



GCSE Physical Education: The Skeletal System



West Kirby
Grammar School

Learning about this topic is important because:
It demonstrates the ways in which parts of the human body work and function during physical activity.

This builds on:

This is the first topic in the Physical Factors Affecting Performance section.

This leads to:

The muscular system and how bones and muscles work together to cause movement.

We will learn:

Students will be able to name and locate the major bones of the body and be able to apply examples of how the skeletal system allows the functions such as posture and protection.

Students will be able to identify major joints along with the associated articulating bones in the knee, elbow, shoulder and hip. Knowledge will be developed of the types of movement at hinge joints and ball and socket joints, as well as being able to apply these movements to examples from physical activities and sports

- Location of major bones
- Functions of the skeleton
- Types of synovial joints
- Movement at joints

We will develop/practise skills including:

Students will learn about the different functions of the skeletal system and be able to apply them to sporting examples.

They will learn the names and location of the major bones in the body and how articulating bones form joints.

They will learn about the different movement possibilities at the shoulder, elbow, hip and knee joints

Students will practise answering exam questions around these topics, applying this information.

Some of the vocabulary that we will use includes:

synovial joint	sternum
articulating bones	vertebrae
scapula	humerus
cranium	Radius
clavicle	ulna
patella	femur
tibia	fibula
metatarsals	tarsals
metacarpals	carpals

You could learn more about this topic by:

- ✓ Watch ocrpecomplete video:
<https://www.youtube.com/watch?v=SC9ibH6PhWQ&authuser=0>
- ✓ Past paper questions: [GCSE - Physical Education \(9-1\) - J587 - OCR](#)
- ✓ The Everlearner videos: [OCR GCSE PE - Functions of the Skeleton](#)
[OCR GCSE PE 9-1: Joint Features](#)
[OCR GCSE PE 9-1: Joint Movements](#)
- ✓ Completing all homework tasks





GCSE Physical Education: The Skeletal System



West Kirby
Grammar School

flexion phalanges adduction rotation hinge cartilage ligaments	extension pelvis abduction circumduction ball and socket tendons	
Your teacher will assess your knowledge & understanding throughout the topic by looking at your work, questioning, discussion and giving you feedback in lots of different ways. The key pieces of work in this topic are: Completion of the booklet Retrieval type activities Teacher questioning End of unit tests Y10 exam Mock exam OCR GCSE PE Paper 1		



GCSE Physical Education: Components of Fitness



West Kirby
Grammar School

Learning about this topic is important because:
It demonstrates the many different components that make up fitness.

This builds on:

Knowledge learnt during circuit training during practical lessons at KS3.

This leads to:

Applying the principles of training to create training programmes.

We will learn:

Learners will develop their knowledge and understanding of the 10 components of fitness. They will be able to define each component and be able to apply using a range of practical examples from physical activities and sports. They will also develop their knowledge of a suitable test for each component.

- Ten components of fitness
- Apply to practical examples
- How to carry out suitable tests for each component.

We will develop/practise skills including:

Students will learn about the 10 different components of fitness.

They will learn to apply each of the components of fitness to suitable sporting activities.

They will carry out a suitable test for each of the components of fitness and record their results.

They will be able to collect and use data relating to the components of fitness while learning about the reliability and validity of testing.

They will complete two pieces of coursework for their NEA, Evaluation and Analysis.

Students will practise answering exam questions around these topics, applying this information.

