

Learning Grids for GCSE AQA PE

Questions

(Paper 1)

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Teacher's Introduction

These learning grids are a tool designed to help you deliver AQA GCSE PE (Paper 1). The concept is that your students are assigned a set of pages to read from their notes or a textbook, possibly for homework, and then asked to complete the relevant learning grids.

The grids are designed to ask questions in sufficient detail that your students are able to study the relevant sections and find the correct answers. Completed grids are provided so that your students' answers can be marked or checked. It may also be useful to hand these out to students during their revision to assist them with answers they cannot find.

These activities are particularly useful for weaker students who find this method of studying of great value, particularly if they find it difficult to absorb information in class.

Advantages of using these learning grids are:

- Resulting grids contain a summary of what students need to know that is useful for revision.
- They are an easy-to-set, yet valuable homework.
- They are a useful catch-up tool to help students who have missed a lesson.
- They can be used as a basis for cover lessons that require minimal preparation and minimal interaction from the cover teacher.
- They are an independent learning resource.

You may want to photocopy the sheets onto A3 paper, particularly for students with reading or writing difficulties.

This edition supports students using the following sources:

Hodder Education textbook AQA GCSE PE (9–1) PE

by Ross Howitt and Mike Murray (ISBN 9781471859526)

and

Oxford Education textbook, AQA GCSE Physical Education

by Kirk Bizley (ISBN 9780198370253)

Notes to teachers using these Learning Grids with AQA GCSE PE (9–1) PE by Ross Howitt and Mike Murray

This resource follows the order of the specification, and helps students pick out the points which are most important for the study of PE at AS/A Level.

The resource is cross-referenced to the popular AQA textbook, so that students using this book can easily find the information that they need.

When the information that students require to answer a question is not included in the cross-referenced textbook, the question is labelled as a research task.

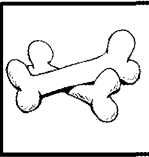
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* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

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3.1.1: Applied Anatomy and Physiology




3.1.1.1 - The structure and function of the musculoskeletal system

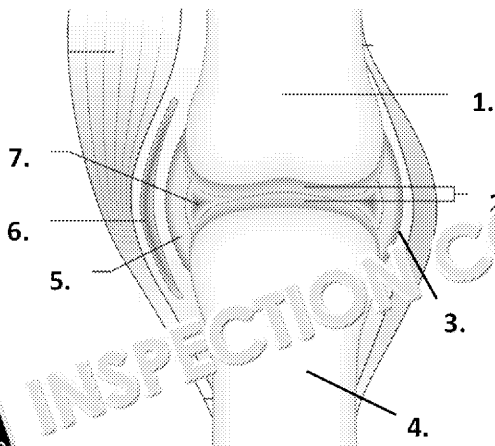
Bones, structure and functions of the skeleton, and synovial joints	Questions			
	1. Name and describe the six functions of the skeleton. For each function, give an example of how it can be applied to sport.		Function	
			1.	
			2.	
			3.	

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Questions		
Bones, structure and functions of the skeleton, and synovial joints (continued)	<div></div> <div>4.</div>	
	<div></div> <div>1. Name and describe the six functions of the skeleton. For each function, give an example of how it can be applied to sport. (Continued)</div> <div>5.</div>	
	<div>6.</div>	
	<div></div> <div>2. Fill in the gaps in the table, identifying either the joint, or the bones that make up a joint.</div>	Joint
		Head/Neck
		Elbow
Knee		
Hip		
Shoulder		

Bones, structure and functions of the skeleton, and synovial joints. (continued)	Questions	
	3. Which bone lies in front of the knee joint?	
	4. Label the parts of a synovial joint and explain how some of them prevent injury.	Feature
		1.
		2.
		3.
		4.
		5.
		6.
	5. Describe the role of ligaments in synovial joints.	
	6. What bones provide protection for internal organs? Give a sporting example of specific bones that provide protection.	

Questions															
Bones, structure and functions of the skeleton, and synovial joints (continued)	7. What types of bone allow gross movements of the skeleton? Give a sporting example of specific bones that allow gross movement.														
	8. What types of bone allow fine movements of the skeleton? Give a sporting example of specific bones that allow fine movement.														
	9. Describe how the skeleton works with muscles to produce movement														
	10. Name the types of joint found in the body and name the movements that can be performed at each. Then, define each type of movement.														
	<table><tr><th>Type of joint</th><th>Movements</th></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	Type of joint	Movements												
Type of joint	Movements														

Bones, structure and functions of the skeleton, and synovial joints (continued)	Questions		
	11. What type of joint is found at the shoulder and hip?		
	12. What type of joint is found at the knee and elbow?		
	13. Name and define the movements that can be performed at the ankle.	Type of Joints	


