

May 2023

Course Mapping Guide

KS4 Theory PE and Vocational Sport

Course List

Physical Education

These courses have been created by our team of experienced secondary Physical Education teachers. Each set of courses are separated into topic strands with a wide range of practical examples, data analysis and topic nuggets available throughout.



Physical Education GCSE: AQA
[View course →](#)

*This course is on rolling release



Second class lever
This is a second class lever — ELF. The **load** or resistance is always in the middle and the effort and fulcrum on either side. It can be either way round. The second class lever has the most mechanical advantage.

Ball & Socket Joints
The ball and socket joints are located in the shoulders and the hips. The ball and socket joint allows for the greatest amount of movement compared to hinge joints. A ball and socket joint is made up of the round end of a bone that fits into a dip of another bone. Movement available at a ball and socket joint:
• Flexion • Adduction

Shoulder joint

Hip joint

First class lever
Movement Analysis
Neck extension
Fulcrum — neck joint
Effort — neck muscles
Load — weight of head & ball

Practical Example: Heading a ball

Identify the plane of movement in the diagram below.

Correctly name the muscles identified on the picture.

- Deltoids
- Triceps
- Biceps
- Pectorals

I DON'T KNOW SUBMIT ANSWER

Answer: _____ plane of movement.
I DON'T KNOW SUBMIT ANSWER

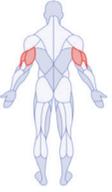
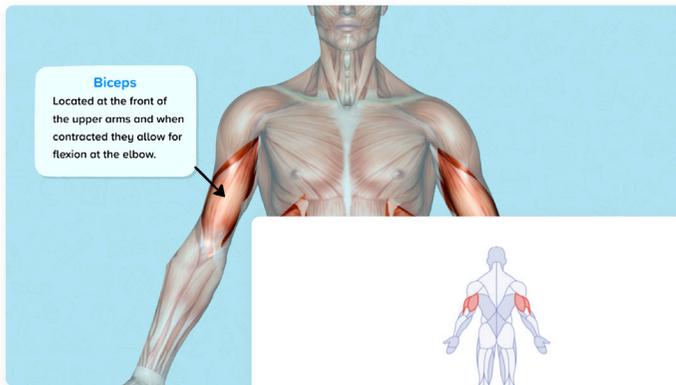
Courses coming soon:

- IGCSE GCSE PE 0413
- OCR GCSE PE J587
- EDEXCEL GCSE PE 1PE0
- BTEC Tech Award in Sport 603/7068/3
- Cambridge Nationals Sport Studies J829
- Cambridge Nationals Sport Science J828
- City and Guilds L2 Award, Certificate & Diploma in Sport (QCF) 4863-23
- NCFE L2 Certificate & Diploma in Sport 601/3037/4 or 6

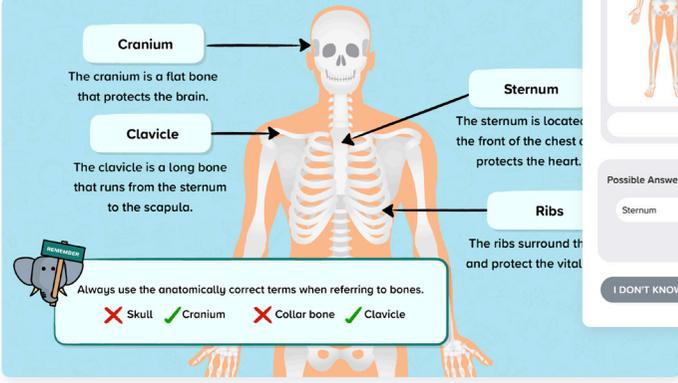
PE Special Feature!

Recall and Review Nuggets

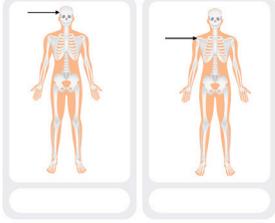
Testing specific A01 subject knowledge quickly identifying misconceptions and gaps in learning to the teacher.



