

# GCSE Physical Education Scheme of work

## Unit B453

### Course text - John Honeybourne - OCR PE for GCSE

Develops knowledge of Physical Education and the concepts, processes and opportunities which are covered in unit B451 through four areas of study:

1. Developing skills, techniques and motivation
2. Developing physical and mental capacity
3. Informed decision making using the principles of training and safe exercise
4. Opportunities, pathways and participation in Physical Education.

### 1. Developing skills, techniques and motivation Chapter 2

#### The learning of skills through a range of methods:

There are various definitions of learning but the predominant view is that experience gives us knowledge, which in turn influences the way we behave. Most skills that are used in sports in sports and physical activities as part of a healthy, active lifestyle are learned in a variety of different ways.

- ❖ Practice/rehearsal
- ❖ Copying others
- ❖ Trial & Error
- ❖ Appropriate Role Models

Application of these via practical examples:

Utilise pupils in the class that excel in particular sports, eg dance, football, gymnastics, trampolining, rugby!

Practice / rehearsal	When learning motor skills for physical activities we often <b>practice</b> repetition drills that encourage movements to become almost automatic. The responses
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	of the learner become <b>conditioned</b> when associated with a particular stimulus.
Copying	Often called ' <b>Observational learning</b> '. Learning takes place through the observation and copying or initiation of others. The person whose behaviour is being observed is called the role model and observational learning is often referred to as modeling.
Trial & Error	Often called ' <b>Operant Conditioning</b> '. It involves the shaping of behaviour through the use of reinforcement. If a reward is given when a certain behaviour takes place then learning is much faster.



### The importance of different types of feedback

- ❖ Intrinsic
- ❖ Extrinsic
- ❖ Knowledge of performance
- ❖ Knowledge of results

How can each of the following motivate participants to follow and active, healthy lifestyle?

**Feedback can be given during the performance of a motor skill or after its completion. Feedback is most effective if it is given close to the performance as it is fresh in the participants mind. Feedback motivates, changes performance or actually reinforces learning.**

- Continuous Feedback
- Terminal Feedback
- Internal/Intrinsic Feedback
- External/Extrinsic Feedback
- Positive Feedback
- Negative Feedback
- Knowledge of Results
- Knowledge of Performance

<p><b>Knowledge of Results</b></p>	 <p>The performer can see by the result of a goal if their feedback would be positive or negative.</p>	<p>This feedback is external and can come from the performer seeing the result of their response, or another person- usually a coach or teacher.</p>
<p><b>Knowledge of Performance</b></p>	 <p>The performer knows exactly how the position of the body must be in order to perform the perfect vault</p>	<p>About the pattern of movement that has been taken, or is taking place. It is normally associated with external feedback but can be gained through <b>Kinaesthetic Awareness</b>, especially if the performer is highly skilled.</p>

## Motivation

Intrinsic and extrinsic motives to participate in different role of participant, leader and official.

### INTRINSIC

Motivation comes from within the performer (self motivated) participate because its fun, to keep fit, to socialise, for pride etc

