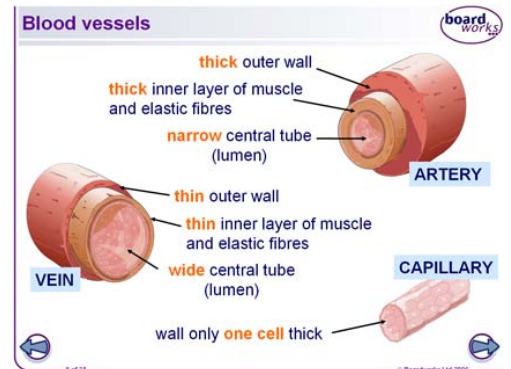


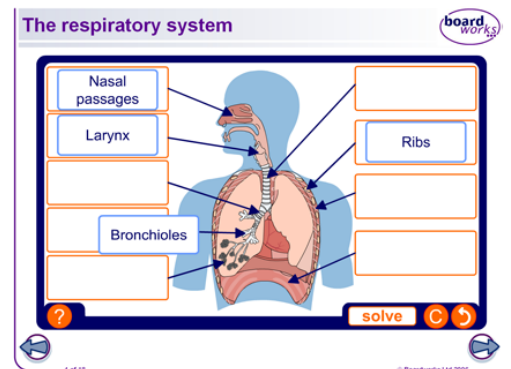
1. The Circulatory System 36 slides

This presentation explains the main functions of the circulatory system. The structures of the heart are identified and the functions and features of the different types of blood vessel are explored. The effects of exercise on the circulatory system are outlined, including changes in heart rate, stroke volume, blood pressure and body temperature. The composition and functions of blood are also covered.



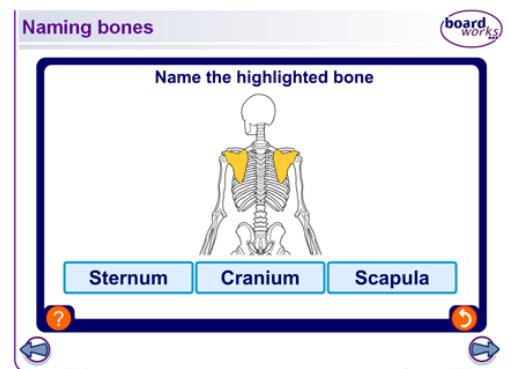
2. The Respiratory System 28 slides

This presentation looks at the structures and functions of the respiratory system. The mechanisms of breathing in and out are explored through interactive animations and the process of gas exchange in the alveoli is explained. The effects of exercise on the respiratory system are considered and the differences between aerobic and anaerobic are explained.



3. Bones 29 slides

This presentation covers the features and functions of the skeleton. The formation and composition of bones and the effects of diet exercise on them are explored. The influence of the skeleton on build and performance is assessed. The presentation also covers the naming and classification of bones and the different sections of the vertebral column.



4. Joints, Tendons and Ligaments 37 slides

This presentation looks at the different types of joint and the range of movements they allow. The different ways in which joints can be classified are explored and the different connective tissues are examined. A range of sporting movements are analysed in terms of joint action. The effects of age and exercise on flexibility are also considered.

Joints in action

Joint type	Movement
1	
2	ball & socket
3	ball & socket
4	flexion
5	flexion (slight)
6	

5. Muscles and Muscle Action 33 slides

This presentation considers the ways in which muscles work to produce movement. It covers the three types of muscle, the names of important voluntary muscles, the functioning of antagonistic pairs and the differences between fast and slow twitch muscles. The effects of training on muscle size and strength, and the importance of muscle tone and posture are also explored.

Muscle training

VERY LIGHT	LIGHT	MEDIUM	HEAVY	VERY HEAVY
50 REPS	25 REPS	15 REPS	5 REPS	2 REPS
Orienteering		Hockey	Rugby (forward)	Weight-lifting
	Rowing			

6. Prevention of Injury 31 slides

The presentation focuses on the causes of sporting injuries and how injuries can be prevented. This includes choosing the correct clothing, footwear and equipment; preparing the body through proper conditioning and the importance of warming-up and cooling-down. Reducing the risk of injury through balancing competition and following rules and regulations is also covered.

The rules of the game: a case study

During the 2005 Lions rugby tour of New Zealand, Brian O'Driscoll, the Lions captain, suffered a **dislocated shoulder** when he was tackled by two New Zealand players.

Video footage later showed that O'Driscoll had been lifted off his feet and driven into the ground head-first in what is termed a **'spear-tackle'**

Why is this type of tackle particularly dangerous?

7. Sports Injuries

33 slides

The presentation covers the identification and treatment of a range of sporting injuries. This includes the classification of injuries as chronic or acute, hard or soft tissue and open or closed. The identification and treatment of concussion, unconsciousness, dehydration and hypothermia are covered, as well as that of hard and soft tissue injuries.

D.R.A.B.C.

Press a word for more information.

Danger

Response

Airway

Breathing

Circulation

DANGER
Decide whether there is any danger to the casualty or to you. If there is, then it may be necessary to move the casualty to a safer place before treating them.

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8. Reasons for Taking Part in Physical Activity

24 slides

In this presentation, students learn about the benefits of exercise. This includes learning definitions of health, fitness, exercise and performance. Health related fitness is defined and its components explored. The role of schools in promoting sport and exercise for health is also considered.