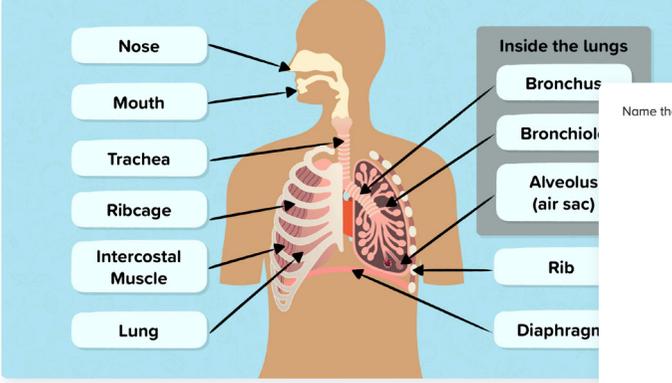
What is the name of the muscles identified in the picture?



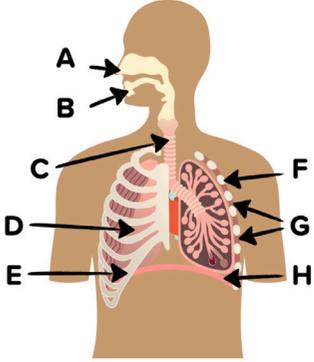
Label the correct bone identified by the arrow.



Possible Answers



Name the part of the respiratory system identified by the label B.



Course Content

Physical Education

GCSE: AQA



Diagnostics 5 **Strands** 5 **Nuggets** 60

Strands

Strand	Nuggets
Diagnostics	5
Recall & Review	4
Applied Anatomy & Physiology	32
Movement Analysis	11
Use of Data	13

*This course is on rolling release and new material is added frequently

Nuggets

AQA

CENTURY

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary
Diagnostics	-		PE0.01	Diagnostic: Skeletal System	Diagnostic covering the structure and function of the skeleton, the types of bones, joints and structure of the joint. Also covers the effects of exercise on the skeletal system.
			PE0.02	Diagnostic: Muscular System	Diagnostic covering the structure and function of the muscular system and the effects of exercise on the muscular system.
			PE0.03	Diagnostic: Cardiovascular System	Diagnostic covering the structure of the cardiovascular system and blood vessels and effects on it during exercise. Includes measuring and interpreting heart rate and cardiac output data.
			PE0.04	Diagnostic: Respiratory System	Diagnostic covering the structure and the effects of exercise on the respiratory system, mechanics of breathing, anaerobic and aerobic respiration and gaseous exchange. It also includes how to interpret a spirometer trace.
			PE0.05	Diagnostic: Movement Analysis	Diagnostic covering levers, mechanical advantage, planes and axes, and movements of specific sporting skills.
			PE0.06	Diagnostic: Components of Fitness	Diagnostic covering all the components of fitness, applying components of fitness to practical examples and fitness testing.
			PE0.07	Diagnostic: Principles of Training	Diagnostic covering the principles of training and evaluate the types of training to improve different components of fitness.
			PE0.08	Diagnostic: Optimising Training	Diagnostic covering how to prevent injuries, seasonal aspects of training, training intensities and specific training techniques. Evaluate the importance of a warm up and cool down.

