HIGHAM LANE SCHOOL

Y9 CORE PE

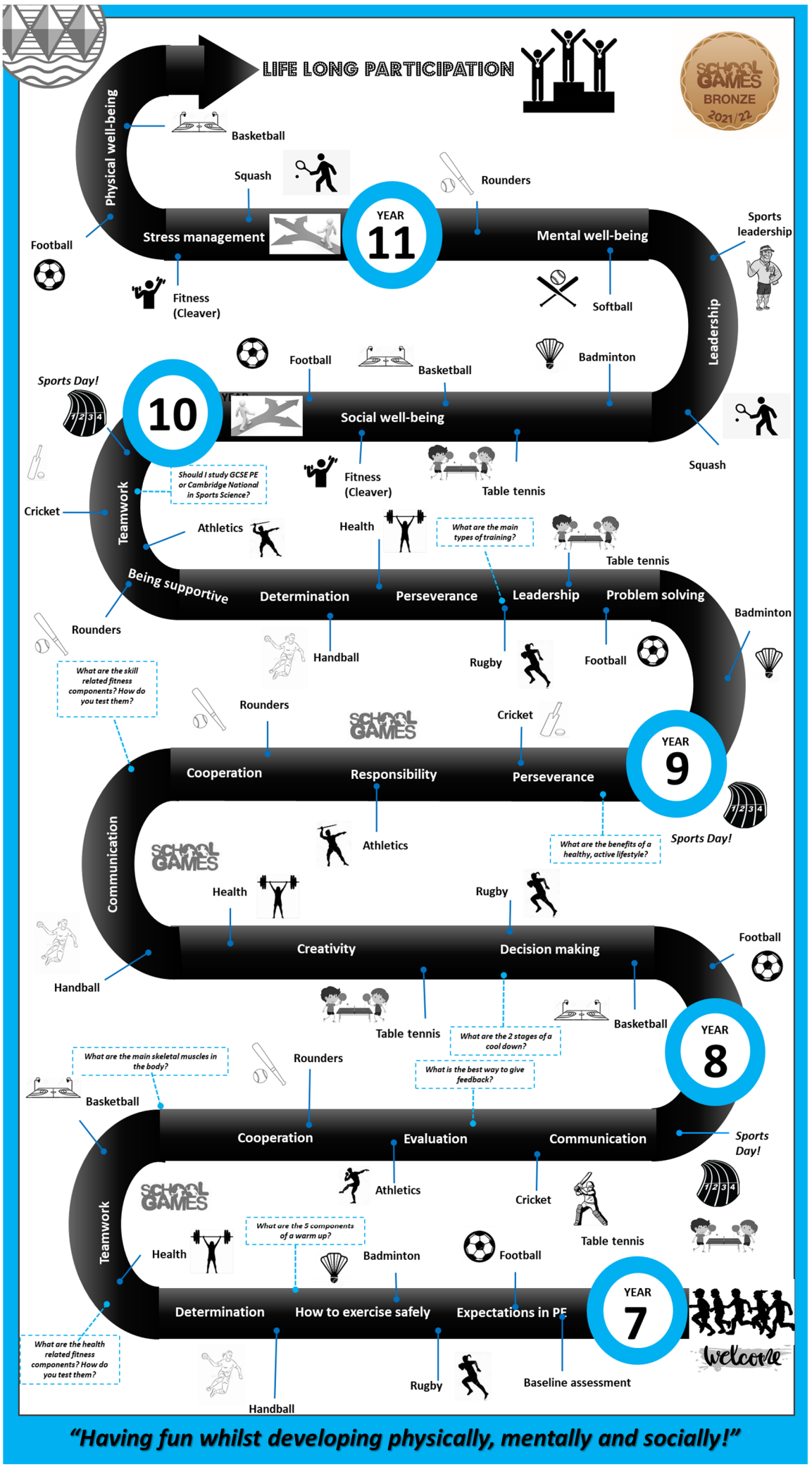
Knowledge Booklet

NAME:

FORM:

PE GROUP:

TEACHER:

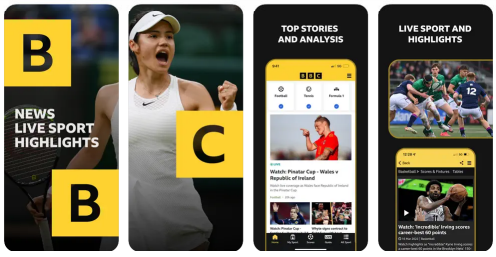

LIFE LONG PARTICIPATION
SCHOOL GAMES BRONZE 2021/22
Physical well-being
Basketball
Squash
Rounders
Football
Stress management
YEAR 11
Mental well-being
Sports leadership
Fitness (Cleaver)
Softball
Leadership
Football
Basketball
Badminton
Sports Day!
10
Social well-being
Squash
Should I study GCSE PE or Cambridge National in Sports Science?
Fitness (Cleaver)
Table tennis
Cricket
Teamwork
Athletics
Health
What are the main types of training?
Table tennis
Being supportive
Determination
Perseverance
Leadership
Problem solving
Badminton
Rounders
Handball
Rugby
Football
What are the skill related fitness components? How do you test them?
Rounders
Cricket
Cooperation
Responsibility
Perseverance
YEAR 9
Communication
Athletics
What are the benefits of a healthy, active lifestyle?
Sports Day!
Health
Rugby
Football
Creativity
Decision making
Handball
Table tennis
What are the 2 stages of a cool down?
Basketball
What are the main skeletal muscles in the body?
Rounders
What is the best way to give feedback?
YEAR 8
Basketball
Cooperation
Evaluation
Communication
Sports Day!
Athletics
Cricket
Teamwork
Table tennis
Health
What are the 5 components of a warm up?
Badminton
Football
Determination
How to exercise safely
Expectations in PE
YEAR 7
What are the health related fitness components? How do you test them?
Handball
Rugby
Baseline assessment
Welcome
"Having fun whilst developing physically, mentally and socially!"

Higham Lane School

PE department

Reading List

9	Believe	Adams, Nicola	Biography	Boxing
9	Impact of Technology in Sport	Anniss, Matthew	Non-Fiction	Various
9	Anthony Joshua: King of the Ring	Worrall, Frank	Biography	Boxing
9	Keeper	Peet, Mal	Fiction	Football
9	Unstoppable	Freedman, Dan	Fiction	Tennis/Football
9	The Silent Striker	Kalu, Pete	Fiction	Football
9	The Everest Files	Dickinson, Matt	Fiction	Mountaineering
9	Wing Jones	Webber, Katherine	Fiction	Running
9	Now is the Time for Running	Williams, Michael	Fiction	Football
9	Check, Please!	Ukazu, Ngozi	Comic	Ice Hockey
9	How the Body Works	DK	Non-Fiction	Physiology



Download the BBC sport app to keep up to date with the latest sports news!

Summarize any reading you have done here!