Some of the vocabulary that we will use includes:

Cardiovascular endurance	Muscular endurance
Speed	Strength
Power	Flexibility
Balance	Co-ordination
Reaction time	Agility
Cooper 12 min run	Hand grip dynamometer
30m sprint	Sit and reach
Illinois agility run	1 rep max

You could learn more about this topic by:

- ✓ Watch ocrpecomplete videos:
<https://www.youtube.com/watch?v=i9IH6FEIwao&authuser=0>
- ✓ Past paper questions: [GCSE - Physical Education \(9-1\) - J587 - OCR](#)
- ✓ The Everlearner videos: [AQA GCSE PE Revision - Components of Fitness](#)
- ✓ Completing all homework tasks





GCSE Physical Education: Components of Fitness



West Kirby
Grammar School

Your teacher will assess your knowledge & understanding throughout the topic by looking at your work, questioning, discussion and giving you feedback in lots of different ways. The key pieces of work in this topic are:

Completion of the booklet

Complete the Evaluation and Analysis sections of the NEA

Retrieval type activities

Teacher questioning

End of unit tests

Y10 exam

Mock exam

OCR GCSE PE Paper 1



GCSE Physical Education: Effects of Exercise on Body Systems



West Kirby
Grammar School

Learning about this topic is important because:

It demonstrates the ways in which the body adapts to the short and long term effects of exercise.

This builds on:

Work completed on the skeletal, muscular, cardiovascular and respiratory systems.

This leads to:

The components of fitness required to sports and physical activity.

We will learn:

Students will develop their knowledge and understanding of the effects of exercise on muscles and bones, the heart and the respiratory system. They will be able to apply understanding of these effects to examples from a range of physical activities and sports.

- Short term (immediate) effects of exercise
- Long term (training) effects of exercise
- Collect and use data related to short-term and long-term effects of exercise

We will develop/practise skills including:

Students will understand the short-term effects of exercise on muscle temperature, heart rate, stroke volume, cardiac output, redistribution of blood flow during exercise, respiratory rate, tidal volume, minute ventilation, oxygen to the working muscles and lactic acid production.

They will understand the long-term effects of exercise on bone density, hypertrophy of muscle, muscular strength, muscular endurance, resistance to fatigue, hypertrophy of the heart, resting heart rate and resting stroke volume, cardiac output, rate of recovery, aerobic capacity, respiratory muscles, tidal volume and minute volume during exercise and capillarisation.

They will be able to apply the effects to examples from physical activity/ sport and be able to collect and use data relating to short-term and long-term effects of exercise.

Students will practise answering exam questions around these topics, applying this information.

Your teacher will assess your knowledge & understanding throughout the topic by looking at your work, questioning, discussion and giving you feedback in lots of different ways. The key pieces of work in this topic are:

Completion of the booklet
Teacher questioning
Y10 exam
OCR GCSE PE Paper 1

Retrieval type activities
End of unit tests
Mock exam



GCSE Physical Education: Effects of Exercise on Body Systems



West Kirby
Grammar School



GCSE Physical Education: Movement Analysis



West Kirby
Grammar School

Learning about this topic is important because:

It demonstrates the ways in which the skeletal system and the muscular system work together to create movement

This builds on:

Work completed during the skeletal system and the muscular system.

This leads to:

Completing the Movement Analysis piece of coursework for the AEP.

We will learn:

Students will develop their knowledge of the three classes of lever and will be able to use examples from physical activities and sport to show where these levers might operate to produce movement. They will know the three planes of movement and axes of rotation and be able to give examples of these levers from different physical activities and sports.

- know the three classes of lever and their use in physical activity and sport
- know the definition of mechanical advantage
- know the location of the planes of movement in the body and their application to physical activity and sport
- know the location of the axes of rotation in the body and their application to physical activity and sport

We will develop/practise skills including:

Students will learn about the three classes of lever and their use in physical activity and sport

They will learn how mechanical advantage is provided by levers

They will know the location of the planes of movement in the body and their application to physical activity and sport.

They will know the location of the axes of rotation in the body and their application to physical activity and sport

Students will practise answering exam questions around these topics, applying this information.

