



Ark Globe  
Academy

## **Year 10 Sport Science**

### **Remote Learning Pack**

#### **R042 Applying the Principles of Training**

*L02 – know how training methods target different sporting components*

Spring One (Remote Learning Pack 2)

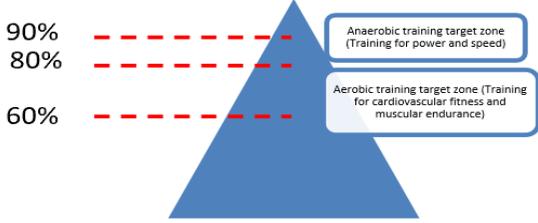
**Year 10 Sport: Unit R042 Applying the Principles of Training**  
**LO2 – Know how training methods target different sporting components**

*For the next 2 weeks (6 lessons) we will be working on the Principles of Training, we will cover aerobic and anaerobic exercise, components of fitness and training methods for different fitness components.*

Session	Title	Work to be completed	Resource provided	Outcome	On-Line Support
<b>1</b>	<b>Online Lesson: Introduction to R042 Components of fitness Aerobic and Anaerobic exercise</b> <i>Mr Boothe- Friday 22<sup>nd</sup> January</i> <i>Miss Blaney - Monday 25<sup>th</sup> January</i>	MS Teams lesson will be scheduled on your calendar	PowerPoint Resource on VLE	Know the components of fitness Be able to give sporting examples for each component of fitness.	Email Mr Boothe/Miss Blaney for any support. <a href="mailto:d.boothe@arkglobe.org">d.boothe@arkglobe.org</a> or <a href="mailto:l.blaney@arkglobe.org">l.blaney@arkglobe.org</a>
<b>2</b>	<b>LO2 Assignment Write-up</b>	For the next two lessons, you need to begin your assignment write up for LO2: Principles of training. <ul style="list-style-type: none"> <li>• Fitness components</li> <li>• Aerobic and anaerobic exercise</li> </ul> <p>*Aerobic and Anaerobic exercise require some independent learning. See checklist in Remote Learning Pack for bullet points to research.</p> <p>Use the checklist effectively – ticking off once each part is completed.</p>	PowerPoint resource on VLE and Remote Learning Pack with checklist	Written up Each component of fitness with specific sporting example. Written up aerobic and anaerobic exercise, with sporting examples.	Email Mr Boothe/Miss Blaney for any support. <a href="mailto:d.boothe@arkglobe.org">d.boothe@arkglobe.org</a> or <a href="mailto:l.blaney@arkglobe.org">l.blaney@arkglobe.org</a>
<b>3</b>					

4	<b>On-line lesson: Training methods, what are they and what components of fit</b> <i>Mr Boothe- Friday 29th January</i> <i>Miss Blaney - Monday 1<sup>st</sup> February</i>	MS Teams lesson will be scheduled on your calendar	PowerPoint resource on VLE	Know the different training methods Be able to explain which training methods improve particular fitness components.	Email Mr Boothe/Miss Blaney for any support. <a href="mailto:d.booth@arkglobe.org">d.booth@arkglobe.org</a> or <a href="mailto:l.blaney@arkglobe.org">l.blaney@arkglobe.org</a>
5 6	<b>LO2 Assignment completion</b>	Pupils to complete the LO2 written assignment with all information discussed in lessons and any extra research, Pupils need to send a completed copy of LO2 to Mr Bonnett/ Ms Heavey by <b>4pm on Wednesday 3rd February</b>	PowerPoint resource on VLE and Remote Learning Pack	You need to send a completed copy of LO2 to your class teacher by the end of the day with all parts of the checklist (see PowerPoints) completed	Email Mr Boothe/Miss Blaney for any support. <a href="mailto:d.booth@arkglobe.org">d.booth@arkglobe.org</a> or <a href="mailto:l.blaney@arkglobe.org">l.blaney@arkglobe.org</a>

Prior to session one - Knowledge organiser → You had a test on this already so you should know these.