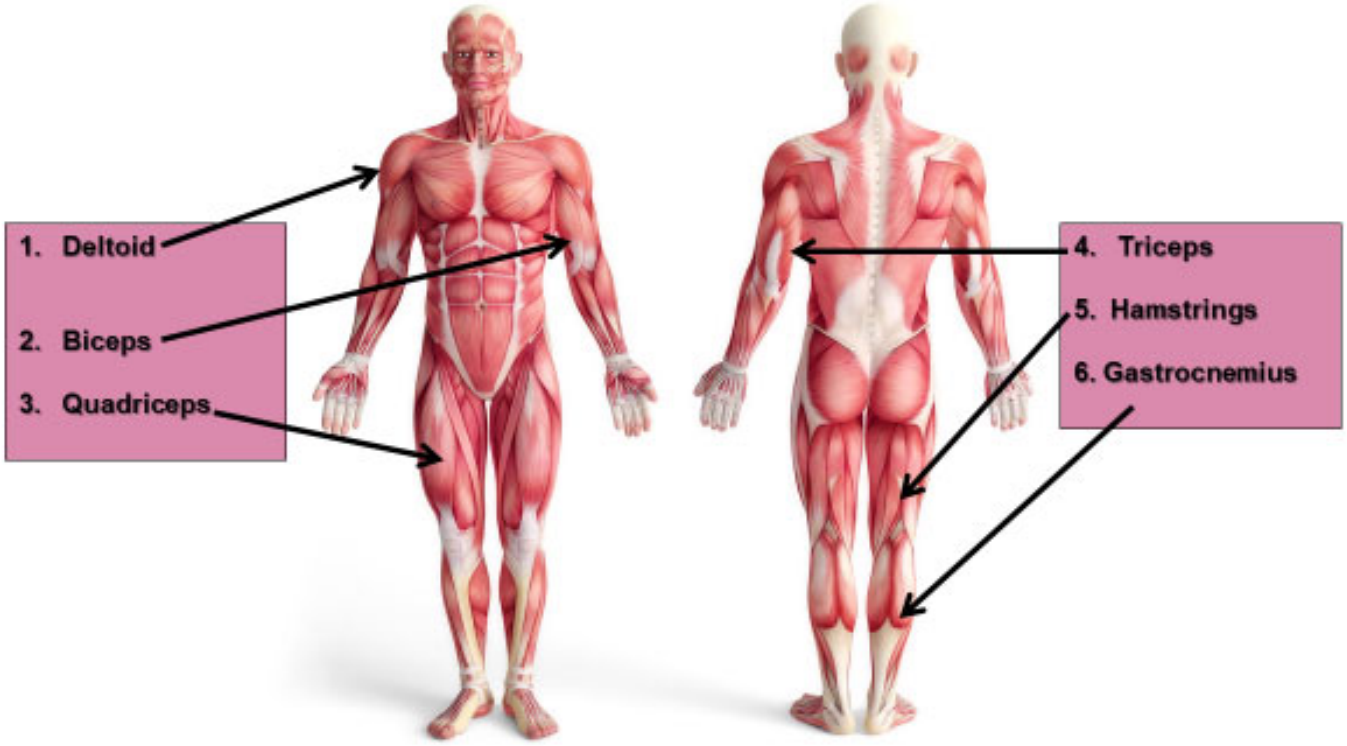
It could be writing a blurb for one of the sports books that you have read or summarizing a news article that you found interesting!!