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary
Diagnostic	-	-	PE0.09	Diagnostic: Classification of Skills	Diagnostic covering skills, abilities, classification of skills and types of goal.
			PE0.10	Diagnostic: Goal Setting, Information Processing, Guidance and Feedback	Diagnostic covering types of goal setting, the information processing model and types of guidance and feedback.
			PE0.11	Diagnostic: Mental Preparation	Diagnostic covering arousal and inverted-U theory, arousal management techniques, aggression, personality types and intrinsic and extrinsic motivation.
Recall & Review	3.1.1.1	Skeletal System	PER.01	Recall: The Skeletal System	Identify the names and locations of the bones of the body.
	3.1.1.4	Muscular System	PER.02	Recall: The Muscular System	Identify the names and locations of the muscles in the body.
Recall & Review	3.1.1.2.5	Cardio-Respiratory System	PER.03	Recall: The Cardiovascular System	Identify the chambers, valves and blood vessels of the heart.
	3.1.1.2.1		PER.04	Recall: The Respiratory System	Identify the structure of the respiratory system.
Applied Anatomy & Physiology	3.1.1.1	Skeletal System	PE1.01	The Structure of the Skeletal System	Identify the structure of the skeletal system.
	3.1.1.2		PE1.02	Types of Bones	Describe the types of bone and identify the two types of skeleton.
	3.1.1.3		PE1.03	Functions of the Skeleton	Describe the functions of the skeleton and apply to sporting examples.
	3.1.1.5		PE1.04	The Structure of a Joint	Describe the types and structure of a synovial joint.
	3.1.1.4.1		PE1.05	Effects of Exercise: The Skeletal System	Describe the effects of exercise on the skeletal system
	3.1.1.6/7		PE1.06	Types of Joints & their Movements	Identify the types of joints and the range of movement available at each joint.

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary
Applied Anatomy & Physiology	3.1.1.4	Muscular System	PE1.07	The Structure of the Muscular System	Identify the Structure of the Muscular System.
	3.1.1.8		PE1.08	The Function of the Muscular System	Identify the function of the muscular system and how it works to create movement in the body.
	3.1.1.4.1		PE1.09	Effects of Exercise: The Muscular System	Describe the effects of exercise on the muscular system.
	Supplementary	Cardiovascular System	BI2.40	The Circulatory System	Describe the double circulatory system and the structure and function of the blood.
	3.1.1.2.4		PE1.10	Structure of the Cardiovascular System	Identify the blood vessels and chambers of the heart.
	3.1.1.2.3		BI2.47	Explaining the Structure of Blood Vessels	Explain how blood vessels are adapted for their function.
	Supplementary		BI2.44	Measuring Heart Rate	Describe what causes a pulse and show how it can be used to measure pulse/heart rate.
	3.1.1.2.3		PE1.11	Redistribution of Blood During Exercise	Describe the process of redistribution of blood during exercise.
	3.1.1.2.6		PE1.12	Cardiac Output	Describe the structure and functions of parts of the heart. Define cardiac output, explain stroke volume & give the equation for cardiac output.
	3.1.1.2.6		BI4.43	Calculating Cardiac Output I	Calculate cardiac output. Word problems and no unit conversions.
	3.1.1.2.6		BI4.47	Describing Cardiac Output Data	Describe patterns in cardiac output data in graphs and tables. Includes calculating cardiac output with no unit conversions.
	3.1.1.2.6		BI4.48	Interpreting Cardiac Output Data	Interpret data to explain cardiac output data and apply knowledge. Includes calculating cardiac output with no unit conversions.
	3.1.1.4.1		PE1.13	Effects of Exercise: The Cardiovascular System	Describe the effects of exercise on the cardiovascular system.
	3.1.4.1.2	PE1.14	Interpreting Heart Rate Graphs	Analyse a heart rate graph before, during and after exercise.	