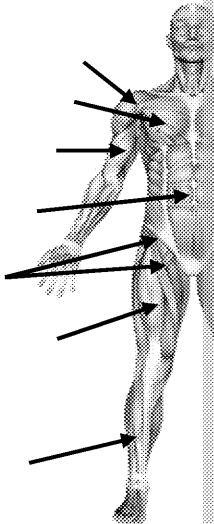


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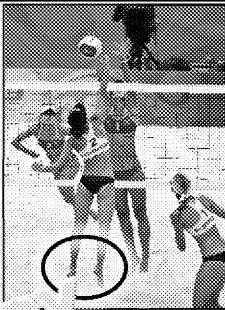
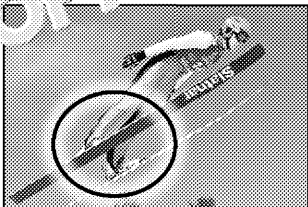
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Muscles, movement and antagonistic pairs	Questions			
	 <p>1. Label the muscles of the body to the right.</p>			
	 <p>2. What role to tendons play in the musculoskeletal system?</p>			
	 <p>3. Provide a sporting example for each of the types of movement at the following joints.</p>	Joint	Movement	
		Elbow	Flexion	
			Extension	
		Knee	Flexion	
			Extension	

Questions			
Muscles, movement and antagonistic pairs (continued)	4. Provide a sporting example for each of the types of movement at the named joints. (Continued)	Joint	Movement
		Hip	Flexion
			Extension
		Shoulder	Flexion
			Extension
			Abduction
			Adduction
			Rotation
	5. Identify the movements shown at the ankle and provide the agonist that causes this movement.	Example	Mo
			
			

Questions	
Muscles, movement and antagonistic pairs (continued)	6. Name and describe the two types of isotonic contraction.
	7. Describe an isometric contraction.
	8. Muscles work in pairs to cause movement at a joint. What are the roles of the agonist and antagonist muscles in movement at a joint?
	9. Give an example of an antagonistic pair of muscles in a part of your body.
	10. Identify the agonistic muscle(s) that cause movement at the shoulder.
	11. Identify the agonistic muscle(s) that cause movement at the elbow.

Movement

Abduction

Adduction

Flexion

Extension

Movement

Flexion

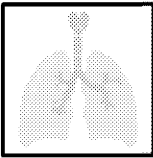
Extension

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Questions	
Muscles, Movement and antagonistic pairs (continued)	Movement
	Abduction
	Rotation
	Extension
	Movement
	Flexion
	Extension
	Scenario
12. Identify the agonistic muscle(s) that cause movement at the hip.	
13. Identify the agonistic muscle(s) that cause movement at the knee.	
14. For each of the following scenarios, justify whether the muscles are working eccentrically, concentrically or isometrically.	A rugby prop pushing against his opponent in the scrum. The scrum is stable and not moving.
	A gym member slowly lowering themselves from a pull-up
	A swimmer pulling back their arms, under the water during the front crawl



3.1.1: Applied Anatomy and Physiology




3.1.1.2 - The structure and function of the cardiorespiratory system

Questions		
The respiratory system	1. Identify the pathway of air in order from the atmosphere to the blood.	1.
		2.
		3.
		4.
		5.
	2. Describe the roles of the <i>intercostals</i> , <i>rib cage</i> and <i>diaphragm</i> when a person <i>inhales</i> at rest.	Intercostals
		Ribcage
		Diaphragm
	3. Describe the roles of the <i>intercostals</i> , <i>rib cage</i> and <i>diaphragm</i> when a person <i>exhales</i> at rest.	Intercostals
		Ribcage
		Diaphragm

