Wyggeston & Queen Elizabeth I College

A Level PE

Get ready for a successful start!

What will I study?	This task includes ... Components of fitness The skeletal system Sports Nutrition
Who teaches this course?	Zoe Bailey
What resources or equipment will I need?	You will be provided with information booklets and classroom resources for each lesson and be loaned a textbook and revision guide for the duration of your time at WQE. Each student will also have their own account for the online learning platform www.theeverlerner.com Each lesson you will need to bring a writing pen, paper, a ruler, highlighters, coloured pens or pencils and a curious mind!
Reading List	AQA A-level PE (Year 1 and Year 2) by Carl Atherton, Sue Young, Ross Howitt. ISBN 9781510473300 A-level Physical Education Specification Specification for first teaching in 2016 (aqa.org.uk) BrianMac Sports Coach Physical Education - BBC Bitesize British Nutrition Foundation - Homepage

To be completed and brought to your first lesson

Resources needed to complete the activity:	Previous knowledge and an enquiring mind! The reading list resources will help.
Estimated time to complete the activity:	2-3 Hours

Fitness is vital to achieving success in sport, and fitness testing plays a valuable role in the development of personal fitness levels. Sports performers regularly participate in fitness tests to determine their baseline measures.

1. Use the word bank below to identify the components of physical fitness by completing the following table:

Word bank: Flexibility, Speed, Aerobic endurance, Muscular endurance, Muscular Strength, Agility, Balance, Co-ordination, Body Composition, Reaction Time, Power

Component of Physical Fitness	Definition
	The ability of the body to exercise for prolonged periods of time without getting tired.
	The maximum amount a muscle can lift
	The ability of muscles to keep contracting without getting tired.
	The range of movement available at a joint or series of joints.
	The ability to move the whole body or a body part quickly, e.g. running fast or hitting fast balls.
	The ability to exert force over a short period of time.
	The percentage of body weight that is fat.
	How quickly can you change direction under control?
	Ability to perform tasks in sport, e.g. running and then passing a ball in rugby.
	The ability to keep your body mass over base of support.
	This is the time it takes someone to make a decision to move.

Identify two sports that require high levels of each component of physical fitness and describe what about the sport demonstrates the fitness component. Complete the following table:

Component of Physical Fitness	Sport 1	Sport 2
Cardiovascular endurance		
Muscular strength		
Muscular endurance		
Flexibility		
Speed		
Power		
Reaction time		
Co-ordination		
Balance		

Sports performers regularly participate in fitness tests to determine their baseline measures. Fitness testing results are then used to identify strengths and areas for improvement. Fitness testing results are also used to predict future performance and provide feedback on the effectiveness of a training programme.

Research at least two advantages and disadvantages for each fitness test.

Component of Fitness	Fitness test		Advantages	Disadvantages
Aerobic Endurance	**Multi Stage Fitness Test (MST/Bleep test)** Cones/Lines **20m apart**, run in-between to the sound of a beep. **Gradually gets faster**. Longer you can keep up the higher the level			
	Forestry Step Test Step/ bench- 33cm for females and 40cm for males. Step up and down for 5 minutes to a metronome. **(90bpm/22.5steps a min)**. Record pulse and compare to table			
Speed	**35m sprint test** Sprint from one line/cone to another in a straight line over 35m. Record time and compare to normative data			

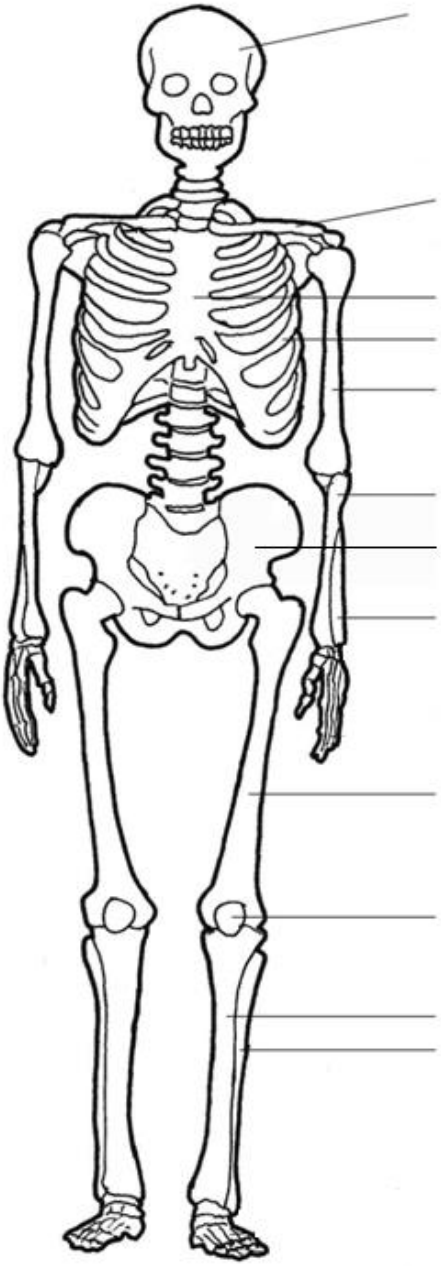
Strength	**Grip dynamometer** 3 attempts, squeeze grip dynamometer measure result in Kg or KgW.			
Flexibility	**Sit and Reach test** Both feet against the **sit and reach box**, reach forward and measure result in centimetres			
Muscular Endurance	**Sit up and press up tests** Count how many sit ups or press-ups completed in 1 minute			

