MY REVISION NOTES

HODDER EDUCATION

OCR

GCSE (9–1)

PE

THIRD EDITION

- Plan and organise your revision
- Reinforce skills and understanding
- Practise exam-style questions

Sarah Powell

MY REVISION NOTES

OCR GCSE (9–1)

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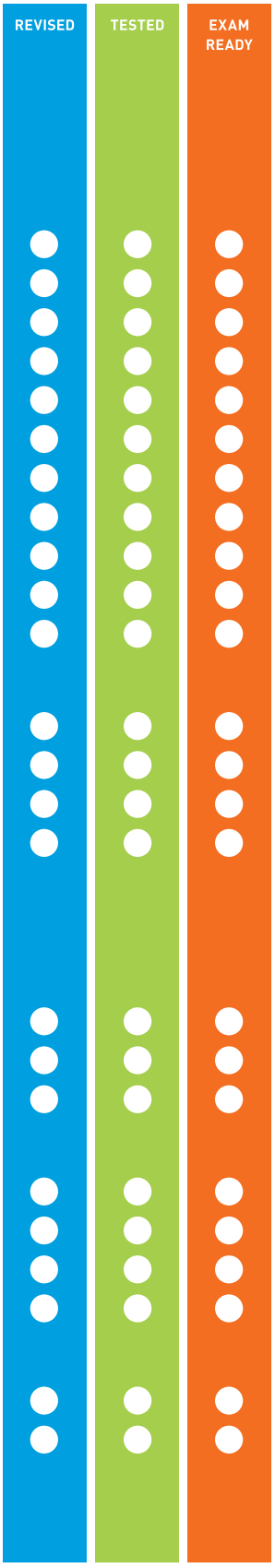
My Revision Planner



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Countdown to my exams

6–8 weeks to go

- Start by looking at the specification — make sure you know exactly what material you need to revise and the style of the examination. Use the Revision Planner on page 4 to familiarise yourself with the topics.
- Organise your notes, making sure you have covered everything on the specification. The revision planner will help you to group your notes into topics.
- Work out a realistic revision plan that will allow you time for relaxation. Set aside days and times for all the subjects that you need to study, and stick to your timetable.
- Set yourself sensible targets. Break your revision down into focused sessions of around 40 minutes, divided by breaks. These Revision Notes organise the basic facts into short, memorable sections to make revising easier.

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2–6 weeks to go

- Read through the relevant sections of this book and refer to the exam tips, exam summaries, remember boxes and key terms. Tick off the topics as you feel confident about them. Highlight those topics you find difficult and look at them again in detail.
- Test your understanding of each topic by working through the 'Now test yourself' questions in the book. Look up the answers at the back of the book.
- Make a note of any problem areas as you revise, and ask your teacher to go over these in class.
- Look at past papers. They are one of the best ways to revise and practise your exam skills. Write or prepare planned answers to the exam practice questions provided in this book. Check your answers at the back of the book and try out the extra quick quizzes at **www.hoddereducation.co.uk/myrevisionnotesdownloads**
- Use the revision activities to try out different revision methods. For example, you can make notes using mind maps, spider diagrams or flash cards.
- Track your progress using the Revision Planner and give yourself a reward when you have achieved your target.

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One week to go

- Try to fit in at least one more timed practice of an entire past paper and seek feedback from your teacher, comparing your work closely with the mark scheme.
- Check the Revision Planner to make sure you have not missed out any topics. Brush up on any areas of difficulty by talking them over with a friend or getting help from your teacher.
- Attend any revision classes put on by your teacher. Remember, your teacher is an expert at preparing people for examinations.

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The day before the examination

- Flick through these Revision Notes for useful reminders – for example, the exam tips, exam summaries, remember boxes and key terms.
- Check the time and place of your examination.
- Make sure you have everything you need – extra pens and pencils, tissues, a watch, bottled water, sweets.
- Allow some time to relax and have an early night to ensure you are fresh and alert for the examinations.

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My exams

PE Paper 1

Date:.....

Time: .....

Location: .....

PE Paper 2

Date:.....

