



CLAREMONT HIGH SCHOOL ACADEMY

Physical Education

Year 9 Theory Curriculum 2016-17

This year students will be given a final end of year grade which will be based on 2 areas:

- Practical abilities (their end of year level)
- Performance in an end of year written exam (1 hour paper)

	Practical Weighting	Theory Weighting
Year 9	40%	60%

End of year practical level converted to practical grade

Level	%
9-	100
8	95
8-	90
7	85
7-	80
6+	78
6	75
6-	73
5+	70
5	68
5-	65

Level	%
4+	63
4	60
4-	58
3+	58
3	56
3-	54
2+	53
2	52
2-	50

This booklet will outline details of information to be delivered through practical lessons throughout the year. The end of year exam will be made up from the following content.

1. Benefits of PE

Pupils should be able to identify the following benefits of exercise/PE.

Benefits of Exercise / PE	
Increase fitness	PE and exercise can increase fitness. Muscles can be strengthened and we can lose weight.
Feel good	Exercise releases serotonin which makes us feel good
Relieve stress	PE and exercise can distract us from other problems and can relieve stress caused by school or home life.
Increase confidence	Overcoming physical challenges can make us feel good about ourselves. Also if we exercise we can lose weight and gain muscle and look good – this can also improve our self-confidence.
Improve health	The fitter we are the better we are at coping with illnesses.
Enjoyment	Most people who do physical education do so because they enjoy it and it's fun!

2. Components of fitness

'Fitness' is made up of 11 different components.

You do not need to be good in all components to be regarded as fit, it depends on the individual and the activity. *For example*, Usain Bolt has excellent **speed** and **muscular strength** but poor **cardiovascular endurance** and **agility**. This is because he only needs to run in a straight line for a short amount of time.



Pupils will need to be able to recognise that different components of fitness are required for different activities. They should also be familiar with the definitions of each component.

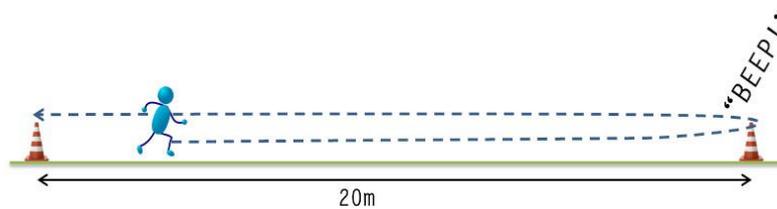
Components of fitness	
Cardiovascular fitness	How efficiently your body can deliver oxygen and nutrients to working muscles during exercise.
Muscular Endurance	The length of time your muscles can contract without getting tired
Muscular Strength	The amount of force a muscle can exert against a resistance.
Flexibility	The range of movement possible at a joint.
Body Composition	The percentage of body weight which is fat, muscle and bone.
Agility	Changing direction quickly whilst maintaining control.
Balance	Keeping your body steady when static or moving.
Coordination	The ability to use two or more body parts together.
Speed	The rate at which your body (or part of your body) is able to move.
Reaction time	The amount of time it takes you to respond to a stimulus.
Power	The ability to combine strength with speed.

3. Fitness Testing

Pupils should be aware of various **fitness tests** which assess your ability in the following components of fitness.

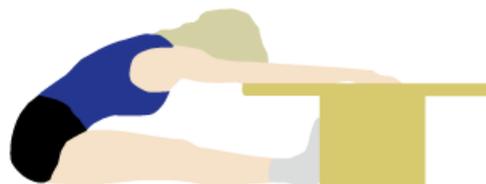
Component: Cardiovascular Endurance	Test: Bleep Test / 12 Minute Run
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- The 12 minute run involves participants running as far as possible in 12 minutes.
- The Bleep Test involves running a length of 20m in time with a series of beeps. The time between the beeps gets smaller as the levels increase, participants therefore have to continually increase their running speed.