OCR Sport Science – Principles of Training														
Principles of training - <b>Guidelines</b> that ensure <b>training is effective</b> and results in <b>positive adaptations</b> .		<b>PAR-Q – Physical Activity Readiness Questionnaire</b> Conducted before fitness testing or an activity programme to examine the performer’s readiness for training or any health conditions/lifestyle choices that may affect the successful completion.												
<b>FITT Principle</b> <table border="1"> <tr> <td><b>Frequency</b></td> <td>How often training takes place.</td> <td><i>Increase training from once a week to two</i></td> </tr> <tr> <td><b>Intensity</b></td> <td>How hard the exercise is.</td> <td><i>Increase resistance from 10kg to 15kg or increase incline on the treadmill.</i></td> </tr> <tr> <td><b>Time</b></td> <td>The length of the session.</td> <td><i>Increase training session from 45 minutes to 55 minutes.</i></td> </tr> <tr> <td><b>Type</b></td> <td>The method of training used.</td> <td><i>Change to from interval training to Fartlek training.</i></td> </tr> </table>		<b>Frequency</b>	How often training takes place.	<i>Increase training from once a week to two</i>	<b>Intensity</b>	How hard the exercise is.	<i>Increase resistance from 10kg to 15kg or increase incline on the treadmill.</i>	<b>Time</b>	The length of the session.	<i>Increase training session from 45 minutes to 55 minutes.</i>	<b>Type</b>	The method of training used.	<i>Change to from interval training to Fartlek training.</i>	<b>Progression</b> Working the body harder than normal/gradually increasing the amount of exercise you do. <i>i.e. bench press 50kg x 10 repetitions and increase to 55kg x5 repetitions.</i> 
<b>Frequency</b>	How often training takes place.	<i>Increase training from once a week to two</i>												
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<b>Type</b>	The method of training used.	<i>Change to from interval training to Fartlek training.</i>												
		<b>Reversibility</b> If training is not regular, adaptations will be reversed. This can happen when: <ul style="list-style-type: none"> <li>• Suffering from illness and cannot train</li> <li>• Injury</li> <li>• After an off-season.</li> </ul> 												
<b>Specificity</b> Training should be <b>matched</b> to the requirements of the sport or position the performer is involved in. Training must be specifically designed to develop the right: <ul style="list-style-type: none"> <li>• Muscles</li> <li>• Type of fitness</li> <li>• Skills</li> </ul>  		<b>Individual needs</b> All PEP’s would differ depending on: <ul style="list-style-type: none"> <li>• Performer’s goals/targets</li> <li>• Strength and weaknesses</li> <li>• Age/gender</li> <li>• Current health/fitness levels</li> </ul>  												
<b>Overtraining</b> Occurs when you <b>train too hard</b> and do not allow the body enough <b>rest/recovery time</b> . Signs/symptoms include: extended muscle soreness, frequent illness & increase injuries.														
<b>Calculating Training Zones/Thresholds of Training</b> Karvonen formula used to calculate aerobic and anaerobic target training zones.														
<b>Maximum Heart Rate (MHR) = 220 – age</b>	<b>Aerobic target zone: 60–80% of MHR</b> (60% = x 0.6 / 80% = x 0.8)	<b>Anaerobic target zone: 80–90% of MHR</b> (80% = x 0.8 / 90% = x 0.9)												
														

**Session one** – Online lesson (introducing LO2, components of fitness, aerobic/anaerobic exercise).

**Session two and three** – Over the next two sessions, you will need to create a new assignment named, LO2 – Applying the Principles of Training. You must write a brief introduction and explain each component of fitness with relevant and detailed sporting examples.

You must also discuss aerobic and anaerobic exercise and relevant and specific sporting examples for each of these.

### Your Assignment Checklist for Session 2 and 3

Title and Introduction		Complete (  )
	in this section you need to explain how you will be discussing <b>the components of fitness, training methods to improve these</b> , and the difference between <b>aerobic &amp; anaerobic exercise</b>	
Component of fitness	<i>Definitions and 3 examples of demonstrating that fitness component.</i>	
Cardiovascular Endurance		
Strength		
Power		
Agility		
Flexibility		
Balance		
Aerobic and Anaerobic Exercise	<i>For this section, you may need to do some independent home learning to enhance your answers.</i>	
	<ul style="list-style-type: none"> <li>• Aerobic exercise definition</li> <li>• anaerobic definition,</li> <li>• aerobic training methods (provide examples),</li> <li>• anaerobic training methods.</li> </ul>	

**Session four** – online lesson (**training methods, each component of fitness relevant training method**)

**Sessions five and six** – Pupils to complete the LO2 write up, including components of fitness and aerobic/anaerobic respiration. Use the PowerPoint on the VLE to help with your answers, as well as the tasks you completed during the live lesson.

Completed LO2 to be sent to Mr Boothe or Miss Blaney by **February 3<sup>rd</sup> 2020 by 4pm.**

Title and Introduction		Complete (✓)
	in this section you need to explain how you will be discussing <b>the components of fitness, training methods to improve these</b> , and the difference between <b>aerobic &amp; anaerobic exercise</b>	✓
<b>Component of fitness and training methods</b>	<i>Definitions and 3 examples of demonstrating that fitness component.</i>	
Cardiovascular Endurance	<p><b>After each component of fitness, you need to now discuss the relevant methods of training to help develop that component.</b></p> <p><b>Example-</b>  <i>Cardiovascular endurance is ..... An athlete would need Cardiovascular endurance to..... Training methods to help improve cardiovascular endurance include continuous training. Continuous training is an aerobic activity at moderate intensity lasting a longer period of time without rest. An example of continuous training is going for a long jog without a break, or going for a long-distance, low intensity cycle without stopping. Another training method to improve cardiovascular endurance is...</i></p> <p><b>Only tick the checklist once you have added the method of training.</b></p>	
Strength		
Power		
Agility		
Flexibility		
Balance		
<b>Aerobic and Anaerobic Exercise</b>	<i>For this section, you may need to do some independent home learning to enhance your answers.</i>	
	<ul style="list-style-type: none"> <li>• Aerobic exercise definition</li> <li>• anaerobic definition,</li> <li>• aerobic training methods (provide examples),</li> <li>• anaerobic training methods.</li> </ul>	✓