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary	
Movement Analysis	3.1.1.2.1	Respiratory System	PE1.15	The Structure of the Respiratory System	Identify the structure of the respiratory system.	
	Supplementary		PE1.16	Mechanics of Breathing	Explain the mechanical process of breathing.	
	3.1.1.2.2		PE1.17	Gaseous Exchange	Describe the structure and function of the human gas exchange system.	
	3.1.1.2.2		BI2.36	How Lungs are Adapted for Gas Exchange	Identify main features of the lungs and explain how they facilitate air gas exchange in humans.	
	3.1.1.2.2		BI1.47	Exchange Surfaces: Alveoli	Describe the structure of alveoli and explain how they are adapted for exchanging materials.	
	3.1.1.2.7		PE1.18	Interpretation of a Spirometer Trace	Analyse a spirometer trace identifying the different lung volumes.	
	3.1.1.2.8		SP3.10	Physiology: Respiration	An experiment to investigate how exercise affects pulse-rate and ventilation rate.	
	3.1.1.4.1		PE1.19	Effects of Exercise: The Respiratory System	Describe the effects of exercise on the respiratory system.	
	3.1.1.3.2		PE1.20	Aerobic & Anaerobic Respiration in Sport	Describe aerobic and anaerobic respiration and apply to sporting examples.	
	3.1.1.3.3		PE1.21	EPOC: Excess Post-exercise Oxygen Consumption	Describe oxygen debt is and explain why it occurs.	
	3.1.1.3.4		PE1.22	The Recovery Process from Vigorous Exercise	Evaluate the different methods used to support the recovery process from vigorous exercise.	
	3.1.1.4.1		I	PE1.23	Summary: Effects of Exercise on Body Systems	Describe the immediate, short-term and long-term effects of exercise on the body systems.
	3.1.2.1.1		Movement Analysis	PE2.01	First, Second & Third Class Levers	Describe the components of first, second and third class levers and apply to practical examples within the body.
	3.1.2.1.2			PE2.02	Mechanical Advantage	Describe mechanical advantage and identify the lever systems with the most and least mechanical advantage.
	3.1.2.2.1			PE2.03	Planes & Axes	Describe the planes of movement and axes of rotation and identify how they link together to create movement.

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary
Movement Analysis	3.1.2.1.3	Movement Analysis	PE2.04	Movement Analysis: Flexion & Extension	Analyse the movement at all the joints for flexion and extension.
	3.1.2.1.3		PE2.05	Movement Analysis: Push Up	Analyse the movement of a push-up.
	3.1.2.1.4		PE2.06	Movement Analysis: Abduction & Adduction	Analyse the movements of abduction adduction and circumduction at the ball and socket joints.
	3.1.2.1.3		PE2.07	Movement Analysis: Throw-in	Analyse the movement of a throw-in at the elbow.
	3.1.2.1.3		PE2.08	Movement Analysis: Running Technique	Analyse the movement of the running technique.
	3.1.2.1.3		PE2.09	Movement Analysis: Vertical Jump	Analyse the movement of the vertical jump.
	3.1.2.1.3		PE2.10	Movement Analysis: Squat	Analyse the movement of a squat.
	3.1.2.1.3		PE2.11	Movement Analysis: Kicking a Ball	Movement analysis of kicking a ball.
Physical Training	3.1.3.1.1	Components of Fitness	PE3.01	Health & Fitness	Describe and explain the relationship between health and fitness and the role exercise plays in both.
	3.1.3.2.1		PE3.02	Cardiovascular Endurance (aerobic power)	Define cardiovascular endurance and suggest why it is important for different sports performers. Explain how cardiovascular endurance can be measured using a fitness test.
	3.1.3.2.1		PE3.03	Muscular Endurance	Define muscular endurance and suggest why it is important for different sports performers. Explain how muscular endurance can be measured using a fitness test.
	3.1.3.2.1		PE3.04	Strength (maximal, static, dynamic and explosive)	Define different types of strength and suggest why they are important for different sports performers. Explain how strength can be measured using a fitness test.
	3.1.3.2.1		PE3.05	Power / explosive strength (anaerobic power)	Define power and suggest why it is important to different sports performers. Describe how to test power and analyse the practicality, validity and reliability of the test.
	3.1.3.2.1		PE3.06	Flexibility	Define flexibility and suggest why it is important for different sports performers. Explain how flexibility can be measured using a fitness test.

