

# KESTEVEN AND SLEAFORD HIGH SCHOOL

## Physical Education Scheme of Learning Year 10 GCSE – Physical Training

### Intent – Rationale

Students will develop their understanding of physical training. Identifying fitness components; they work to apply these to sporting examples and know the most effective methods of training for the variety of sports. They will know the principles of training and develop their understanding of how these create adaptations in the body over time when used correctly.

<b>Sequencing – what prior learning does this topic build upon?</b>	<b>Sequencing – what subsequent learning does this topic feed into?</b>
Practical PE through Key Stage 3. Particularly Health Related Fitness units throughout their school time.	<ul style="list-style-type: none"> <li>Written NEA</li> </ul>
<b>What are the links with other subjects in the curriculum?</b>	<b>What are the links to SMSC, British Values and Careers?</b>
<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Use the coded help guides to complete this section</li> </ul>
<b>What are the opportunities for developing literacy skills and developing learner confidence and enjoyment in reading?</b>	<b>What are the opportunities for developing mathematical skills?</b>
<ul style="list-style-type: none"> <li>Please fill this in with your own suggestions alternatively the LRC team will provide some suggested titles/links</li> </ul>	<ul style="list-style-type: none"> <li>Heart rates, training zones (percentages, range) Borg scale</li> <li>One rep max</li> </ul>

# KESTEVEN AND SLEAFORD HIGH SCHOOL

## Physical Education Scheme of Learning

### Year 10 GCSE – Physical Training

#### Intent – Concepts

What knowledge will students gain and what skills will they develop as a consequence of this topic?

##### Know

Know the definitions for Health & Fitness. Be able to identify the different fitness components. Know the limitations of fitness tests. Know the different fitness tests and be able to carry some of these out correctly. Know the principles of training. Know the different types of training. Know the advantages & disadvantages of training types. Know the different % for training zones. To know how the three parts of the training season are divided. Know the methods used to avoid injury. Know how to warm up and cool down

##### Apply

Be able to explain the components of the FITT principle and how it overlaps with other principles of training. Understand how to use these principles to improve fitness. Be able to apply the principles of training to sporting examples. Be able to explain how to carry out these types of training. Develop use of key terminology when applying knowledge of physical training. Explain how to carry out the different types of training. Be able to explain High-Altitude training. Explain all aspects of warming up and cooling down.

##### Extend

Be able to explain the relationship between health and fitness. Analyse which fitness components would be most needed for specific sports. Be able to justify why fitness tests are used. Be able to analyse the results of fitness tests to make judgements Be able to justify the use of principles of training. Evaluate which types of training would be most suitable for different sports. Evaluate which training zone would be most suitable for different types of training. To be able to apply the three training seasons to a sport and evaluate why it is important. Be able to justify why High-Altitude training would benefit a distance performer. Be able to explain why certain methods used to avoid injury would be appropriate in specific sports. Evaluate all aspects of warming up and cooling down

# KESTEVEN AND SLEAFORD HIGH SCHOOL

What subject specific language will be used and developed in this topic?	What opportunities are available for assessing the progress of students?
<p><b>Aerobic training zone</b> The aerobic training zone allows the aerobic system to be trained. To define aerobic training zone:</p> <ol style="list-style-type: none"> <li>1. Calculate maximum heart rate (220 bpm) minus age: 220-age</li> <li>2. Work at 60-80% of maximum heart rate.</li> </ol> <p><b>Agility</b> The ability to move and change direction quickly (at speed) whilst maintaining control.</p> <p><b>Altitude</b> A geographical area (of land) which is over 2,000 m above sea level.</p> <p><b>Altitude training (traditional)</b> Training at altitude where there is less oxygen. The body adapts by making more red blood cells to carry oxygen. The additional oxygen carrying red blood cells is an advantage for endurance athletes returning to sea level to compete.</p> <p><b>Altitude sickness</b> Nausea caused by training at altitude.</p> <p><b>Balance</b> The maintenance of the centre of mass over the base of support. Reference can be made to whilst static (still) or dynamic (whilst moving).</p> <p><b>Circuit training</b> A series of exercise stations whereby periods of work are interspersed with periods of rest.</p> <p><b>Closed season</b> Post (transition). It is defined as:</p>	<ul style="list-style-type: none"> <li>• Formative assessment in low stakes quizzes, kahoots and recall games.</li> <li>• Exam questions used to assess application of knowledge</li> <li>• EOTT to assess application in timed conditions</li> </ul>

# KESTEVEN AND SLEAFORD HIGH SCHOOL

- period of rest to recuperate
- players doing gentle aerobic exercise to maintain general fitness
- fully rested and ready for pre-season training.