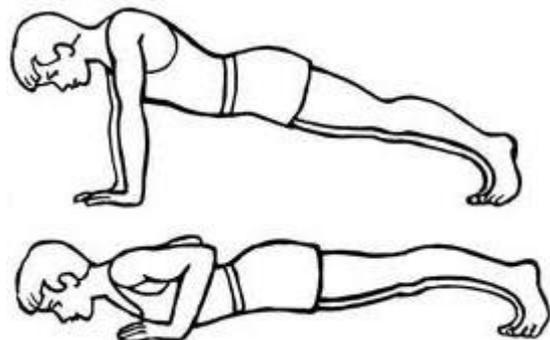
Component: Flexibility	Test: Sit and Reach Test
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This test measures the flexibility of the hamstrings. The test is to see how far past your toes you can reach. Somebody who can't reach their toes scores a minus total. If you reach your toes you score zero, which is average.



Component: Muscular Endurance	Test: One-minute press-up test
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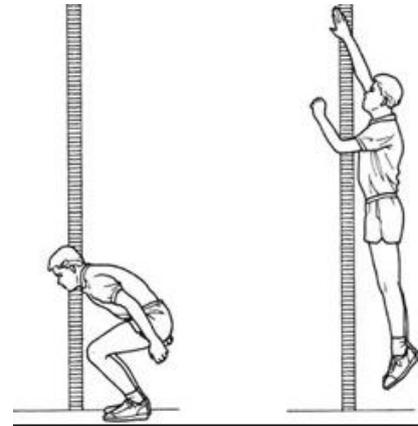
This test measure muscular endurance of your upper body. You must perform as many press ups as possible in a one minute time limit.



Component: **Power**

Test: **Vertical Jump Test**

Stand side-on to a wall and reach up with the hand closest to the wall. Keeping your feet flat on the ground, your assistant should mark or measure the point on the wall where the top of your fingertips touches. This is your standing reach. Put a little chalk on your fingers and jump vertically as high as you can. Touch the wall at the highest point of the jump. The distance between the standing reach height and the jump height is your score.



Component: **Speed**

Test: **30m Sprint**

Run as fast as you can over 30m. A partner needs to record your time.



4. Methods of Training

There are a number of training methods which can be used to improve fitness. Each is designed for a specific purpose, to improve a specific aspect of fitness, and therefore each suits different sports and activities.

<p>Continuous Training</p>	<ul style="list-style-type: none"> • Steady training with no rests • Lower intensity • Can improve Cardiovascular Fitness • Aerobic activity • Good for developing basic fitness levels, but not very appropriate for games/sports which involve short bursts of energy (football, netball etc)
<p>Circuit Training</p>	<ul style="list-style-type: none"> • Involves a number of exercises one after the other • Each exercise area is known as a 'station' • Can monitor the amount of repetitions completed • High intensity • Develops general fitness – works both muscles and cardiovascular system
<p>Interval Training</p>	<ul style="list-style-type: none"> • High intensity periods of work followed by periods of rest • Anaerobic activity • Very appropriate for games/sports which involve short bursts of energy (football, netball etc)
<p>Fartlek Training</p>	<ul style="list-style-type: none"> • Swedish for 'Speed Play' • Similar to interval training • Takes place over different types of ground, can include hills and varies speed • Very appropriate for games/sports which involve short bursts of energy (football, netball etc)
<p>Weight Training</p>	<ul style="list-style-type: none"> • Uses resistance to improve muscular strength and muscular endurance • Will increase the size of muscles • Lifting heavy weights with low repetitions will increase muscular strength • Lifting lighter weights with high repetitions will increase muscular endurance
<p>Plyometrics</p>	<ul style="list-style-type: none"> • Plyometrics are exercises in which muscles exert maximum force in short intervals of time • The aim is to increase explosiveness – increasing strength and speed (power) • For example, a high jumper will want to improve the power in their legs to improve their jump. • Plyometric exercises include hopping and jumping

Year 9 Pupils should know the difference between aerobic and anaerobic activities

Aerobic activities

These are activities of **low intensity** and **long duration**. Because the demand for energy is not that great and is steady, the body is able to convert the oxygen it breathes into energy.

e.g. Jogging (12 minute run)



Anaerobic activities

These are activities of **high intensity** and **short duration**. Because the demand for energy is very large and instant, the body is unable to convert the oxygen it breathes into energy quickly enough. So it relies on energy already stored in the body. This stored energy comes from the carbohydrates we eat in food.