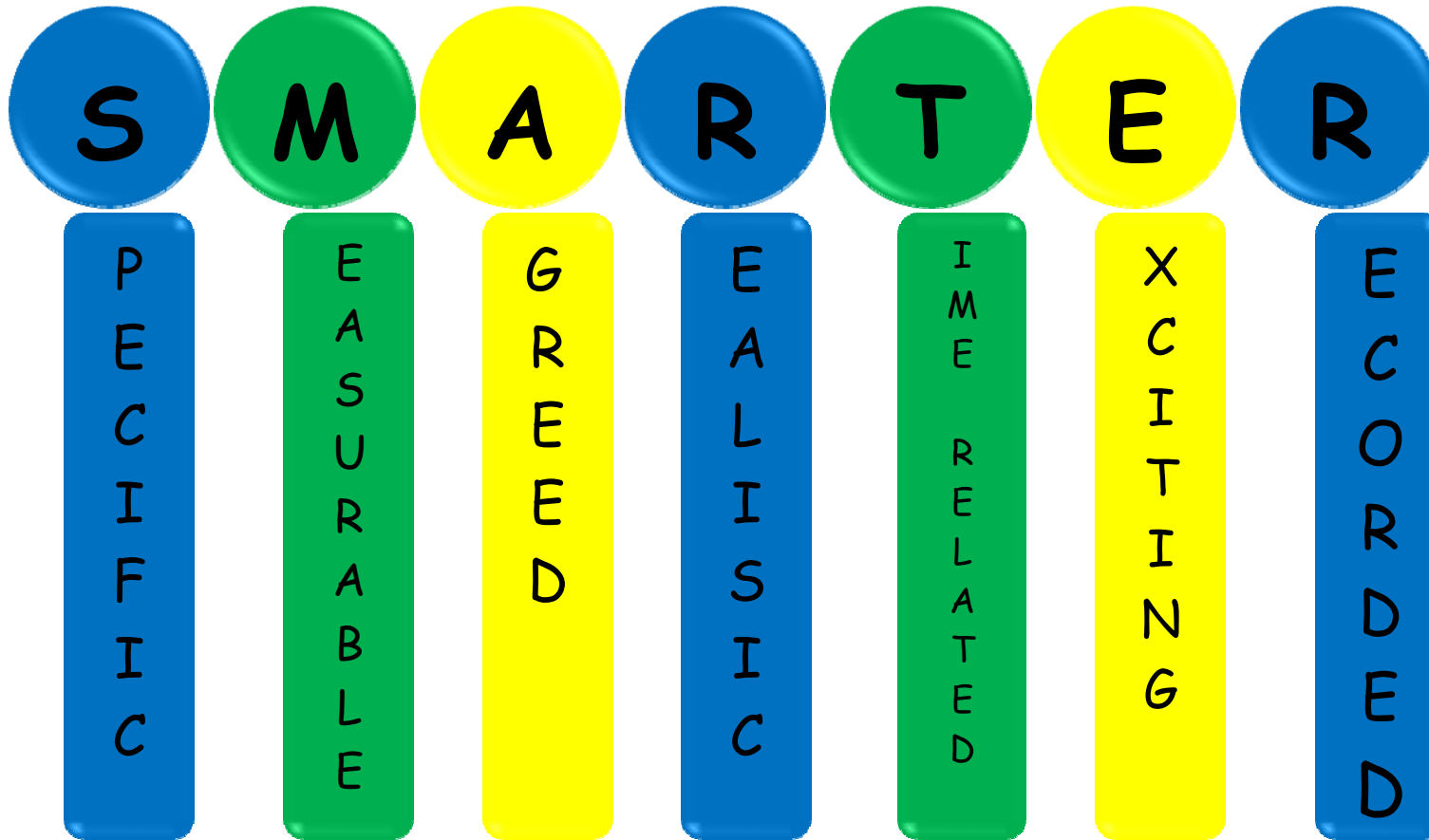
### EXTRINSIC

Chris Eubank said he continued boxing only for money

Winner of men's singles at Wimbledon get close to £500,000

The importance of goal setting

- To optimise performance
- To ensure exercise adherence
- To control Anxiety



## 2. Developing physical and Mental Capacity

### Chapter 4

#### **The development of the skeletal system and its role in physical activity**

The different functions of the skeletal system:

- Shape/support; importance of healthy posture.
- Blood cell production; importance of red blood cells for energy/minerals.
- Protection; importance of healthy bones to avoid injury and allow sustained involvement in physical activity.
- Movement/leverage; importance of levers and joints in facilitating movement.
- Mineral store; importance of minerals for health.

Application of these functions via practical examples.

The development and maintenance of healthy joints and the ways in which different types of joints affect participation and performance in an active, healthy lifestyle.

#### **Types of joint:**

- Hinge - elbow and knee:
- Ball and socket - shoulder:

#### **Ranges of movement that are allowed by these joints:**

- Flexion
- Extension
- Rotation
- Abduction
- Adduction.

Application of these movements via practical examples.

#### **Structure of joints and the value of healthy and efficient joints:**

- Ligament
- Cartilage
- Synovial fluid.

#### **Associated problems with joints and how to avoid them through physical activity and healthy lifestyles:**

- Inflammation of joints
- Arthritis
- Osteoarthritis.

Exercise has short and long term effects on the skeleton. In terms of short term changes in joints, movement stimulates the secretion of synovial fluid. The synovial fluid becomes less viscous, which enables a greater range of movement.

In the longer term and with more persistent exercise the connective tissue around the skeleton becomes more flexible. Over a period of time the short term improvement in the range of movement become sustained.

Skeletal bone increases in its density as a result of exercise. This makes the bones stronger and can help to offset the effects of bone disease.

Hyaline cartilage also thickens with exercise, which helps to cushion the joints, therefore preventing damage to the bone. Tendons thicken and the ligaments have a greater stretch potential.

The bone mineral content of calcium and phosphate has been shown to be significantly higher in those that participate in regular exercise for all ages than those who do not.

<b>Arthritis</b>	Means inflammation of the joints
<b>Osteoporosis</b>	Occurs when the body fails to form enough new bone, or too much old bone is reabsorbed, or both

## **Understanding the muscular system in relation to physical performance**

Identification of ways in which an active, healthy lifestyle can maintain and develop the health of muscles.