Health related fitness

Muscular strength:
This means the ability to move heavy weights. This is important in sport, but also in jobs that involve lifting, e.g. builders, refuse collectors, and in everyday life, for example, if you were moving house.

Cardiovascular fitness **Muscular strength** **Muscular endurance** **Flexibility** **Body composition**

1 of 24

9. Skill Related Fitness

14 slides

This presentation defines the following components of skill related fitness and explores how they contribute to performance in a range of physical activities:

- agility
- balance
- coordination
- power
- reaction time
- speed.

Coordination

Coordination is the ability of the performer to move two or more body parts accurately and smoothly in response to stimuli from the senses.

Coordination allows you to produce complex actions from a number of smaller movements.

For example, an effective tennis stroke requires coordinating footwork and arm action.

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10. Principles of Training 30 slides

In this presentation, students learn that training needs to be tailored to the needs and goals of the individual. The presentation covers the principles of training: specificity, progression, overload, reversibility and tedium, and outlines how overload can be achieved using the F.I.T.T. principle. The use of training zones is also covered and the principles of rest and moderation introduced.



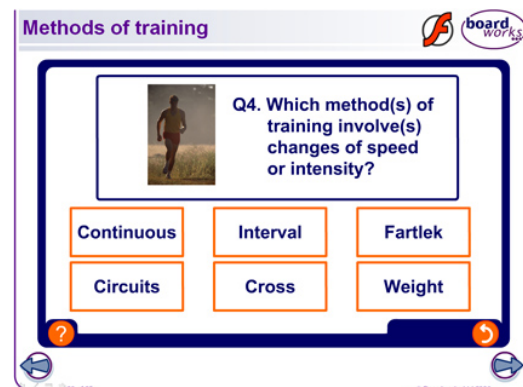
The principles of training

Gradually increasing training as you get fitter.

11. Methods of Training 25 slides

This presentation covers the advantages and disadvantages of:

- continuous training
- interval training
- Fartlek training
- circuit training
- cross-training
- weight training.



Methods of training

Q4. Which method(s) of training involve(s) changes of speed or intensity?

Continuous Interval Fartlek
Circuits Cross Weight

12. Personal Exercise Programmes 18 slides

This presentation looks at how to plan and write a personal exercise programme. It explores how to apply the principles of training to the programme as a whole and also how to structure individual training sessions.



Planning your training – an example

Example case study
Erin plays on a local rugby sevens team.
The team are playing in an important tournament in six weeks' time – Erin would like to play at her best.

Her general goal is to improve her game.
She goes on to identify three areas that most need improvement.

Her **specific goals** are to:

1. improve her kicking
2. reduce her number of dropped catches
3. improve her speed.

13. Effects of Exercise

30 slides

This presentation covers the immediate and long-term effects of exercise on areas of the body, including the respiratory and circulatory systems, the muscles and the bones. Changes in levels of lactic acid, heat and glycogen are explained and the process of recovery is examined. Simple tests to assess the long-term fitness improvements caused by exercise are also included.

Recording – Harvard Step Test

The Harvard Step Test	
Measurement	
Measurement 1 min after exercising	110
Measurement 2 mins after exercising	100
Measurement 3 mins after exercising	80
Add together the 3 heart rates	290
Multiply the total heart rates by 2	580

Calculate the number of seconds the performer stepped for:
 $60 \times 5 \text{ mins} = 300\text{s}$

Divide the number of seconds by your result above, then multiply by 100:
 $\frac{300 \times 100}{580} = 51.72$

next


14. Diet & Nutrition

37 slides


In this presentation, students learn about the components of a balanced diet; how the body gets energy from carbohydrates, fats and proteins and the importance of vitamins, minerals, fibre and water for health and performance. The presentation also highlights the need for individuals to balance their energy intake with their energy requirements.

Carbohydrates, fats and proteins


Drag each statement into the correct box



Carbohydrates



Fats



Proteins

Converted to glycogen and stored in the liver and muscles.

15. Body Types & Weight


29 slides

This presentation outlines the characteristics of the three extreme somatotypes: endomorphs, mesomorphs and ectomorphs. The influence of body type on performance in a variety of activities is considered, and ways of changing your body shape are discussed. The presentation also includes definitions of overweight, overfat, underweight and obese and explores how body fat can be measured and how it affects performance.

Somatotypes in sport

Certain somatotypes tend to be found in certain sports. The **ideal somatotype** for a performer will depend on their sport or event. In some cases, the position that they play in a particular sport might also be important.

Consider, for example, the various body sizes and shapes in a rugby team.



16. Drugs and Hygiene

37 slides

This presentation covers the effects of socially acceptable drugs, like tobacco and alcohol, and of performance enhancing drugs, including stimulants, steroids, analgesics and beta blockers.

It also highlights the importance of cleanliness and hygiene and covers the identification, treatment and prevention of athlete's foot and verrucae.



17. Performance Analysis

31 slides

This presentation covers how to observe and analyse a performance and assess its strengths and weaknesses. Students learn how to evaluate a performance against the perfect model and how to assess a performer's mental approach, planning, tactics and strategies. The presentation also suggests appropriate analysis models and covers how to give feedback using correct terminology.