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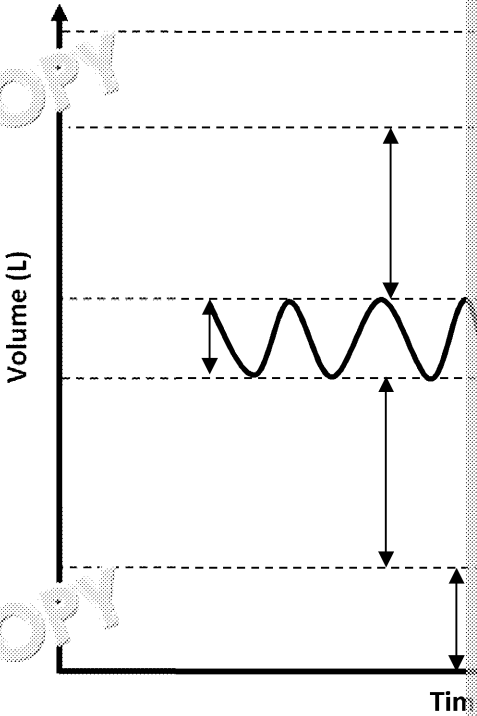
Questions										
The respiratory system (continued)	<p>4.  We exercise our breathing rate increases and our lungs expand more.</p> <p>Explain how additional skeletal muscles are recruited to allow this to happen.</p>									
	<p>5.  Explain how air pressure causes inspiration and exhalation of air.</p>									
	<p>6.  Define each of the following lung volumes.</p> <table> <tr> <th>Volume</th><th></th></tr> <tr> <td>Tidal volume</td><td></td></tr> <tr> <td>Inspiratory reserve volume</td><td></td></tr> <tr> <td>Expiratory reserve volume</td><td></td></tr> <tr> <td>Residual volume</td><td></td></tr> </table>	Volume		Tidal volume		Inspiratory reserve volume		Expiratory reserve volume		Residual volume
Volume										
Tidal volume										
Inspiratory reserve volume										
Expiratory reserve volume										
Residual volume										

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The respiratory system (continued)

Questions	Answers						
<p>7. Identifying each of the lung volumes on the spirometer trace.</p> 							
<p>8. When exercise begins, explain what happens to the following volumes.</p>	<table> <tr> <td>Inspiratory reserve volume</td><td></td></tr> <tr> <td>Expiratory reserve volume</td><td></td></tr> <tr> <td>Tidal volume</td><td></td></tr> </table>	Inspiratory reserve volume		Expiratory reserve volume		Tidal volume	
Inspiratory reserve volume							
Expiratory reserve volume							
Tidal volume							
<p>9. Give a definition of diffusion.</p>							

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The respiratory system (continued)	Questions	
	10. Explain how gaseous exchange takes place at the alveoli.	
	11. Which physiological factors aid gaseous exchange?	
	12. What role do haemoglobin play in gaseous exchange?	

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The cardiovascular system	1. What are the roles of veins, arteries and capillaries?	Veins:	
		Arteries:	
		Capillaries:	
	2. Identify the structures and characteristics of veins and arteries, and describe how these characteristics aid the transportation of blood.	Structure/Characteristic	
		Veins	

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Questions	
The cardiovascular system (continued)	<div>3.  Describe the structures and characteristics of the heart and arteries and describe how the characteristics aid in the transportation of blood. (Continued)</div>
	<div>4. Describe the structure or characteristic of capillaries and how the structure aids gaseous exchange.</div>
	<div>5.  Name the name of the vein that receives oxygenated blood from the lungs and transports it to the left atrium of the heart?</div>
	<div>6. Name two other major veins that supply the heart, and state where each carries blood to and from.</div>

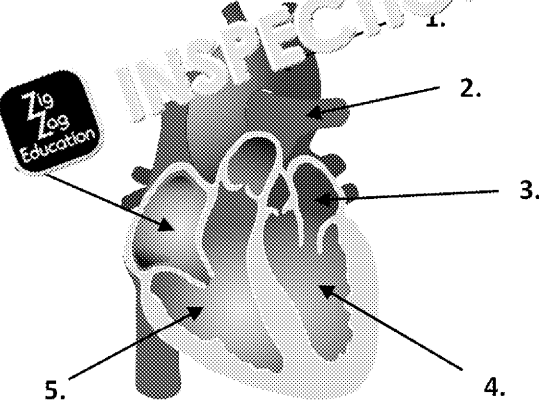
Arteries

Structure/Characteristic

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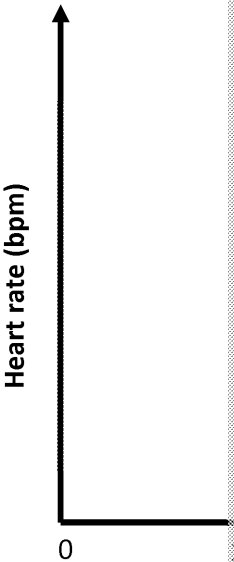
Questions	
The cardiovascular system (continued)	<p>7. Label the diagram of the heart.</p> 
	1.
	2.
	3.
	4.
	5.
	6.
	<p>8. Describe the cardiac cycle and the pathway of blood through the heart as deoxygenated blood returns from the body.</p>

Questions		
The cardiovascular system (continued)	9. Describe what is meant by the term	
	10. Describe the process of systole.	
	11. Define the terms 'heart rate', 'stroke volume' and 'cardiac' output.	Heart rate
		Stroke volume
		Cardiac output
	12. Write an equation to calculate cardiac output.	
	13. anticipatory rise?	
14. Explain how the body redistributes blood to aid exercise.		