Some of the vocabulary that we will use includes:

1st class lever

3rd class lever

Frontal plane

Sagittal plane

Transverse axis

2nd class lever

Mechanical advantage

Transverse plane

Frontal axis

Longitudinal axis

You could learn more about this topic by:

- ✓ Watch ocrpecomplete videos:
- ✓ <https://www.youtube.com/watch?v=bYnsdu6eANI&authuser=0>
- ✓ Past paper questions: [GCSE - Physical Education \(9-1\) - J587 - OCR](#)
- ✓ The Everlearner videos: [AQA GCSE PE: Movement Analysis](#)
- ✓ Completing all homework tasks



Your teacher will assess your knowledge & understanding throughout the topic by looking at your work, questioning, discussion and giving you feedback in lots of different ways. The key pieces of work in this topic are:



GCSE Physical Education: Movement Analysis



West Kirby
Grammar School

Compulsory Movement Analysis NEA for the AEP

Completion of the booklet

Retrieval type activities

Teacher questioning

End of unit tests

Y10 exam

Mock exam

OCR GCSE PE Paper 1



GCSE Physical Education: The Cardiovascular System



West Kirby
Grammar School

Learning about this topic is important because:

It demonstrates the ways in which the heart, blood and blood vessels function during physical activity.

This builds on:

Work from KS3 practical fitness lessons.

This leads to:

The respiratory system and how the cardiovascular and respiratory systems work together

We will learn:

Students will develop their knowledge and understanding of the structure and function of the cardiovascular system. Blood vessels and blood cells with their pathway through the heart will be understood along with definitions of key cardiac terms.

- Structure and function of the cardiovascular system
- Know about different types of blood vessels
- Understand the pathway of blood through the heart
- Understand what is meant by heart rate, stroke volume and cardiac output

We will develop/practise skills including:

Students will learn about the structure and function of the cardiovascular system and how it is a double circulatory system

They will learn the pathway of blood through the heart and the name of the major blood vessels, chambers of the heart and valves involved in this process

They will learn about the different blood vessels and their role in the transport of blood at rest and during exercise.

They will learn what happens to heart rate, stroke volume and cardiac output at rest and during exercise.

Students will practise answering exam questions around these topics, applying this information.

Some of the vocabulary that we will use includes:

systemic
arteries
veins
capillaries
semi-lunar valves
aorta
pulmonary artery
septum
Stroke volume

pulmonary
atria
ventricles
bicuspid valve
tricuspid valve
vena cava
pulmonary vein
heart rate
cardiac output

You could learn more about this topic by:

- ✓ Watch ocrpecomplete videos:
<https://www.youtube.com/watch?v=EGpgMmXgZZs&authuser=0>
- ✓ Past paper questions: [GCSE - Physical Education \(9-1\) - J587 - OCR](#)
- ✓ The Everlearner videos: [AQA GCSE PE: Cardiac Cycle](#)
- ✓ Completing all homework tasks





GCSE Physical Education: The Cardiovascular System



West Kirby
Grammar School

Your teacher will assess your knowledge & understanding throughout the topic by looking at your work, questioning, discussion and giving you feedback in lots of different ways. The key pieces of work in this topic are:

- Completion of the booklet
- Retrieval type activities
- Teacher questioning
- End of unit tests
- Y10 exam
- Mock exam
- OCR GCSE PE Paper 1



GCSE Physical Education: The Muscular System



West Kirby
Grammar School

Learning about this topic is important because:

It demonstrates the ways in which parts of the human body work and function during physical activity. It shows how the muscular system and the skeletal system work together to create movement and how it underpins all movement in sport.

This builds on:

Knowledge learnt during the study of the skeletal system.

This leads to:

The levers, planes and axes. Knowledge from this topic is also used for completion of the Movement Analysis NEA.

We will learn:

Students will develop their knowledge of the location of the major muscle groups and be able to apply muscle use to examples from physical activities and sport.

Students will also develop their knowledge of the roles of muscles as agonists, antagonists, fixators and also how they operate as antagonistic pairs by applying to examples from physical activities and sports

- Location of major muscle groups
- The roles of muscles in movement

We will develop/practise skills including:

They will learn the names and location of the major muscle groups in the body and how they work with bones to create movement.

