

## Level 3 BTEC Sport



# BTEC National Sport

## Unit 1 Bridging Course

This course attempts to 'bridge the gap' between GCSE/BTEC Level 2 and BTEC National Sport. It will identify topics covered in Unit 1 and knowledge that you need to bring with you when beginning the course, as well as offering a glimpse of what it will take to succeed!

Academic Year 2022-23

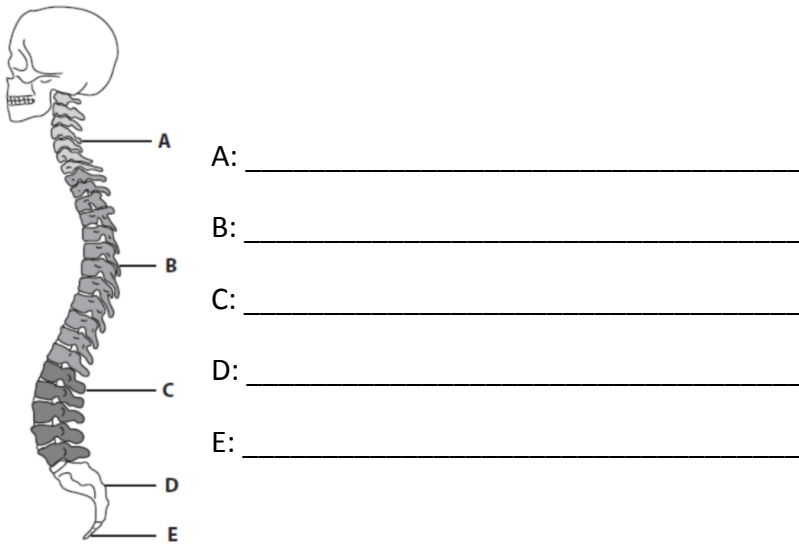
Miss Berry

Contact List

Miss A Berry: [Berrya@stjosephs.uk.net](mailto:Berrya@stjosephs.uk.net)

Skeletal System

Label the diagram of the vertebral column



(5 marks)

Factors affecting the Skeletal system

What is **arthritis** and why does it cause pain?

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(2 marks)

Muscular System

What is a concentric muscle contraction?

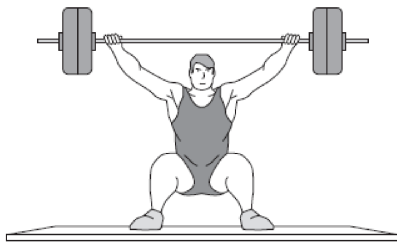
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(1 mark)

Analysis of Movement



Use the diagram of an athlete performing the upward phase of a squat to complete the table below.

Joint	Type of Joint	Joint Action	Agonist (Contracting Muscle)
Hip			
Knee			

(5 marks)

Respiratory System

What is meant by the key terms **tidal volume** and **vital capacity**?

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(2 marks)

Gaseous Exchange

Figure 1. shows the process of gaseous exchange.

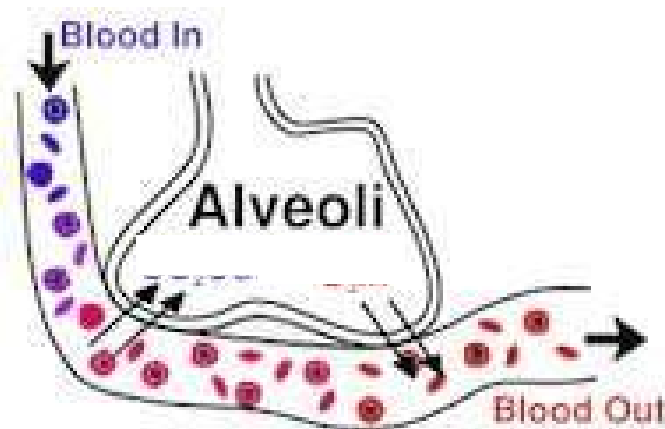


Figure 1.

State which gases are moving between the alveoli and the capillaries and in which direction.

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(2 marks)

Cardiovascular System

Complete the table below stating one feature of each of the 3 main blood vessels.

Blood Vessel	Feature
Artery	
Vein	
Capillary	

(3 marks)

Blood Pressure

Describe the difference between **systolic** and **diastolic** blood pressure.

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(2 marks)

Structure of the heart

Complete the following table:

Name	Feature of the Heart
	Upper chambers of the heart.
	Lower chambers of the heart.
	The 2 different arteries (1 leaving the heart to the lungs and 1 leaving to the rest of the body).

(3 marks)

Effects of Exercise on heart

What will the effects on the heart be as a result of long term, regular endurance training?