Understanding which of the major muscle groups (Deltoid; Trapezius; Latissimus dorsi; Pectorals; Biceps; Triceps; Abdominals; Quadriceps; Hamstrings) are involved in and benefit from particular types of physical activity.

### **The roles of muscle in movement**

- Prime movers
- Antagonist
- Synergist
- Antagonistic pairs.

Candidates should be able to describe these roles and give applied practical examples of appropriate muscle groups that are used when participating in specific physical activities. Application of these via practical examples.

### **Role & Functions of Tendons**

The value of healthy and efficient muscles and tendons with associated problems and how to avoid them:

- Soreness
- Strain
- Overuse
- Inflammation
- Tendonitis.

How participation in an active, healthy lifestyle can avoid the above problems with applied practical examples.

### **The effects of lactic acid**

Give applied examples of when lactic acid affects exercise and training and the ability to maintain physical activity, to enable participation in an active, healthy lifestyle.

### **Mental Preparation**

Control of emotions to enable fair play and to cope with stress.

#### **The effects of mental preparation for performance:**

- Relaxation
- Focusing
- Raising confidence.

### 3. Informed decision making using the principles of training and safe exercise

#### Chapter 6

##### **Short term effects of an active, healthy lifestyle**

Respiratory rate, tidal volume and minute volume

- Heart rate, cardiac output and stroke volume
- Muscle fatigue; increase in temperature.

Application of these via practical examples.

Changes in blood-flow to muscles during exercise with identification of the vascular shunt mechanism.

Application of this via practical examples.

##### **Long Term effects of an active, healthy lifestyle**

Heart rate, stroke volume and cardiac output

- Lung volumes and rate of recovery
- Increase in strength of muscle fibres; hypertrophy; increased tolerance to lactic acid.

Application of these via practical examples.

##### **Exercise and Training Principles that affect improving health and fitness**

Identification and description of:

- Overload
- Specificity
- Progression
- Reversibility.

Apply these principles to plan a targeted range of exercise/training programmes using applied practical examples.

Identification of the FITT principle and applied practical examples of how these might affect health and fitness

- Frequency
- Intensity
- Time
- Type.

Factors affecting effective exercise in a safe and positive environment for adopting an active, healthy lifestyle.

Application via practical examples.

## **Definitions and examples of aerobic and anaerobic exercise and training**

Candidates should be able to give simple descriptions of aerobic and anaerobic exercise.

Candidates should be able to describe how these types of exercise can develop participation and performance in an active, healthy lifestyle.

- Circuit training
- Weight training
- Plyometrics
- Flexibility training
- Continuous training
- Fartlek
- Interval training.

Application of these methods via practical examples.

## **Identifying potential hazards in a range of settings related to the role of participant, leader or official.**

The gymnasium/sports hall/fitness centre

- Playing field
- Artificial outdoor areas
- Court areas
- Outdoor adventurous areas.

Application of potential hazards via practical examples.

## **How to reduce risks and injuries**

Minimising risks through knowledge of:

- Correct clothing/footwear
- Personal protective equipment
- Health and Safety procedures
- Lifting, carrying and placing equipment safely
- Appropriate level of competition
- Warm up and cool down
- The importance of personal hygiene to avoid minor infections

## 4. Opportunities, pathways and participation in Physical Education

### Chapter 6

#### **Level of participation in sport and physical activity**

Effects of media influences and promotional campaigns for an active, healthy lifestyle on levels of participation. Application of these effects via practical examples. Effects of sponsorship and availability of funds to follow an active, healthy lifestyle with applied practical examples.

### Chapter 7

#### **Reasons for participation and non-participation in physical activities and following an active, healthy lifestyle**

Local and national provision - examples of levels of provision locally and nationally in different physical activities and their impact on participation. The roles of the following in promoting participation/leading/officiating in physical activities:

- Local authority
- Private enterprise
- Voluntary organisations (clubs)
- National organisations (National Governing Bodies)
- Olympic organisations (International Olympic Committee; British Olympic Association).

Application of these roles via practical examples.

### Chapter 9

#### **Current Government initiatives to promote healthy, active lifestyles**

Candidates should be familiar with a range of up-to-date initiatives, such as:

- Five hours of high-quality Physical Education and sport per week
- One hour of physical activity per day
- Eating five fruit and vegetables a day.

### Chapter 10

What schools provide to influence young people to get involved in physical activity as part of a healthy lifestyle

The role of the school in promoting an active, healthy lifestyle:

- Examination courses/related qualifications
- Extra curricular
- Links with clubs/agencies
- Advertising and posters
- Health awareness programmes.

Application of these using practical examples.