Time: .....

Location: .....

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Introduction

This revision guide has been written to accompany the OCR GCSE (9–1) PE J587 specification to help you get the best possible result in your examinations. The book covers both the components that make up the written exam Papers 1 and 2:

- Component 01, Physical factors affecting performance, aims to examine your knowledge and understanding of the key physical factors that determine performance in physical activities and sport. The component includes:
  - the structure and function of the human body during physical activity and the physiological response to training
  - physical training using principles and developing training plans while minimising the risk of injury.
- Component 02, Socio-cultural issues and sports psychology, aims to examine your knowledge and understanding of the key socio-cultural and psychological factors that determine performance in physical activities and sport. The component includes:
  - socio-cultural influences: engagement patterns in, commercialisation of and ethical issues surrounding participation in physical activity and sport
  - sports psychology: skill, goal setting, mental preparation, guidance and feedback in physical activity and sport
  - health, fitness and well-being: health benefits of physical activity, consequences of a sedentary lifestyle, diet and nutrition.

These components will be assessed using specific objectives:

- AO1: to demonstrate knowledge and understanding of the factors that underpin performance and involvement in physical activity and sport.
- AO2: to apply this knowledge and understanding of the factors that underpin performance and involvement in physical activity and sport. AO2 marks are typically earnt by providing specific practical examples.
- AO3: to analyse and evaluate the factors that underpin performance and involvement in physical activity and sport.

This book aims to give you the essentials that should serve as a reminder of what you will have covered in your course and allow you to bring together your own learning and understanding.

I wish you every success with your studies.

Exam breakdown

What is the format of the exam?

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The GCSE Physical Education examination has two papers, as shown in the table below:

Paper	Length	Marks	Percentage of final mark
J587/01 Physical factors affecting performance	1 hour	60	30%
J587/02 Socio-cultural issues and sports psychology	1 hour	60	30%

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What is assessed in each paper?

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J587/01 Physical factors affecting performance

This paper assesses applied anatomy and physiology, and physical training.

It will test the material covered in sections 1.1 and 1.2 of this book.

J587/02 Socio-cultural issues and sports psychology

This paper assesses socio-cultural influences, sports psychology, and health, fitness and well-being.

It will test the material covered in sections 2.1, 2.2 and 2.3 of this book.

How is the subject assessed in each paper?

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Both J587/01 and J587/02 consist of a variety of objective-response and multiple-choice questions, and short-answer and extended-response items.

J587/01 Physical factors affecting performance

Section A:

- This section is worth 30 marks.
- There are 20 questions ranging in number of marks.
- Question formats include objective response, multiple choice, true/false and short answer.
- Questions will consider both applied anatomy and physiology, and physical training.

Section B:

- This section is worth 30 marks.
- There are three 10-mark questions, each broken into part-questions.
- There will be two questions on applied anatomy and physiology and one question on physical training.
- One part-question is an extended-response question worth 6 marks. This question will feature a synoptic element assessing the AO3 objective of analysis and evaluation, and will require knowledge and understanding of J587/02 to be drawn upon.

Within Paper 1, there will be a minimum of 3 marks assessing the ability to use data.

J587/02 Socio-cultural issues and sports psychology

Section A:

- This section is worth 30 marks.
- There are 20 questions ranging in number of marks.
- Question formats include objective response, multiple choice, true/false, and short answer.
- Questions will consider all three aspects: socio-cultural influences, sports psychology, and health, fitness and well-being.

Section B:

- This section is worth 30 marks.
- There are three 10-mark questions, each broken into part-questions.
- There will be one question on each aspect: socio-cultural influences, sports psychology, and health, fitness and well-being.
- One part-question is an extended-response question worth 6 marks. This question will feature a synoptic element assessing the AO3 objective of analysis and evaluation, and will require knowledge and understanding of J587/01 to be drawn upon.

Within Paper 2, there will be a minimum of 3 marks assessing the ability to use data.

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What skills are assessed?

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Papers 1 and 2 both use a variety of objective-response and multiple-choice questions, and short-answer and extended-response items.