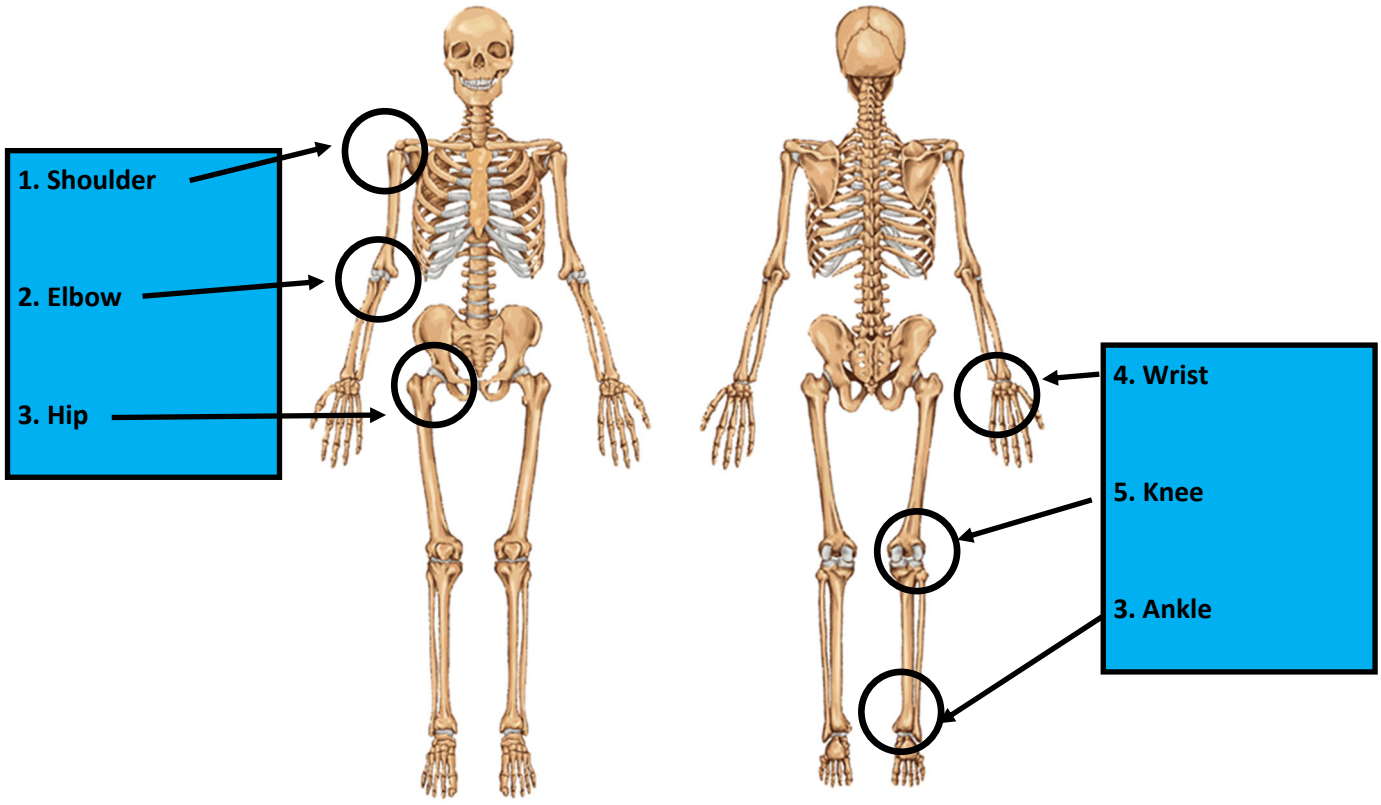
Warming Up

Component (part) of warm up	*Activities you should do*	*Why this part of the warm up is so important*
Pulse raiser	Movements that get your heart beating faster and make your breathing Rate increase (go up)	It gets the blood flowing quicker to deliver oxygen to your Muscles so they can make energy It gets your muscles warm so you are less likely to injure them.
Mobility	Movements that prepare your joints for exercise	To get your joints used to a full range of movement so you can perform skills really well and safely
Stretching	You need to stretch all the major muscles you will use in your sport	So you reduce the risk of pulling or straining your muscles as they will be able to stretch further
Dynamic movement	Movements that you will use in your sport. e.g. if you have to move sideways in your sport you should do sideways movements in your warm up	To get your body ready to do all the movement you need to do in the sport you are going to play. If you do this you should play well
Skill rehearsal	You should practice the skills you are going to use in your sport. e.g. if you were playing netball / basketball you should practice Throwing, catching and shooting.	This will make sure you are physically and mentally ready for the game by rehearsing important skill and getting you focused. This should help you to play well.

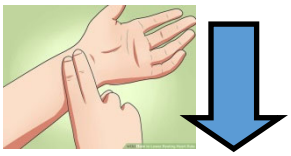
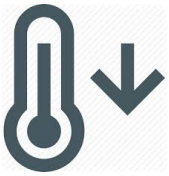
Muscles and joints

Muscles contract to cause movement at joints during physical activity.





Cooling Down

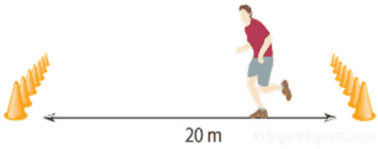
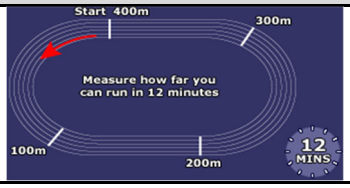
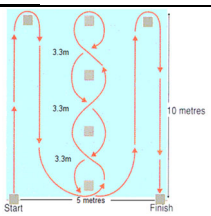
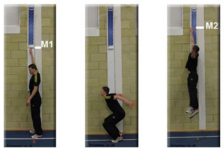
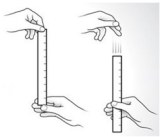
Component (part) of cool down	*Activities you should do*	*Why this part of the cool down is so important*
Pulse lowering activity 	Exercises which gradually Lower ***heart rate*** and ***body temperature*** 	Doing gentle exercise keeps your B_____ flowing which helps you remove a waste product from your muscles called L _____ Acid. If this substance stays in your muscles they won't be able to work properly when you exercise again and they might get I _____
Stretching 	Exercises that help the ***muscles to Relax from the activity you have done.*** You need to ensure that all the **major muscle groups** used in the **sport** are stretched. Stretch each muscle group for **10 to 30 seconds, 2 to 3 times.**	This helps **relax your muscles** and **restore** them to their **Resting length** It will help **improve your Flexibility.** It will help you ***recover*** so your body is ***ready*** for your next training session or match and you won't ***get hurt!***

HEALTH

Fitness is the ability to ***cope*** with the ***playing environment*** you are in. Some sports are ***physically harder*** than others so you will need a ***higher*** level of fitness.