Anaerobic activities produce **lactic acid** – this is why muscles get sore and we get cramp.

e.g. Sprinting, throwing, kicking

A **cool down** (low intensity aerobic activity and stretching) can help flush out lactic acid so muscles are not as sore afterwards.



5. The Exercise Session

A warm up is essential before any physical activity. A warm up should be made up of **three** phases:

Phases of Warm Up	
Phase 1 – Pulse raiser	Any low intensity exercise (doesn't have to be running) which gets our heart rate up, leaves us a little out of breath with perhaps the onset of sweat.
Phase 2 – Stretching	Warm up stretches should be held for 8-12 seconds
Phase 3 – Specific Skills Practice	This should include practicing skills specific for your activity. Eg. Netballers practicing passing and cricketers practicing catching and throwing.

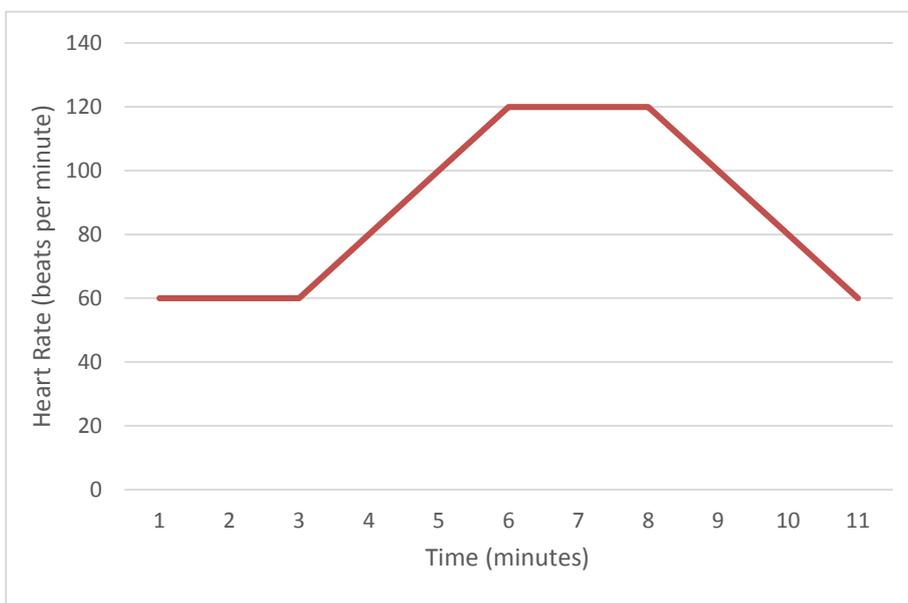
Year 9 pupils should be aware of the following three **reasons** for taking part in a warm up

1. Prevent injury
2. Practice skills before the event/game
3. Prepare mentally for the event/game

Heart Rate and Exercise

- Heart rate is the number of times the heart beats per minute (BPM)
- When we exercise our muscles need more oxygen/energy, so our heart rate increases to pump more blood (oxygen) to the muscles.

