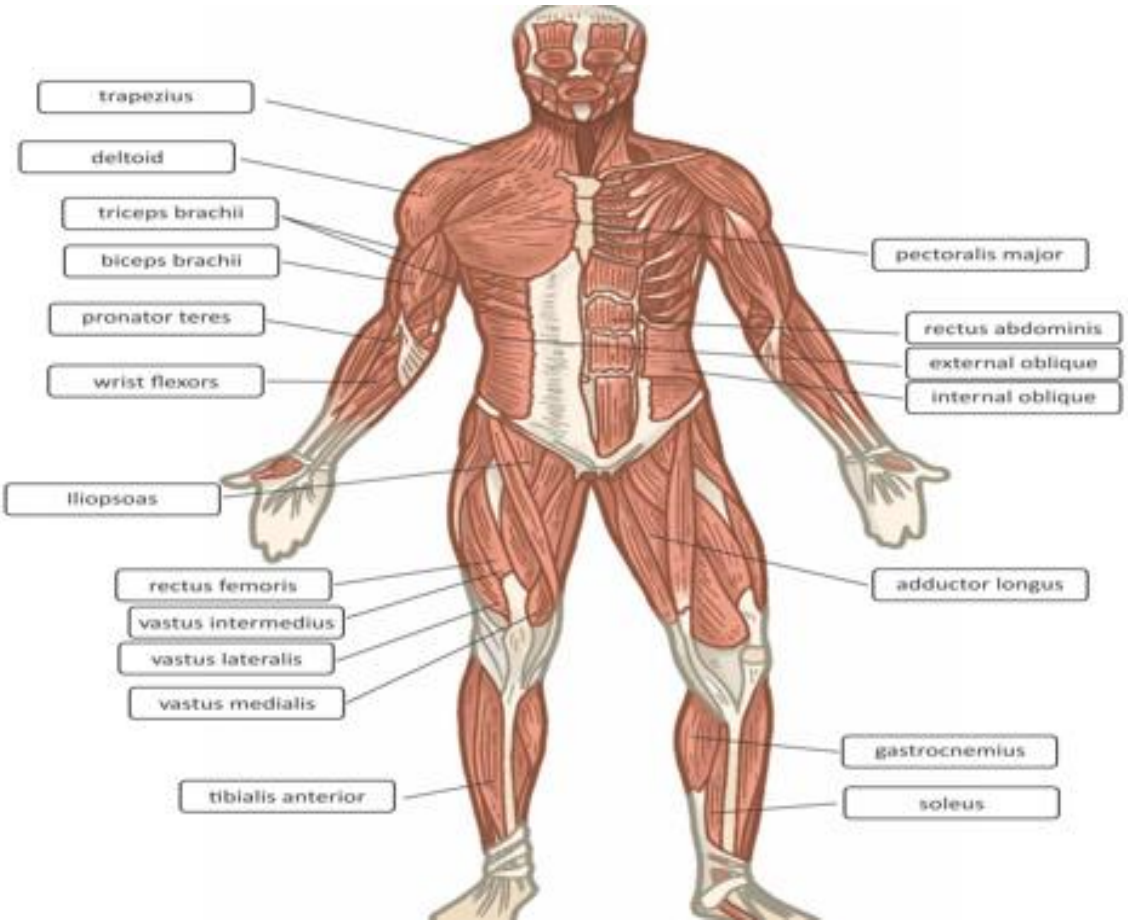
*Slight drop in heart rate as intensity of exercise lowers*
*Slight drop in breathing rate as intensity of exercise lowers.*