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The cardiovascular system (continued)	Questions	
	<p>15. Complete the graph by plotting the heart rate you would expect an athlete to experience during steady-state running. Then, justify why you chose the heart rate as you did.</p>	

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3.1.1: Applied Anatomy and Physiology

3.1.1.3 - Aerobic and anaerobic exercise

Aerobic and anaerobic exercise	Questions	
	1. Define 'aerobic exercise'.	
	2. Write an equation to show aerobic exercise.	
	3. Define 'anaerobic exercise'.	
	4. Write an equation to show anaerobic exercise.	
	5. Give a sporting example of an athlete who competes aerobically. Justify your answer.	
	6. Give a sporting example of an athlete who competes anaerobically. Justify your answer.	

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Questions	
Aerobic and anaerobic exercise (continued)	<p>7. Give an example of a sport that requires the athlete to use both the aerobic and anaerobic systems. Justify your choice.</p>
	<p>8. Define 'EPOC'.</p>
	<p>9. Why does EPOC occur?</p>
	<p>10. What are the three main parts of a cool-down?</p>
	<p>11. Give reasons why athletes perform a cool-down following exercise.</p>

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Aerobic and anaerobic exercise (continued)	Questions	
	<p>12. Explain how an athlete's diet can be related to aid recovery, and suggest how each component of the diet aids recovery.</p>	Hydration:
		Carbohydrates:
		Proteins:
	13. What does DOMS stand for?	
	14. What causes DOMS?	
	15. When do DOMS Occur?	
	16. Using a specific example, explain one recovery method that helps to prevent DOMS following high-intensity exercise.	

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3.1.1: Applied Anatomy and Physiology



3.1.1.4 - The short-term and long-term effects of exercise

Short-term and long-term effects of exercise	Questions		
	1. Describe the immediate effects of exercise on the cardiovascular and respiratory systems.	Cardiovascular response	
	2. Explain why the following *very* immediate effects happen as a result of exercise.	Increased body temperature	
		Increased sweating	

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Short-term and long-term effects of exercise (continued)	Questions	
	 <p>3. Jack has just completed a high-intensity circuit training session.</p> <p>Describe the short-term effects Jack may experience in the 36 hours after the exercise.</p>	
	 <p>4. How does long-term exercise help to improve body shape?</p>	

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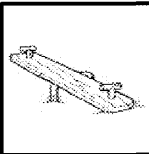


Short-term and long-term effects of exercise (continued)	Questions	
	 <p>5. Explain the long-term effects of exercise on the fitness of an individual.</p> 	
	 <p>6. What is the term used to explain a resting heart rate of less than 60 bpm?</p>	

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3.1.2: Movement Analysis



3.1.2.1 Lever systems and movement analysis and 3.1.2.2 Planes and

Lever systems	Questions		
	1. Define the 'fulcrum' in a lever system.		
	2. What is an 'effort' in a lever system?		
	3. Define a 'load', or 'resistance', in a lever system.		
	4. Give an example of each part of a lever system.	Fulcrum	
		Effort	
		Load	
	5. Draw and label the fulcrum, effort and load in a second-class lever system.		

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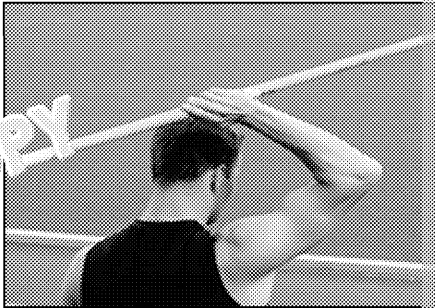


	Questions	
Lever systems (continued)	<p>6. Draw a first-class lever system and label the resistance arm and effort arm.</p> 	
	<p>7. Draw a third-class lever system.</p> 	

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Questions	
<p>Lever systems (continued)</p> <p>8. To the right are two images of sporting movement. Identify the lever system being used in each image, and label the components of the lever on the image.</p>	 
<p>9. Write a diagram to represent mechanical advantage.</p>	
<p>10. Why does a first-class lever system have a mechanical advantage? What effect does this have on movement?</p>	
<p>11. Why does a second-class lever system have a mechanical advantage? What effect does this have on movement?</p>	

	Questions	
Lever systems (continued)	12. Why are third-class lever systems considered to be a mechanical disadvantage?	
	13. Give sporting examples of a first-, second- and third-class lever system. (Use different examples from those given in Question 8.)	First Class:
		Second Class:
		Third Class:

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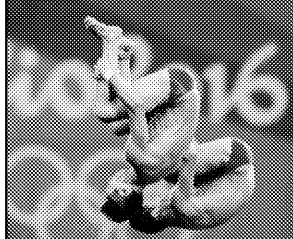



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Questions			
Planes and axes of movement	<p>1. Name the 'sagittal', 'frontal' and 'transverse' planes of movement.</p>	Sagittal:	
		Frontal:	
		Transverse:	
	<p>2. Label the three planes of motion with diagram.</p>		
	<p>3. Name and define the three axes of rotation a body can move in.</p>		





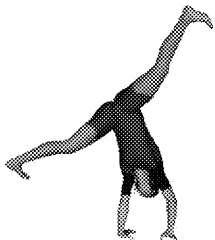

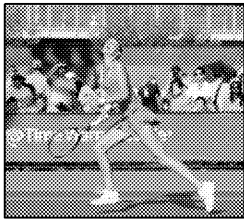


Planes and axes of movement (continued)	Questions	
	 <p>4. Label the axes of rotation on the diagram.</p>	
	 <p>5. For the following sporting movements, state which plane and axis each movement is occurring in.</p>	<p>A diver performing a somersault</p> 
		<p>A long jumper performing the jump</p> 

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Planes and axes of movement (continued)	Questions	
		<p>A discus thrower spinning</p> 
	<p>5. For the following sporting activities, state which plane and axis each movement is occurring in. (continued)</p> 	<p>A footballer performing sidesteps</p> 
		<p>A cartwheel</p> 
		<p>A tennis player running backward lob shot</p> 

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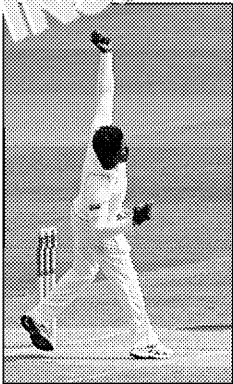
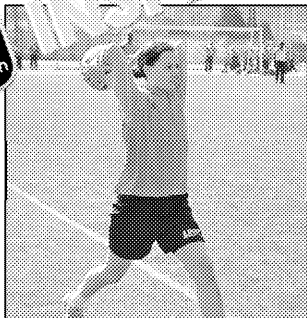


Question is			
Movement analysis	 <p>1. What movements are possible at the following joints?</p>	Shoulder	
		Elbow	
		Hip	
		Knee	
		Ankle	
	 <p>2. For each of the following movements, identify the agonist muscle(s) causing the movement.</p>	Movements	
		Wrist flexion	
		Shoulder flexion	
		Plantarflexion	
		Elbow extension	
		Shoulder adduction	

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Questions			
Movement analysis (continued)	<p>3. Fill in the answers to the right in order to perform movement analysis of the shoulder of the cricketer below.</p> 	Movements at shoulder, and agonist muscle causing movements:	Mov
		Plane of movement:	
		Direction of rotation:	
	<p>4. Perform a movement analysis of a footballer's effort in making a throw-in.</p> 	Movements at elbow, and agonist muscle causing movements:	Mo
		Plane of movement:	
		Direction of movement:	

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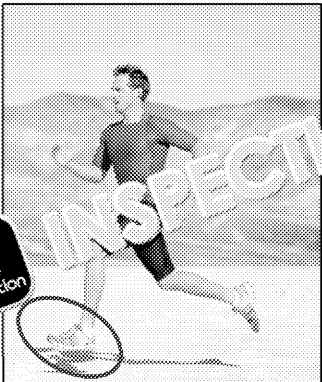



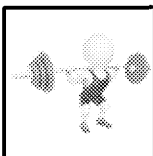
Questions		Answers	
Movement analysis (continued)	<p>5. Fill in the answers to the right, to perform movement analysis of a standing vertical jump at the moment of take-off.</p>	A	
		Movement type:	
		Agonist muscle:	
		Contraction type of agonist muscle:	
		Plane of movement:	
		Axis of movement:	
		K	
		Movement type:	
		Agonist muscle:	
		Contraction type of agonist muscle:	
		Plane of movement:	
		Axis of movement:	
		P	
		Movement type:	
		Agonist muscle:	
		Contraction type of agonist muscle:	
		Plane of movement:	
		Axis of movement:	

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Questions	
<div>Movement analysis (continued)</div> <div>  </div> <p>6. Perform a movement analysis on a runner in the recovery stage of a stride.</p> <div>  <div>  </div> </div>	
	Movement type:
	Agonist muscle:
	Contraction type of agonist muscle:
	Plane of movement:
	Axis of movement:
	Movement type:
	Agonist muscle:
	Contraction type of agonist muscle:
	Plane of movement:
	Axis of movement:
	Movement type:
	Agonist muscle:
	Contraction type of agonist muscle:
	Plane of movement:
	Axis of movement:



3.1.3: Physical Training

3.1.3.1 The relationship between health and fitness, and 3.1.3.2 Components of fitness

Health and fitness and components of fitness	Questions		
	1. Define 'health'.		
	2. Define 'fitness'.		
	3. Describe the positive effects improved fitness can have on health.		
	4. Describe the possible relationships between ill health and fitness.		
	5. Fill in the table, naming the component of fitness, or providing a definition of the component of fitness.	Fitness component	
			The ability of muscles to exert force
			The range of movement of a joint
		Reaction time	
		Strength	
			Large
			Performance
			The speed of movement

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Health and fitness, and components of fitness (continued)

Questions	Answers		
5. Fill in the table, naming the component of fitness by providing a definition of the component of fitness.	Agility		
	Speed		
	Balance		
		The ability to use more than	
	Cardiovascular endurance		
6. For each of the components of fitness, give a sport that requires that fitness component and justify your answer.	Fitness component	Sporting example	
	Muscular endurance		
	Flexibility		
	Reaction time		
	Static strength		
	Dynamic strength		

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Questions			
Health and fitness, and components of fitness (continued)	<p>6. For each of the components of fitness, name a sport that requires that fitness component and justify your answer. Continued.</p>	Maximal strength	
		Power / explosive strength	
		Agility	
		Speed	
		Balance	
		Coordination	
		Cardiovascular endurance	
	7. Would a 50 m sprint swimmer need high levels of muscular endurance? Justify your answer.		
	8. Explain whether a long jumper would benefit from having a very good reaction time.		

Questions			
Fitness testing	 <p>1. Describe the benefits of, or reasons for, testing an athlete's fitness</p>		
	 <p>2. Explain the possible limitations of fitness testing.</p>		
	<p>3. Name and describe the test used to measure flexibility</p> 	<p>Test</p> <p>Equipment</p> <p>Protocol</p>	

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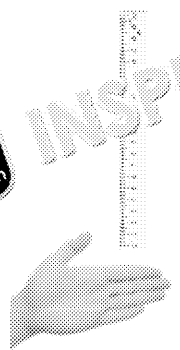
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Questions	
Fitness testing (continued)	4. Name the test that is used to measure speed
	5.  the component of fitness can be measured using a hand grip dynamometer. Describe the protocol of this test.
	6. Identify the test being shown by the image below. Name what component of fitness the test measures and describe the protocols of this test.
	 
	7. Describe the protocol of the stork balance test



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Questions				
Fitness testing (continued)	<p>8.  sketch to illustrate how the Illinois Agility test is completed. Below it, describe the protocol.</p>			
	<p>9. An athlete could use the one-rep max (1RM) test to test which component of fitness?</p>			
	<p>10.  Once 1RM is established, how is it used to assess strength?</p>			
	<table> <tr> <th>Equipment</th><th></th></tr> <tr> <td> <p>11. The multistage fitness test is commonly used as a cheap method of testing cardiovascular endurance.</p> <p>Identify any equipment required to complete the multistage fitness test, and describe the protocol for the test.</p> <p></p> </td><td></td></tr> </table>	Equipment		<p>11. The multistage fitness test is commonly used as a cheap method of testing cardiovascular endurance.</p> <p>Identify any equipment required to complete the multistage fitness test, and describe the protocol for the test.</p> <p></p>
Equipment				
<p>11. The multistage fitness test is commonly used as a cheap method of testing cardiovascular endurance.</p> <p>Identify any equipment required to complete the multistage fitness test, and describe the protocol for the test.</p> <p></p>				

Questions		Answers	
Fitness testing (continued)		Test	
	12. Name and describe the test used to test a person's muscular endurance.	Protocol	
	13. Provided below is the protocol of a fitness test. Name the fitness test being described and state which component of fitness is assessed using the test.	Test:	
	An athlete stands with their back against a wall for 30 seconds. The ball is thrown and caught using opposite hands. The number of times the ball is thrown and caught is counted and used as a score.	Fitness component:	

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Questions			
Fitness testing (continued)	14.  how a vertical jump test is carried out by an athlete to assess their explosive strength.		
	15.  ch of the following tests, suggest whether it is appropriate / not appropriate for the athlete it has been matched to. Justify your answer.	One-rep max test	Triathlete
		Sit-and-reach test	Dancer
		100 m sprinter	

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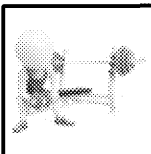


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Questions	
Fitness testing (continued)	<p>16. When taking measurements in fitness tests you must record the type of measurement you are recording. For each of the following quantities, state the unit it should be measured in.</p>
	Distance:
	Time:
	Mass:
	17. What is qualitative data?
	18. What is quantitative data?
	19. Explain why quantitative data is useful in fitness testing.
	20. Explain why normative data is useful in fitness testing.