Papers 1 and 2 will include equal proportions of questions to test your ability to demonstrate the following:

- knowledge and understanding
- application of the knowledge and understanding
- analysis and evaluation.

Section A of Papers 1 and 2 will largely focus on knowledge and understanding, with some application of that knowledge and understanding to sporting situations.

Section B of Papers 1 and 2 will include some analysis and evaluation, often through the extended-response question.

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1.1 Applied anatomy and physiology

1.1a The structure and function of the skeletal system

1 Major bones and the function of the skeleton

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Location of major bones

There are many bones which make up the skeleton that shapes the framework of the body. The names and locations of the major bones are shown in Figure 1.1.1.

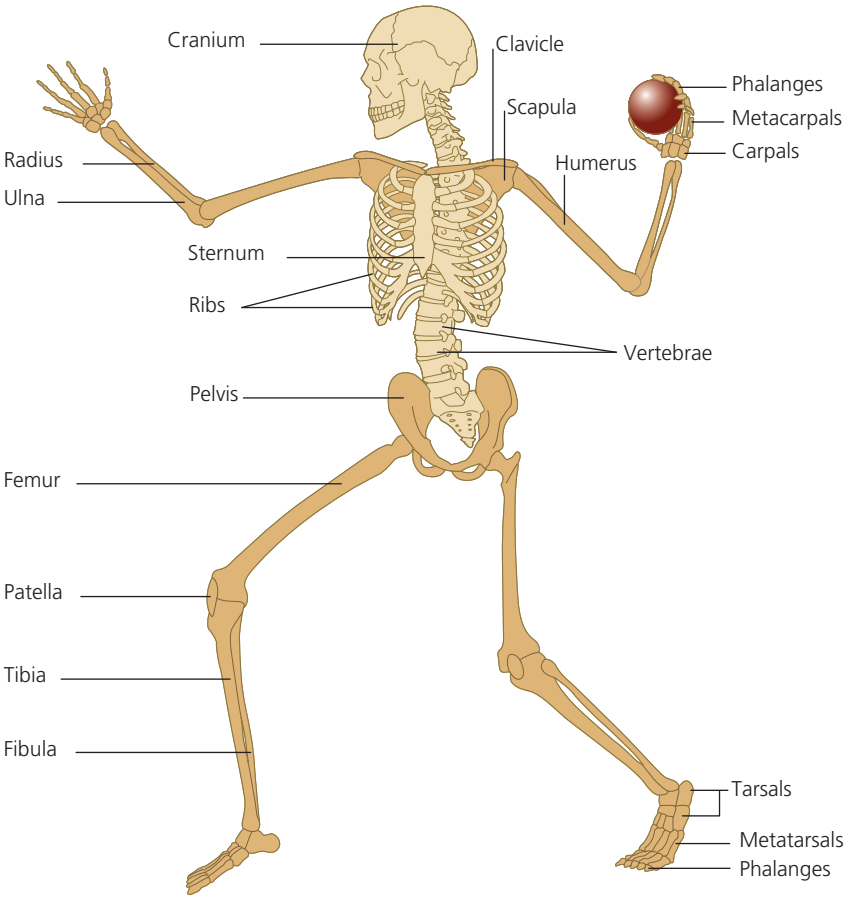

Figure 1.1.1 Name and location of the major bones in the skeleton.

Exam tip

Although many bones have commonly used names, stick to the technical terminology to gain full marks – for example, cranium not skull and clavicle not collarbone.

Remember

It is important that you can identify the different bones on a skeleton and also identify the bones that move (articulate) in the knee, elbow, shoulder and hip.

Revision activity

Group bones together and write lists of bones found in the arms, legs, head and body. In different colours, highlight which bones come together to articulate at the shoulder (two bones), elbow (three bones), hip (two bones) and knee (two bones).

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Functions of the skeleton

The skeleton has five main functions, summarised in Table 1.1.1 and Figure 1.1.2.