## Coordination

The ability to use different (two or more) parts of the body together, smoothly and efficiently.

## Competition season (peak)

It is defined as:

- playing season
- taking part in matches every week
- maintenance of fitness related to the activity but not too much training as it may cause fatigue, which would decrease performance
- concentration on skills/set plays to improve team performance.

## Continuous training

Involves working for a sustained period of time without rest. It improves cardio-vascular fitness. Sometimes referred to as a steady state training.

## Fartlek training

Swedish for 'speed play'. Periods of fast work with intermittent periods of slower work. Often used in running, ie sprint, jog, walk, jog, sprint, etc.

## Fatigue

Either physical or mental, fatigue is a feeling of extreme or severe tiredness due to a build-up of lactic acid or working for long periods of time.

## Fitness

The ability to meet/cope with the demands of the environment.

## FITT

FITT is used to increase the amount of work the body does, in order to achieve overload (see SPORT). FITT stands for:

- frequency – how often you train

# KESTEVEN AND SLEAFORD HIGH SCHOOL

- intensity – how hard you train
- time – the length of the training session
- type – the specific method, eg continuous training.

## Flexibility

The range of movements possible at a joint.

## High intensity interval training (HITT)

It's an exercise strategy alternating periods of short intense anaerobic exercise with less intense recovery periods (see Interval training).

## Interval training

Periods of training/work that are followed by periods of rest, eg work, rest, work, rest (see High intensity interval training).

## Maximal heart rate

Calculated by:  $220 - \text{age}$

## Mental health and well-being

A state of well-being in which every individual realises his/her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (as per WHO). It works in conjunction with physical and social health.

## Muscular endurance (similar to dynamic strength)

Ability of a muscle or muscle group to undergo repeated contractions, avoiding fatigue.

## One rep max

The maximal amount that can be lifted in one repetition by a muscle/group of muscles (with the correct technique).

## Physical health and well-being

All body systems working well, free from illness and injury. Ability to carry out everyday tasks. It works in conjunction with social and mental health.

## Post season (transition)

# KESTEVEN AND SLEAFORD HIGH SCHOOL

Period of rest/active recovery/light aerobic work after the competition period (season).

## Power/explosive strength (anaerobic power)

The product of strength and speed, ie strength x speed.

## Pre-season (preparation)

It is defined as:

- period leading up to competition
- usually using continuous/fartlek/interval training sessions to increase aerobic fitness
- weight training to build up strength and muscular endurance
- developing techniques specific to the sport in order to be fully prepared for matches at start of season and therefore be more successful.

## Principles of overload

Frequency, intensity, time and type (see FITT).

## Principles of training

Specificity, progressive overload, reversibility and tedium (see SPORT).

## Qualitative

More of a subjective than an objective appraisal. Involving opinions relating to the quality of a performance rather than the quantity (eg score, placing, number).

## Quantitative

A measurement which can be quantified as a number, eg time in seconds or goals scored. There is no opinion expressed (qualitative). It is a fact.

## Reaction time

The time taken to initiate a response to a stimulus, ie the time from the initiation of the stimulus (eg starting gun in 100 m) to starting to initiate a response (eg starting to move out of the blocks in 100 m).

# KESTEVEN AND SLEAFORD HIGH SCHOOL

## Recovery

Time required to repair the damage to the body caused by training or competition.

## Reliability

Relating to the consistency and repeatability of a test (ie to produce same or similar scores).

## Repetitions

The number of times an individual action is performed. A set is a group of repetitions.

## Season

A period of time during which competition takes place or training seasons, dividing the year up into sectional parts for pre-determined benefits.

Training seasons include:

- pre-season (preparation)
- competition season (peak)
- post-season (transition). See these terms for definitions.

## Sedentary lifestyle

A lifestyle with irregular or no physical activity.

## Social health and well-being

Basic human needs are being met (food, shelter and clothing). The individual has friendship and support, some value in society, is socially active and has little stress in social circumstances. It works in conjunction with physical and mental health.