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3.1.3: Physical Training




3.1.3.3 Principles of training and their application to training

Principles of training and types of training	Questions		
	1. Name and describe the principles of SPORT to maximise improvements in sporting performance from training.	S	
		P	
		O	
		R	
	2. Give a sporting example of how each principle of SPORT can be implemented.	T	
		P	
		O	
		R	
	3. Explain how overload can occur using the FITT principle.	T	
		F	
		I	
		T	

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Principles of training and types of training (continued)	Questions		
		Training type	D
  	4. Describe each of the specific types of training and state what fitness component the training improves.	1.	
		2.	
		3.	
		4.	
		5.	
		6.	
		7.	

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Principles of training and types of training (continued)		Questions	
	5.	What considerations should a coach make when completing a circuit training session?	
	6.	When designing a circuit session, the coach should ensure there is enough space to hold all of the circuit stations. What else should the coach check in order to design a successful circuit training session?	
	7.	Using specific examples, apply the principles of SPORT and FITT to a circuit training session.	Application to a circuit training session
			S
			PO
			T

	Questions	Answers	
Principles of training and types of training (continued)			Application to a circuit training session
	7. Using specific examples, apply the principles of SPORT and FITT to a circuit training session.	I	
		T	
	8. Give tips to a coach who is planning a fartlek training session. (Continued)		
	9. How should interval training be adapted for a beginner athlete?		
	10. What does HIIT stand for?		
	11. How should an athlete perform static stretching in order to prevent injury?		

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Principles of training and types of training (continued)

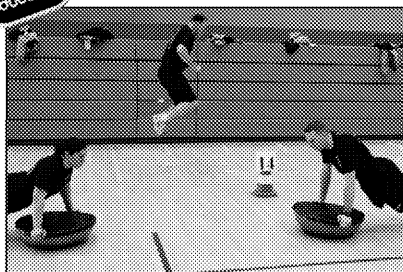
Questions	Answers	
12. Alice is looking to improve her strength by completing weight training. What safety advice would you give Alice when completing weight training?		
13. Plyometric training is often avoided by coaches and athletes. Why is this?		
14. For each of the types of training, give the correct training threshold and suggest the rest/recovery time for each training type.	Training type	Training threshold
	Continuous	
	Fartlek	
	Interval	
	Plyometric	
	Circuit	
	Static stretching	
	Weight training	

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Advantages and disadvantages of training		Questions	
Advantages and disadvantages of training	1.	Give the advantages and disadvantages of continuous training.	Advantages
	2.	Identify the training type shown in the picture. Give the advantages and disadvantages of this type of training?	Advantages



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Advantages and disadvantages of training (continued)		Questions	
	3. Fartlek training may not be suitable for all athletes depending on the demands of their sport. List the advantages of fartlek training for an athlete.		
			Advantages
	4. Assess the use of plyometric training and weight training to improve fitness.		
			Advantages
	5. Describe the advantages and disadvantages of static stretching to a rugby player in a warm-up.		Advantages

Advantages and disadvantages of training (continued)	Questions		
		Advantages	
Advantages and disadvantages of training (continued)	6. Fill in the table, listing the advantages and disadvantages of interval training.		
	7. For each training type, give an example of an athlete who would benefit from the type of training.	Continuous	
		Fartlek	
		Interval	
		Plyometric	
		Circuit	
		Weight training	

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3.1.3: Physical Training

3.1.3.4 How to optimise training and prevent injury

Optimising training and preventing injury	Questions	
	1. Is there a training threshold?	
	2. Training thresholds can be set at percentages of maximum heart rate. How is maximum heart rate calculated?	
	3. What percentage of maximum heart rate does aerobic training occur in?	
	4. What percentage of maximum heart rate does anaerobic training occur in?	
	5. Dan is 27 years old. He wants to train aerobically. Calculate the heart rate range that Dan should work within to train anaerobically.	
	6. Calculate the heart rate range that a 22-year-old female should work within to improve her aerobic fitness.	

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Optimising training and preventing injury (continued)	Questions		
	7. Circuit training can be altered to meet the needs of the athlete.		
	What should be altered in a circuit to meet the fitness aim of a circuit?		
	8. The intensity/weight used in weight training is determined using one-repetition maximum (1RM).		
	What is 1RM?		
	9. What are 'reps' and 'sets'?	Reps:	
		Sets:	
	10. How can 1RM be used to allow an athlete to improve their strength and power.		
	11. Explain how 1RM can be used to allow an athlete to improve their muscular endurance.		