You will be asked to interpret a heart rate graph. For example:



- The subject's resting heart rate is 60bpm
- After 3 minutes they begin exercising. Their HR goes up to 120bpm
- HR remains steady for 2 minutes, suggesting that they are training at a constant intensity
- Their training session finishes after 8 minutes and HR begins to decrease. It takes 3 minutes for HR to return to resting levels

6. The Cardiovascular System

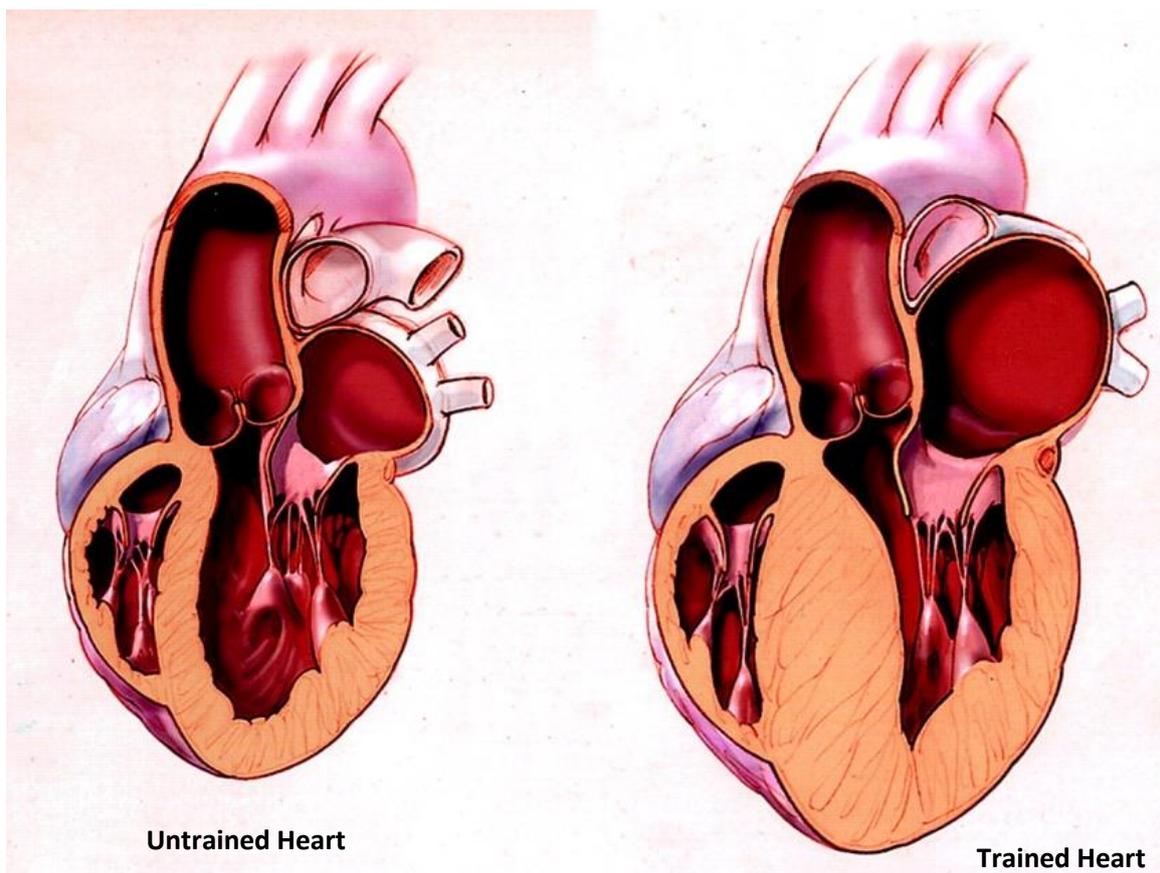
Effects of exercise

The heart is a muscle, which like all other muscles, gets bigger the more you use it (imagine going to the gym and doing bicep curls, after time your biceps get bigger). If your heart gets bigger it can pump more blood with every contraction. If the heart can pump more blood with every beat, then it doesn't need to beat as many times to pump the same amount of blood. Therefore resting heart rate decreases.

Elite athletes have much lower resting heart rates than us, because of this reason.