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary	
Physical Training	3.1.3.2.1	Components of Fitness	PE3.07	Speed	Define speed and suggest why it is important for different sports performers. Explain how speed can be measured using a fitness test.	
	3.1.3.2.1		PE3.08	Agility	Define agility and suggest why it is important for different sports performers. Explain how agility can be measured using a fitness test.	
	3.1.3.2.1		PE3.09	Balance	Define balance and suggest why it is important for different sports performers. Explain how balance can be measured using a fitness test.	
	3.1.3.2.1		PE3.10	Co-ordination	Define coordination and suggest why it is important for different sports performers. Explain how coordination can be measured using a fitness test.	
	3.1.3.2.1		PE3.11	Reaction time	Define reaction time and suggest why it is important for different sports performers. Explain how reaction time can be measured using a fitness test.	
	Supplementary		PE3.12	Body composition	Define body composition and suggest why it is important for different sports performers. Explain how body composition can be measured using different tests.	
	3.1.3.2.1		PE3.13	Summary: Components of Fitness	Define the components of fitness and apply them to practical examples.	
	3.1.3.2.4		PE3.14	Summary: Fitness Tests	Describe all of the fitness tests and understand which component of fitness they measure.	
	3.1.3.2.3		PE3.15	Benefits & Limitations of Fitness Tests	Explain the reasons why fitness tests are used. Evaluate the limitations of fitness testing.	
	3.1.3.2.5		PE3.16	Recording Fitness Test Data	Describe the units fitness test data is measured in and understand the difference between qualitative data and quantitative data.	
	3.1.3.3.1		Principles of Training	PE3.17	Principles of Training	Explain the key principles of training (SPORT) and overload (FITT).
	3.1.3.3.2			PE3.18	Applying Principles of Training	Apply the principles of training to a training programme.
	3.1.3.3.3			PE3.19	Circuit Training	Describe the purpose of circuit training. Discuss the advantages and disadvantages of circuit training.
	3.1.3.3.3			PE3.20	Continuous Training	Describe the purpose of continuous training. Discuss the advantages and disadvantages of continuous training.

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary
Physical Training	3.1.3.3.3	Principles of Training	PE3.21	Fartlek Training	Describe the purpose of fartlek training. Discuss the advantages and disadvantages of fartlek training.
	3.1.3.3.3		PE3.22	Interval Training	Describe the purpose of interval / HIIT training. Discuss the advantages and disadvantages of interval / HIIT training.
	3.1.3.3.3		PE3.23	Static Stretching	Describe the purpose of static stretching. Discuss the advantages and disadvantages of static stretching.
	3.1.3.3.3		PE3.24	Weight Training	Describe the purpose of weight training. Discuss the advantages and disadvantages of weight training.
	3.1.3.3.3		PE3.25	Plyometric Training	Describe the purpose plyometric training. Discuss the advantages and disadvantages of plyometric training.
	3.1.3.3.3		PE3.26	Summary: Types of Training	Summarise the methods of training and identify the advantages and disadvantages of each.
	3.1.3.4.1	Optimising Training	PE3.27	Calculating Training Intensities	Define training thresholds. Calculate the aerobic/anaerobic training zone. Use one rep max to plan intensity of weight training.
	3.1.3.4.2		PE3.28	Preventing Injuries	Discuss the safety principles when training. Describe how and why warm-up and cool-down is important.
	3.1.3.4.3		PE3.29	Specific Training Techniques	Describe what high altitude training is and how it improves aerobic fitness. Evaluate this type of training.
	3.1.3.4.4		PE3.30	Seasonal Aspects	Name the different training seasons and describe what each season entails.
	3.1.3.5.1		PE3.31	Warming Up	Describe the elements of a warm up and explain why each is important for practical performance.
	3.1.3.5.1		PE3.32	Cooling Down	Describe the elements of a cool down and explain why each is important for practical performance.
	3.1.3.5.1		PE3.33	Summary: Warm Up & Cool Down	Describe the elements of a warm up and cool down and explain why each is important for practical performance.