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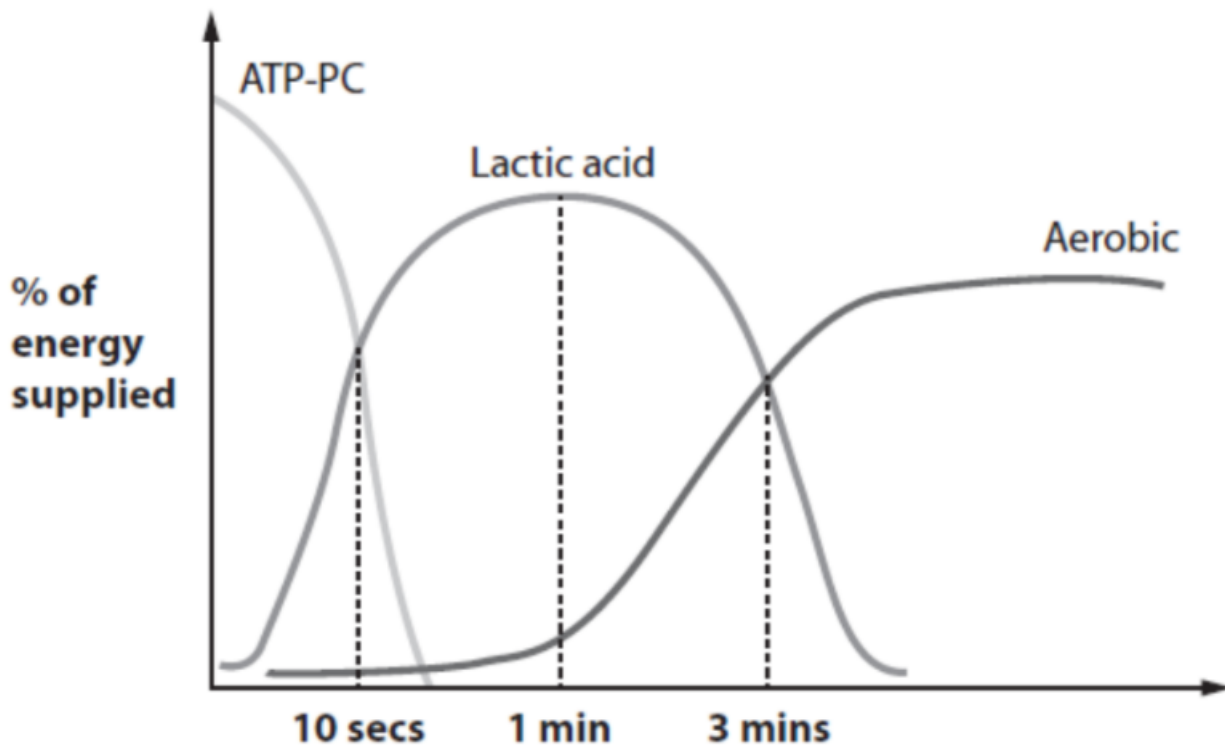
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(3 marks)

## Energy Systems

The graph below shows the energy continuum. Can you identify the 3 energy system and how long they each last for?



Energy System	Duration

(6 marks)

Which food nutrients are required by the body to produce **aerobic energy**?

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(1 mark)



## Glossary of Terms

**AGONIST** = The main contracting muscle which allows movement to take place at a joint.

**BLOOD PRESSURE** = The amount of pressure created on the walls of the blood vessels as blood is pumped out of the heart.

**CARDIORESPIRATORY ENDURANCE** = Ability to delay the onset of fatigue.

**ENDURANCE TRAINING** = Training designed to improve cardiorespiratory endurance or Stamina, usually sustained exercise at a steady pace and with no rest periods.

**FITNESS** = Ability to meet the demands/ to cope with the task.

**GASEOUS EXCHANGE** = The exchange of gases (O<sub>2</sub> and CO<sub>2</sub>) between the alveoli and capillaries at the lung site and between the cell and capillaries at the muscle site.

**JOINT ACTION** = Type of movement taking place at the joint.

**LUNG VOLUMES** = The different depths of breathing used in different situations i.e. rest compared to during activity.

**MUSCULAR ENDURANCE** = The ability of a muscle or group of muscles to perform repetitive contractions over a period of time.

**POWER** = A rapid application of muscular force. A combination of Strength x Speed

**STRENGTH** = The ability to overcome a resistance. This may be explosive, static or dynamic.

**STATIC** = Holding position/ Isometric

**EXPLOSIVE** = Rapid, maximal or powerful contraction

**TYPE OF JOINT** = Category of joint.

### USEFUL WEBSITES

[www.GCSEBitesize.com](http://www.GCSEBitesize.com)

[www.SportEngland.com](http://www.SportEngland.com)

[www.YouthSportTrust.org](http://www.YouthSportTrust.org)

<b>Unit 1 - Anatomy &amp; Physiology</b>	<b>Unit 2 - Fitness Training and Programming for Health, Sport and Well-being</b>
<ul style="list-style-type: none"> <li>• Traditional Examination</li> <li>• Examinable (External Assessment)</li> </ul>	<ul style="list-style-type: none"> <li>• Case Study examination</li> <li>• Support Information sheets</li> <li>• Examinable (External Assessment)</li> </ul>
<b>Unit 3- Professional Development in the Sports Industry</b>	<b>Unit 4 - Leadership</b>
<ul style="list-style-type: none"> <li>• Careers in Sport Assignment</li> <li>• Applying for a Job in the Sport Industry Assignment</li> <li>• Coursework (Internal Assessment)</li> <li>• Standards Verified (Sampled)</li> </ul>	<ul style="list-style-type: none"> <li>• Coursework (Internal Assessment)</li> <li>• Standards Verified (Sampled)</li> </ul>

Do you want additional support with BTEC Sport?

Then you could follow.....

@PEnthusiast