## Speed

The maximum rate at which an individual is able to perform a movement or cover a distance in a period of time, putting the body parts into action as quickly as possible. Calculated by:  $\text{distance} \div \text{time}$

## SPORT (the principles of training)

# KESTEVEN AND SLEAFORD HIGH SCHOOL

## Specificity

Making training specific to the sport being played/movements used/muscles used/energy system(s) used.

## Progressive overload

Gradual increase of the amount of overload so that fitness gains occur, but without potential for injury. Overload is the gradual increase of stress placed upon the body during exercise training (more than normal).

## Reversibility

Losing fitness levels when you stop exercising.

## Tedium

Boredom that can occur from training the same way every time. Variety is needed.

## Static stretching

Holding a stretch still/held/isometric.

## Strength

The ability to overcome a resistance. This can be explosive, static or dynamic:

- explosive – see Power
- static – static ability to hold a body part (limb) in a static position. Muscle length stays the same/maximum force that can be applied to an immoveable object
- dynamic – see Muscular endurance for similarity.

## Suppleness

As with flexibility, the range of movement possible at a joint.

## Target zone

The range within which athletes need to work for aerobic training to take place  
(60-80% of maximum heart rate).

## Training



# KESTEVEN AND SLEAFORD HIGH SCHOOL

<p>A well-planned programme which uses scientific principles to improve performance, skill, game ability, motor and physical fitness.</p> <p><b>Training thresholds</b> The actual boundaries of the target zone.</p> <p><b>Validity</b> The extent to which a test or method measures what it sets out to measure.</p> <p><b>Weight training</b> The use of weights/resistance to cause adaptation of the muscles.</p> <p><b>Well-being</b> Involves physical, mental and social well-being. The dynamic process that gives people a sense of being comfortable, healthy or happy.</p>	
---	--

## Intent – Concepts

Lesson title	Learning challenge	Higher level challenge	Suggested activities and resources
Health & Fitness & relationship	Know the definitions for Health & Fitness	Be able to explain the relationship between health and fitness	
<i>Components of fitness</i>	Be able to identify the different fitness components	Analyse which fitness components would be most needed for specific sports	
<i>Fitness testing</i>	Know the limitations of fitness tests	Be able to justify why fitness tests are used	

## KESTEVEN AND SLEAFORD HIGH SCHOOL

<b><i>Fitness testing (data)</i></b>	Know the different fitness tests and be able to carry some of these out correctly	Be able to analyse the results of fitness tests to make judgements	
<b><i>Principles of training</i></b>	Know the principles of training	Understand how to use these principles to improve fitness	
<b><i>Principles of training</i></b>	Be able to explain the components of the FITT principle and how it overlaps with other principles of training	Be able to apply the principles of training to sporting examples and justify their use	
<b><i>Types of training</i></b>	Know the different types of training and be able to explain how to carry out these types of training	Explain how to carry out the different types of training	
<b><i>Types of training to include advantages/disadvantages</i></b>	Know the advantages & disadvantages of training types	Evaluate which types of training would be most suitable for different sports	
<b><i>Working intensities (data)</i></b>	Know the different % for training zones	Evaluate which training zone would be most suitable for different types of training	
<b><i>Recap</i></b>	Develop use of key terminology when applying knowledge of physical training	Develop evaluation and analysis skills when referring to physical training topics	

## KESTEVEN AND SLEAFORD HIGH SCHOOL

<b><i>EOTT</i></b>	Develop understanding of different command words and know the expected content required	Use understanding to demonstrate knowledge in a variety of examination questions with differing command words	
<b><i>Seasonal Aspects</i></b>	To know how the three parts of the training season are divided	To be able to apply the three training seasons to a sport and evaluate why it is important	
<b><i>Specific Training</i></b>	Be able to explain High-Altitude training	Be able to justify why High-Altitude training would benefit a distance performer	
<b><i>How to avoid injury</i></b>	Know the methods used to avoid injury	Be able to explain why certain methods would be appropriate in specific sports	
<b><i>Warming up &amp; Cooling down</i></b>	Know how to warm up and cool down	Evaluate and fully explain all aspects of warming up and cooling down.	
<b><i>Recap</i></b>	Develop use of key terminology when applying knowledge of physical training	Develop evaluation and analysis skills when referring to physical training topics	