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary
Use of Data	3.1.4.1.1	Data Collection	MF48.03	Tally Chart	This nugget has learning material and questions covering the topic of Tally Chart.
	3.1.4.1.1		MF48.04	Questionnaires	This nugget has learning material and questions covering the topic of Questionnaires: Creating.
	3.1.4.1.1		MF48.05	Types of Random Sampling	This nugget has learning material and questions covering the topic of Types of Random Sampling .
	3.1.4.1.1		MF48.06	Fair Samples	This nugget has learning material and questions covering the topic of Fair Samples.
	3.1.4.1.1		MF48.07	Grouped Tally Charts: Discrete and Continuous	This nugget has learning material and questions covering the topic of Grouped Tally Charts: Discrete and Continuous .
	3.1.4.1.2	Present Data	MF50.01	Completing Two Way Tables	This nugget has learning material and questions covering the topic of Completing Two Way Tables.
	3.1.4.1.2		MF50.04	Bar Charts	This nugget has learning material and questions covering the topic of Bar Charts.
	3.1.4.1.2		MF50.05	Multiple and Composite Bar Charts	This nugget has learning material and questions covering the topic of Multiple and Composite Bar Charts.
	3.1.4.1.2		MF50.06	Vertical Line Graphs	This nugget has learning material and questions covering the topic of Vertical Line Graphs.
	3.1.4.1.2		MF50.19	Scales: Continuous Data	This nugget has learning material and questions covering the topic of selecting appropriate scales for graphing continuous data.
	3.1.4.1.3	Analyse & Evaluate Data	MF50.02	Interpreting Two Way Tables	This nugget has learning material and questions covering the topic of Interpreting Two Way Tables.
	3.1.4.1.3		MF50.11	Interpreting Pie Charts	This nugget has learning material and questions covering the topic of Interpreting Pie Charts.
	3.1.4.1.3		MF50.15	Interpreting Scatter Graphs 2: Outliers	This nugget has learning material and questions covering the topic of Interpreting Scatter Graphs 2.

Strand	Spec Code	Diagnostic	Nugget Code	Nugget Name	Nugget Summary
Sports Psychology	3.2.1.1.1	Classification of skills	PE5.01	Skill & Ability	Define a skill and ability and provide practical examples of each.
	3.2.1.1.1		PE5.02	Classification of Skills	Describe the different classifications of skills and apply practical examples of skills on to each continuum.
	3.2.1.1.3		PE5.03	Types of Goals	Describe the types of goals and apply examples of each.
	3.2.1.2.2	Goal Setting	PE5.04	SMART Targets	Explain the key principles of SMART targets applying them to examples.
	3.2.1.3.1	Basic Information Processing	PE5.05	Information Processing Model	Explain the key principles of the information processing model applying it to practical examples.
	3.2.1.4.1	Guidance and Feedback	PE5.06	Types of Guidance	Describe the different types of guidance and analyse the benefits of each for different types of performers.
	3.2.1.4.2		PE5.07	Types of Feedback	Describe the different types of feedback and analyse how these are beneficial for different performers.
	3.2.1.5.1/2	Mental Preparation	PE5.08	Arousal & Inverted U Theory	Define arousal and the inverted U theory and apply how varying arousal levels can affect performance.
	3.2.1.5.4		PE5.09	Arousal (Stress) Management	Describe ways to manage arousal and stress. Apply the different methods to a practical example.
	3.2.1.5.5		PE5.10	Aggression	Describe aggression and the types of aggression in sport. Explain the advantages and disadvantages of aggression in sport.
	3.2.1.5.6		PE5.11	Personality Types	Describe the different types of personality and analyse the effect this has on sport preference.
	3.2.1.5.7		PE5.12	Intrinsic & Extrinsic Motivation	Evaluate the different types of motivation providing examples.

Questions?
Email support@century.tech