Table 1.1.1 Key functions of the skeleton

Key function	Description	Example
Support/ posture	Supports the weight of the upper body, holds the body upright and provides a shaping framework	Vertebral column supports the weight of the cranium and holds the body upright to keep good posture when a gymnast walks on a beam
Protection	Protects internal organs from damage or injury	Cranium protects a footballer's brain when heading a ball
Movement	Provides areas for muscular attachment and forms lever systems	Pectorals attach to the sternum and humerus, creating movement of the upper arm
Blood cell production	Some large bones contain marrow, which produces blood cells	Red blood cells are produced and transport oxygen around the body
Mineral storage	Bones store minerals, such as calcium, potassium and iron, and slowly release them into the blood	Calcium is essential to move our muscles and keep our bones healthy

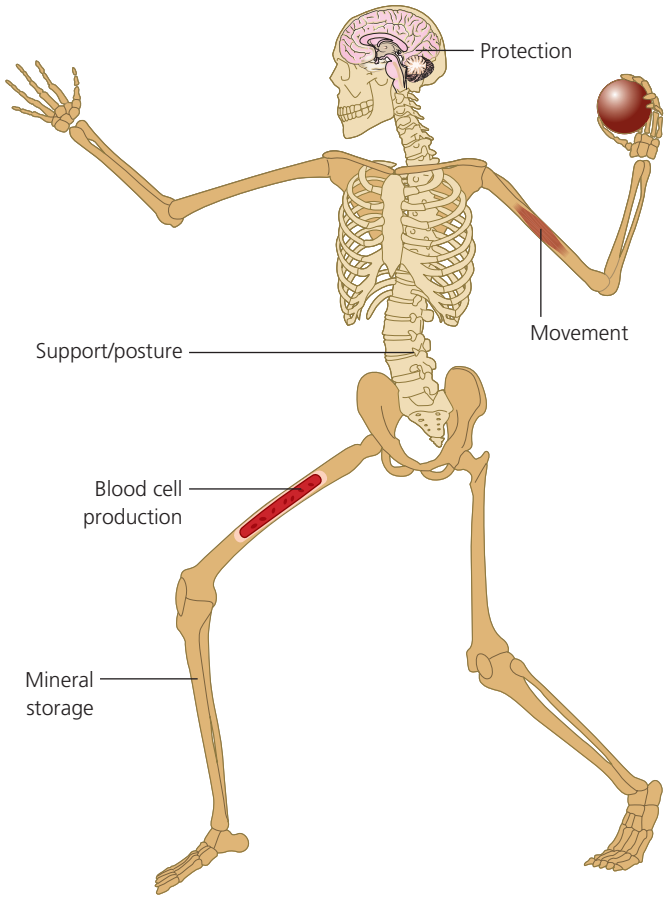

Figure 1.1.2 Functions of the skeleton

Exam tip

Make sure you can identify the five functions of the skeleton and also apply these functions to examples. Consider the depth of knowledge and understanding you may need to demonstrate:

- 'Identify a key function of the skeleton' – for example, protection (AO1 knowledge only).
- 'Identify and describe a key function of the skeleton' – for example, protection to prevent damage or injury to internal organs (AO1 knowledge and understanding).
- 'Apply a key function of the skeleton to a sporting situation' – for example, the cranium protects the brain from injury when a player heads a ball during a football game (AO2 application of knowledge).

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Now test yourself TESTED

1 Which two bones are found in the lower leg?
2 Which two bones are found in the forearm?
3 Which set of bones runs the length of the back?
4 Which bone protects the brain?
5 Which bones protect the heart and lungs?
6 The muscles attach to the bones to create what?
7 True or false? Two functions of the skeleton are to produce blood cells and to store minerals.

2 Synovial joints, ligaments, tendons and cartilage

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Synovial joints

Synovial joints are freely movable joints where two or more bones articulate (see Figure 1.1.3). They allow for the wide range of movements that are essential when participating in sport. They have a joint capsule to strengthen the joint and synovial fluid to allow friction-free movement.