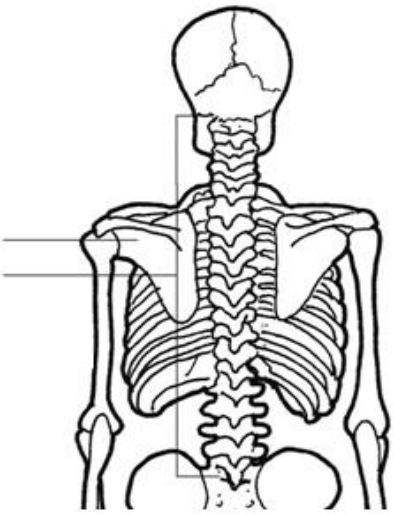
Agility	**Illinois Agility test** Cones set up as in the image, lie face down on the floor at the start, measure time to complete course in seconds			
Power	**Vertical Jump test** Stand side on to wall reach up and mark/set the measure. Standing jump as high as possible touching wall. Measure between two marks/measures			

The structure of the skeleton

The human body is made up of many different systems that work together and allow us to take part in a huge variety of sport and exercise activities. An athlete can go from rest to all-out sprinting in a matter of seconds, whereas an endurance athlete can continue exercising for many hours at a time.

Label the diagrams to show the bones which form the structure of the skeleton:





Verterbral column

Humerus

Radius

Pelvis

Clavicle

Cranium

Sternum

Femur

Scapula

Tibia

Ribs

Fibula

Vertebrae

Patella

Ulna

Humerus

Describe the major bones which form the structure of the skeleton. You should write next to the name about **where** it can be found, **what type** of bone it is, other bones it **connects** to, or its main **function**:

Cranium	
Sternum	
Scapula	
Clavicle	
Ribs	
Arm	
Pelvis	
Femur	

Sports Nutrition

The importance of good nutrition and hydration in sports has grown in popularity in recent years. The significance of a healthy balanced diet and its links to good health and improved sports performance is now a key aspect of the sportsperson's lifestyle.

Research the following nutrients and complete the table below:

	Carbohydrates	Fats	Protein	Fibre	Vitamins & Minerals	Water
What is the sport & physical activity role of the nutrient?						
Examples of food sources						

Describe the components of a balanced diet. How does this differ between endurance athletes and power athletes?

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NETFLIX

Tick Box

1. **The English Game** *(Sport & Society)*
2. **Friday Night Lights** American football movie
3. **Icarus** *(Drugs & Performance)*
4. **Stop at Nothing** *(Doping in sport)*
5. **The Game Changers** *(Diet & Nutrition)*
6. **Sunderland 'Till I Die** (Elite world of *Football*)
7. **The Last Dance** *(Michael Jordan)*
8. **Last Chance U** *(American football)*
9. **Coach Carter** *(Sport Psychology)*
10. **Formula 1 Drive to survive** *(elite world of F1)*
11. **Fittest in Dubai** *(Health related fitness)*
12. **The Blindside** *(American football)*

prime video

1. All or Nothing *(Manchester city)*
2. All or nothing *(New Zealand All Blacks)*
3. All or Nothing *(NFL series)*
4. Don't Take me Home *Welsh football*
5. 4 Minute Mile
6. The Program *(Lance Armstrong)*
7. Andy Murry - Resurfacing *(Injury Rehabilitation)*
8. Dan Carter *Perfect 10*
9. The Test *(Australian cricket)*
10. Muscle & Medals
11. NFL Americas game *(elite world of NFL)*
12. Tyson – The movie *Boxing*

YouTube

1. Subscribe to Joe *Wicks*
2. Kobe Bryant *Black Mamba doc*
3. Being Serena
4. "Is professionalism *(killing sport" BBC Doc)*
5. The psychology of a *(winner Doc)*
6. Trent Alexander Arnold. *(Living the dream)*
7. Tyson Fury *(Road to redemption)*
8. Crossing the Line *(Australian Cricket)*
9. Jürgen Klopp *(Journey to the Top)*
10. Strive for greatness *(LeBron James)*
11. Hard Knocks *(NFL behind the scenes)*
12. The Jamie Vardy Factor