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Optimising training and preventing injury (continued)	Questions	
		1.
		2.
		3.
		4.
	12. Describe nine injury prevention methods that athletes should adopt in preparation for competition.	5.
		6.
		7.
		8.
		9.

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Altitude training and seasonal aspects	Question	
	1. What is altitude training?	
	2. Explain the physiological changes that occur to an athlete training at altitude and how these changes affect their performance.	
	3. Give two examples of athletes who would benefit from altitude training.	

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Questions			
Altitude training and seasonal aspects (continued)	4. Give two examples of athletes who would not benefit from altitude training.		
	5. Assess the use of altitude training by marathon runners.	Advantages	
	6. Name and describe each of the three seasons of training which athletes participate in within a year.	1.	
		2.	
		3.	
7. Explain why the three seasons of training cannot always be applied to a particular athlete.			

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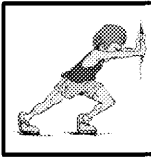


Altitude training and seasonal aspects (continued)	Questions		
	 <p>8. For the following scenario, give a brief training plan / list of activities that the athlete would complete throughout the year:</p> <p>A long jumper who is part of the Olympic team. The Olympics is the next major event they will be competing in.</p> 	Season of training	

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3.1.3: Physical Training

3.1.3.5 Effective use of a warm-up and a cool-down

Questions		Answers	
1. Name four components that should be part of a warm-up.		1	
		2	
		3	
		4	
Warm-ups and cool-downs	2. Describe the physiological and psychological benefits of warm-ups for an athlete.		
	3. Plan a warm-up for a footballer prior to a match.		

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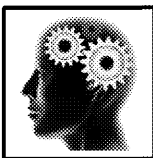


Warm-ups and cool-downs (continued)	Questions	
	4. Describe the important cool-down exercises that should be included in a cool-down.	
	5. What benefits does a good cool-down give an athlete?	
	6. Plan an appropriate cool-down for a hockey player.	

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3.1.4: Use of Data



3.1.4.1-3 Demonstrating a knowledge of understanding, presenting, a

Understanding data	Questions	
	1. Define 'qualitative data'.	
	2. Define 'quantitative data'.	
	3. Give two examples of how to collect qualitative data.	
	4. Give three examples of methods used to collect quantitative data.	
	5a. Below is a question taken from a questionnaire. State whether the answers would be qualitative or quantitative. Give a reason for your answer. <i>Rate your experience of today's lesson, learning how to play lacrosse, with 1 to 5 stars. 'not enjoyable at all' and 5 stars, 'very enjoyable'.</i>	

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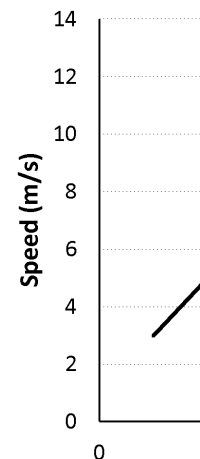
	Questions	
Understanding data (continued)	<p>5b. Below is another question taken from the same questionnaire. Decide whether the answers would be qualitative or quantitative. Give a reason for your answer.</p> <p> <i>write any feedback you have for today's lacrosse coach in the space provided below.</i></p>	
	<p>5c. What do your answers from 5a and 5b tell you about the use of questionnaires in data collection?</p>	
	<p>6. On a graph, what is plotted along the x-axis?</p>	
	<p>7.  On a graph, what data is plotted along the y-axis?</p>	

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Questions	
Understanding data (continued)	<p>8. To the right is a graph plotting speed of a 100 m sprinter in a race.</p> <p>a) Explain what is happening between 1 second and 8 seconds.</p> <p>b) Calculate the distance travelled between 8 and 11 seconds.</p>
	<p>Explanation:</p>
	<p>Calculation:</p>



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Understanding data (continued)

Questions

9. Draw a bar chart of the distance thrown by a shot put using the following data:

Attempt	Distance (m)
1	55
2	65
3	65
4	65
5	60
6	70

10. Below is a graph showing the average number of spectators in a football stadium over the last 10 years.

Answer the questions to the right using the graph.

Year	Average spectators
2007	60000
2008	50000
2009	55000
2010	60000
2011	65000
2012	70000
2013	70000
2014	75000
2015	65000
2016	80000

a. In what year did the number of spectators hit its lowest?

b. Between what years did the average number of spectators remain the same?

Describe the trend of spectators between the years 2013 and 2016.