They will learn about how muscles work together in pairs known as antagonistic muscle action

Students will practise answering exam questions around these topics, applying this information.

Some of the vocabulary that we will use includes:

deltoid	trapezius
latissimus dorsi	pectorals
biceps	triceps
abdominals	gluteals
quadriceps	hamstrings
gastrocnemius	antagonist
agonist	antagonistic muscle action
fixator	contract
relax	

You could learn more about this topic by:

- ✓ Watch: https://www.youtube.com/watch?v=uP_DNWoJr5U&authuser=0
- ✓ Past paper questions: [GCSE - Physical Education \(9-1\) - J587 - OCR](#)
- ✓ The Everlearner videos: [OCR GCSE PE 9-1: Muscles of the Body](#)
[OCR GCSE PE 9-1: Roles of Muscles](#)
[OCR GCSE PE 9-1: Antagonistic Muscle Pairs](#)
- ✓ Completing all homework tasks





GCSE Physical Education: The Muscular System



West Kirby
Grammar School

Your teacher will assess your knowledge & understanding throughout the topic by looking at your work, questioning, discussion and giving you feedback in lots of different ways. The key pieces of work in this topic are:

- Completion of the booklet
- Retrieval type activities
- Teacher questioning
- End of unit tests
- Y10 exam
- Mock exam
- OCR GCSE PE Paper 1



GCSE Physical Education: The Respiratory System



West Kirby
Grammar School

Learning about this topic is important because:

It demonstrates the ways in which parts of the human body work and function during physical activity. It shows how the cardiovascular and respiratory systems work together at rest and during exercise.

This builds on:

Knowledge and understanding developed during the study of the cardiovascular system.

This leads to:

The short and long term effects of exercise on all four body systems.

We will learn:

Students will develop their knowledge and understanding of the structure and function of the respiratory system. They will know the role of the respiratory muscles and alveoli during breathing, along with an understanding of key definitions.

- Structure and function of the respiratory system
- Understand the pathway of air through the respiratory system
- Know the role of respiratory muscles during breathing
- Understand the role of alveoli as the site of gas exchange
- Understand what aerobic and anaerobic exercise is and be able to give practical examples

We will develop/practise skills including:

Students will learn about the structure and function of the respiratory system.

They will learn the pathway of air through the respiratory system and the name of the major muscles involved in this process

They will learn about the exchange of gases from the alveoli into the blood and from the blood into the alveoli.

They will learn what happens to breathing rate, tidal volume and minute ventilation at rest and during exercise.

Students will practise answering exam questions around these topics, applying this information.

Some of the vocabulary that we will use includes:

Mouth	Nose
Trachea	Bronchi
Bronchiole	Alveoli
Lung	Diaphragm
Intercostal muscles	Breathing rate
Tidal volume	Minute ventilation
Aerobic	Anaerobic

You could learn more about this topic by:

- ✓ Watch ocrpecomplete videos:
<https://www.youtube.com/watch?v=EGpgMmXqZZs&authuser=0>
- ✓ Past paper questions: [GCSE - Physical Education \(9-1\) - J587 - OCR](#)
- ✓ The Everlearner videos: [Edexcel GCSE PE 9-1: Structure of the Respiratory System](#)
- ✓ [OCR GCSE PE 9-1 Mechanics of Breathing](#)
- ✓ Completing all homework tasks





GCSE Physical Education: The Respiratory System



West Kirby
Grammar School

Your teacher will assess your knowledge & understanding throughout the topic by looking at your work, questioning, discussion and giving you feedback in lots of different ways. The key pieces of work in this topic are:

- Completion of the booklet
- Retrieval type activities
- Teacher questioning
- End of unit tests
- Y10 exam
- Mock exam
- OCR GCSE PE Paper 1