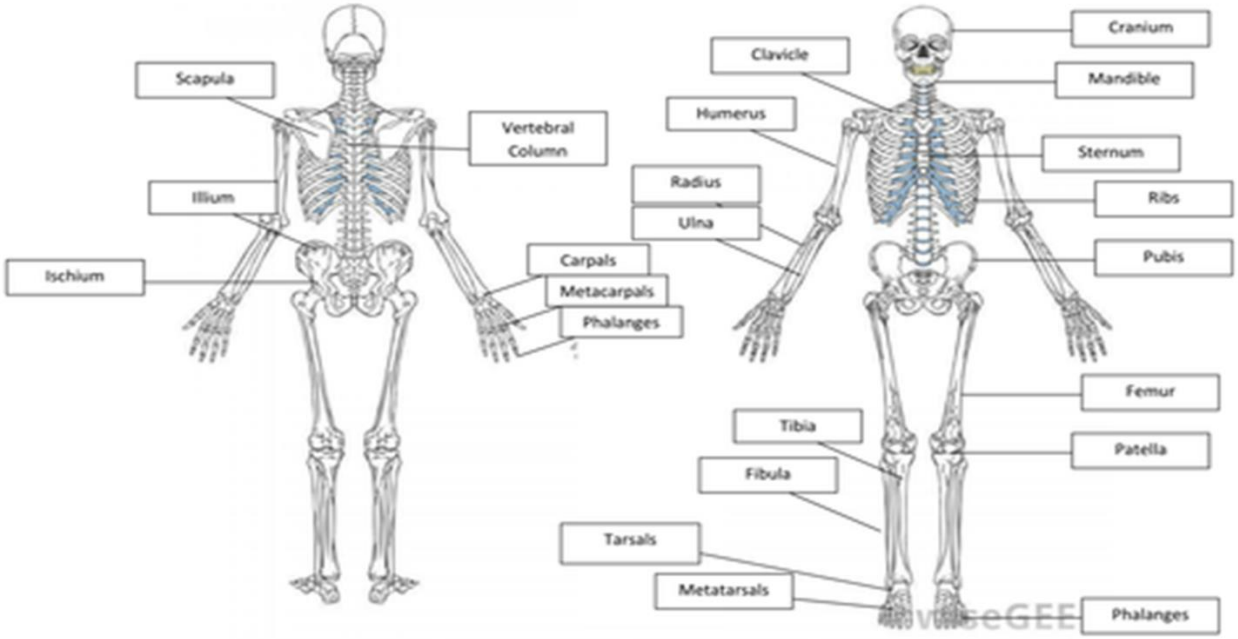
**Preparation Stretches – effects**

*Slight drop in heart rate and breathing rate for static stretches*
*Maintained elevated heart and breathing rate for dynamic stretches.*

# Week 10

## Musculoskeletal System




| | | | |
|---|---|---|---|
| Clavicle | Sternum | Humerus | Ulna |
| Cranium | Radius | Ischium | Pubis |
| Ribs | Illium | Carpals | Phalanges x 2 |
| Scapula | Metacarpals | Femur | Fibula |
| Tibia | Tarsals | Patella | Metatarsals |
| Vertebral Column | Mandible | | |

## Week 10

## Musculoskeletal System

***What is the musculoskeletal system?***

*The major functions of the bones are body support, facilitation of movement, protection of internal organs, storage of minerals and fat, and haematopoiesis. Together, the muscular system and skeletal system are known as the musculoskeletal system*

***What is the purpose of the musculoskeletal system?***

*Your musculoskeletal system includes bones, muscles, tendons, ligaments and soft tissues. They work together to support your body's weight and help you move.*

***The following muscles are described as 'main muscles'?***

*Deltoids, Biceps, Triceps, Erector spinae, Abdominals, Obliques, Hip flexors, Gluteus maximus, Quadriceps, Hamstrings, Gastrocnemius.*

***What happens to your musculoskeletal system during a pulse raiser?***

*Increased temperature of the muscles*
*Increased pliability of the muscles*
*Reduced risk of muscle strain.*

***What happens to your musculoskeletal system during a mobiliser?***

*Increased production of synovial fluid in the joints to increase lubrication of joint and increase range of movement at the joint.*

***What happens to your musculoskeletal system during a mobiliser?***
*Extending muscles so that they are fully stretched and less likely to tear during the sport or activity session.*

# Week 11

## Adaptations of Warm Up's

***Suitability of a warm up:***

*1 – Stuck in the mud, followed by a game of tag and then throwing an receiving ben bags in pairs – Primary school children – 5-11*
*2 – Pulse raiser around the football pitch followed by a game of cones and domes – Adolescents – 12-15*
*3 – Individual pulser raiser followed by dynamic stretches – Adults – 18 - 49*
*4 – A walk along the seafront followed by some static stretches of arm and leg muscles – Older Adults – 50+*

***Why some warm ups are not suitable for everyone:***

*An individual may have health issues.*
*As you get older your bones become more fragile.*
*Different fitness levels.*
*Someone may have a disability.*
*More advanced performer.*

***What adaptations could you make for participants?***

*Vary intensity of activities*
*Low impact and high impact options*
*Vary timing of warm-up – longer time frame for beginners, participants with low*
*Fitness levels and those aged 50 plus*
*Types of stretch used – simple stretches for beginners, compound stretch for Moderate to advanced participants.*

***What adaptations do you need to make for physical activity?***
*Introduction of equipment in the warm-up that is specific to the physical activity*
*Using movements and activities from the physical activity in the warm-up*
*Stretching the main muscles required for the specific physical activity.*

**Week 12**

*Delivering a warm up*

***When organising a warm-up you need to consider the following:***

*Space – areas used*
*Equipment*
*Organisation of participants*
*Timing*
*Demonstrations*
*Positioning*

***Would it be appropriate to teach a PE X-Country lesson in the sports hall? Basketball lesson in the assembly hall? Dance lesson in the gym?***

*Think of the space that you have and try and ensure that it is suitable for that.*
*Tag – Sports Hall – 6 students – Is that area too big?*
*Relay's – MUGA – 30 students – Is that area too small?*
*Stretching – The Flow routine – Raining on the MUGA – Is the weather appropriate?*

***Do you need any equipment for the warm-up? Or is it going to get in the way?***

*Tag – Do you need bibs to identify who is the catcher?*
*Relay's – Do you need loads of cones on the floor or could you use one cone or a line?*
*Ruby – Are tags more appropriate than bibs?*
*Athletics – What pieces of equipment help tell athletes how far/fast they have competed?*
*Indoor/outdoor equipment – Indoor footballs are very different to outdoor footballs, foam or metal javelins?*

***Before you attend a practical PE lesson, what does your PE teacher do to organise you into the lesson?***

*Think about arrival, changing, equipment used and location of lesson.*
*Less waiting time = Less opportunity to be off task.*
*More physical activity.*
*More time to learn and practice their skills*
*Ensure that your groups are even and fair – think about numbers and ability levels.*