Synovial joint A freely movable joint where two or more bones articulate

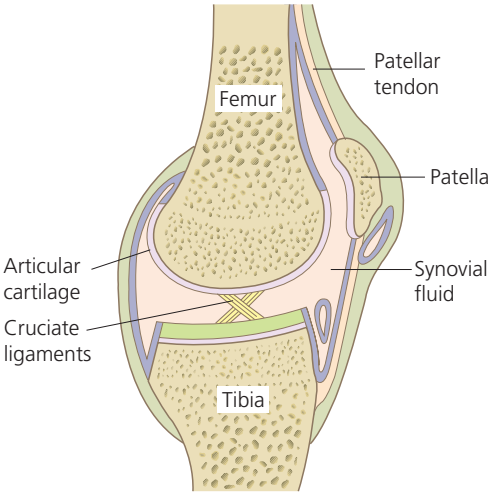

Figure 1.1.3 The synovial joint at the knee

Exam tip

There are only two bones that articulate in the knee joint: the femur and tibia. A common error made by students is to say that the patella and fibula articulate in the knee joint.

Remember

Although the individual synovial joints, such as the knee and shoulder, may look different, they share the same common features.

Ligaments, tendons and cartilage

Ligaments, tendons and cartilage are also important components of joints:

- **Ligaments** connect bone to bone. They are strong bands of connective tissue which join bones together, keep joints stable and prevent extreme movements which could lead to dislocation. An example of a group of ligaments is the cruciate ligaments which connect the femur and tibia in the knee joint.
- **Tendons** connect muscle to bone. They are tough bands of connective tissue which transmit forces generated by the muscles to move bones into position. An example of a tendon is the Achilles tendon, which connects the gastrocnemius to the heel bone.
- Cartilage reduces friction and absorbs shock to protect a joint. It is a tough and flexible connective tissue, which exists in two forms:
  - **Articular cartilage** covers the articulating surfaces of bones; it protects the bone by reducing friction.
  - White fibrocartilage is found in areas of great stress, such as the knee (meniscus) or spine (vertebral discs); it protects the bones by absorbing shock and allows the bones to fit together smoothly.

Ligament Tissue which connects bone to bone and stabilises joints

Tendon Tissue which connects muscle to bone and transmits muscular forces to move bones

Articular cartilage Tissue which covers the surface of articulating bones to prevent friction, absorb shock and protect bone surface

The hinge joint and ball-and-socket joint are two types of synovial joint essential to sport.

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Hinge joint

Hinge joints allow movement in one plane. There are two hinge joints in the human body:

- **Elbow:** the humerus, radius and ulna articulate to perform movement such as touching your shoulder, throwing a dart or a biceps curl (Figure 1.1.4).
- **Knee:** the femur and tibia articulate to perform movement such as squatting down or kicking a ball.

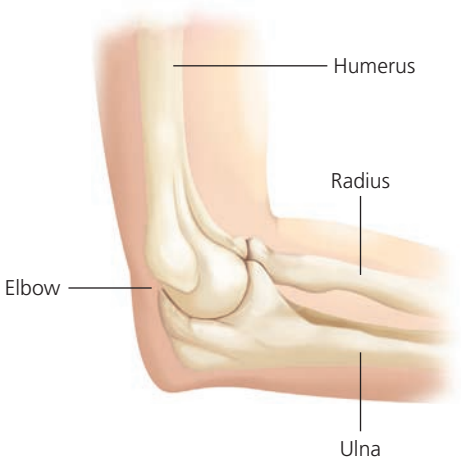

Figure 1.1.4 The elbow joint enables the arm to bend and straighten

Ball-and-socket joint

Ball-and-socket joints allow a wide range of motion in all three planes:

- **Shoulder:** the scapula and humerus articulate to perform movement such as throwing a javelin or serving in tennis (Figure 1.1.5).
- **Hip:** the pelvis and femur articulate to perform movement such as sit-ups or the splits.