The average resting heart rate is 66 to 72 bpm. A well-trained endurance athlete has a resting heart rate of roughly 40 bpm.

Miguel Indurain, a five-time Tour de France winner and Olympic gold medalist in 1996, recorded a resting heart rate of 28 bpm!!

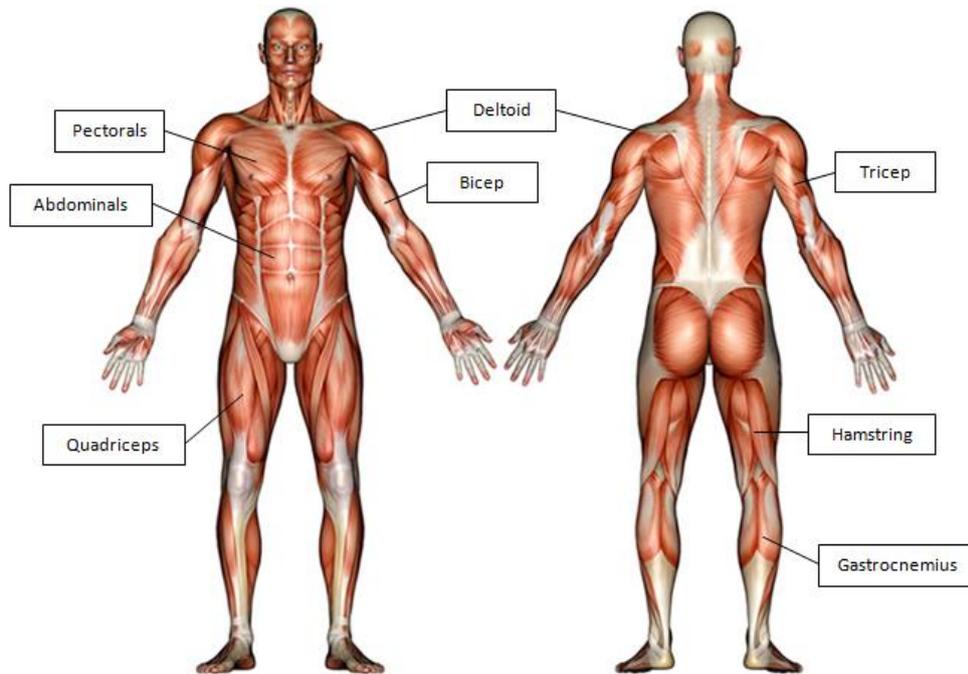


When the heart gets bigger and stronger as a result of regular exercise, it is called **Cardiac Hypertrophy**

7. Muscles

Year 9 pupils are required to know the name of all the major muscles labelled below.

Spelling is important!



8. A Balanced Diet

Eating a balanced diet is an essential part of a healthy lifestyle. A balanced diet is made up of **7 nutrients**.

Macronutrients are the nutrients you need to consume in relatively large amounts.

Macronutrient	Function
Carbohydrate	This is our main source of energy. Carbohydrates are stored in the body as glycogen which is converted to energy when we need it. Examples: Pasta, Potatoes, Bread
Fat	Eating fat doesn't make you fat! They are an important source of energy. Examples: Butter, Cheese, Bacon, Cooking Oil
Protein	Protein is important to help build and repair muscles and can also help us recover from injury. Examples: Meat, Poultry, Fish, Dairy Products

Micronutrients are the nutrients that you need to consume in relatively small amounts.

Micronutrient	Function
Vitamins	Essential for general health. They are necessary for good skin, vision and healing. Examples: Vitamin C helps fight infections, found in fruit and vegetables.
Minerals	Essential for general health. Examples: Calcium helps us grow and develop strong bones. Iron is essential for our blood to be able to carry oxygen.
Fibre	Helps us digest food . Examples: Wholegrain Cereal, Oats, fruit.
Water	Essential for transporting nutrients and waste products. It prevents dehydration . Athletes need to drink more water because they lose a lot through sweat.