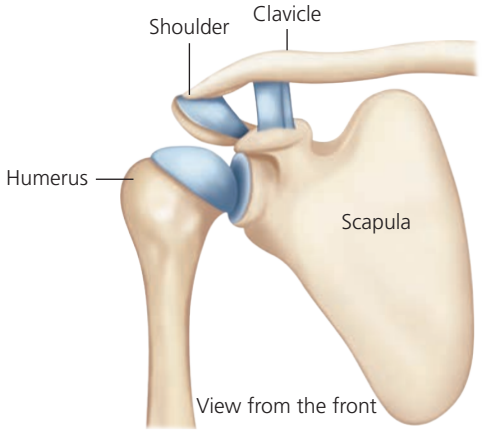

Figure 1.1.5 The shoulder joint allows us to swing our arms and to move them outwards and inwards

Now test yourself

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1 Identify the key word from the following statements:
   a) connective tissue which connects bone to bone
   b) a freely movable joint where two or more bones articulate
   c) a type of joint which restricts movement to only one plane.
2 What is the function of articular cartilage?
3 Name an example of a tendon.
4 Which bones articulate in the elbow joint?
5 Which bones articulate in the hip joint?
6 True or false? The articulating bones of the knee joint are the femur, tibia and fibula.
7 True or false? White fibrocartilage absorbs shock and helps the vertebrae to fit smoothly together.

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MY **REVISION** NOTES

OCR GCSE (9–1)

PE

Target exam success with *My Revision Notes*. Our updated approach to revision will help you learn, practise and apply your skills and understanding. Coverage of key content is combined with practical study tips and effective revision strategies to create a guide you can rely on to build both knowledge and confidence.

***My Revision Notes: OCR GCSE (9–1) PE* will help you:**

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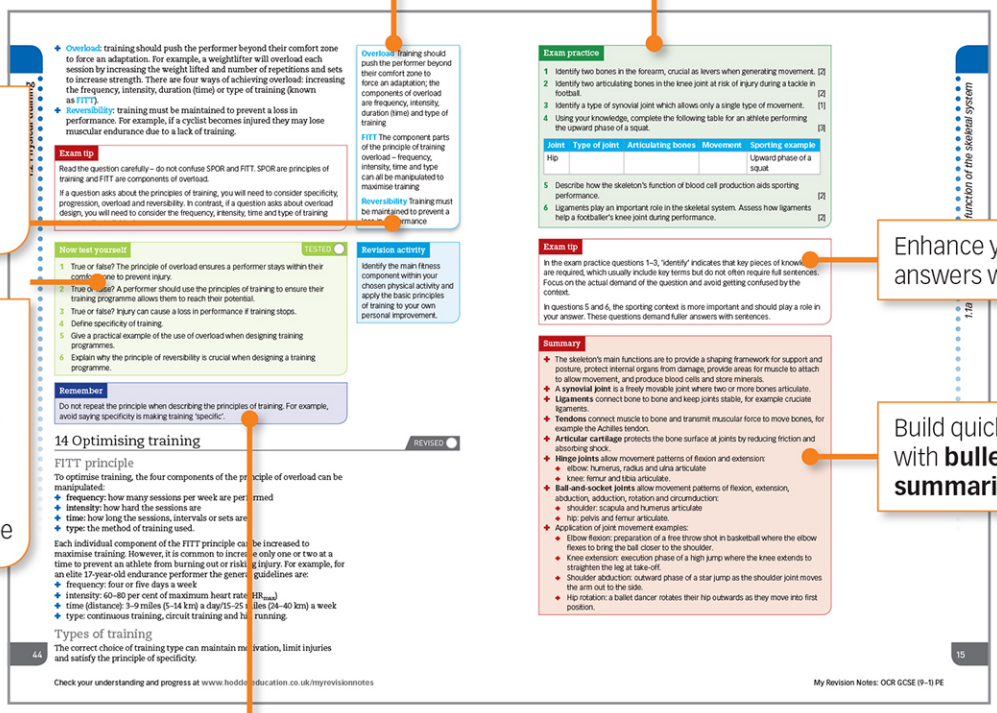
Practise your exam skills with **exam-style questions**

Understand each topic in an interactive way with **revision activities**



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HODDER EDUCATION

t: 01235 827827

e: education@hachette.co.uk

w: hoddereducation.co.uk

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