Component of Fitness	***Definition***	***Example—when do you need this in sport?***
Cardiovascular endurance	The ability to exercise the whole body for a long period of time without fatiguing/tiring.	Being able to run attack and defend for the whole length of a handball game without tiring.
Muscular endurance	The ability of your muscles to keep contracting for a long period of time.	Being able to continuously perform a volley in volleyball without tiring.
Muscular strength	The ability to apply force against a resistance.	A shot putter needs this to throw the shot as far as possible.
Flexibility	The range of movement at a joint.	Being able to reach far for a ball in netball. Being able to perform a arabesque in dance.
Speed	The ability to move the body or parts of the body quickly.	Moving the arm quickly to return the ball fast in table tennis.
Agility	The ability to change direction at speed.	Changing direction quickly to return the ball in volleyball.
Power	Strength x speed	Generating force quickly when hitting the ball to try and score a rounder.
Coordination	The ability to move two or more body parts at the same time with control	Moving the arms and legs at the same time during a leap in dance.
Reaction time	The time taken to respond to a stimulus.	Responding to the movement of the attacker when marking in netball.
Balance	The ability to remain stable over a base of support.	Being able to stay upright when doing the hop and step phase in triple jump.

Health—Fitness Testing

Component of Fitness	*Fitness test*
Cardiovascular endurance	12 minutes cooper run Multi-stage fitness test  
Muscular endurance	Sit up test Press up test 
Muscular strength	Hand grip dynamometer 1 rep max 
Flexibility	Sit and reach test 
Speed	30m sprint 
Agility	Illinois agility test 
Power	Vertical jump Standing broad jump 
Coordination	Wall throw test 
Reaction time	Ruler drop test 
Balance	Standing stork test 

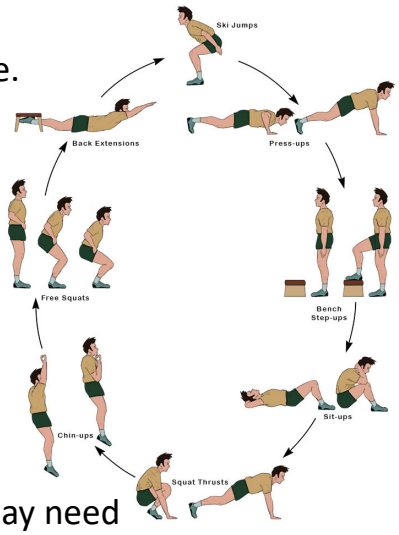
Training methods

Circuit training

COF improved: can work on any COF. Often muscular endurance.

Features: A series of 10-15 stations involving different exercises (normally different muscle groups) that last for a set amount of reps or length of time.

Example: See picture



Advantages: Very flexible training method (specificity). Doesn't require a lot of space.

Disadvantages: Need to be motivated to tolerate discomfort. May need longer recovery periods.

Continuous training

COF improved: cardiovascular endurance

Features: Activity for 20+ minutes at a steady rate without rest. Usually works in the aerobic training zone 60-80% of maximum heart rate.

Example: Long distance run for 30 minutes at 60% of MHR.

Advantages: Builds up aerobic fitness. Straight forward for beginners.

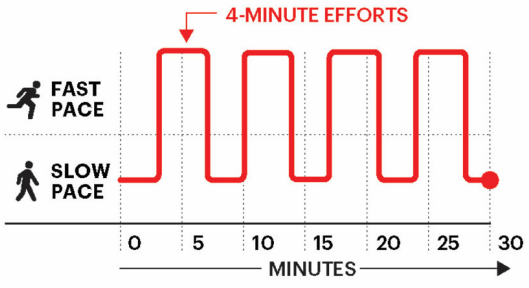
Disadvantages: Can be quite boring. Takes a long time to make adaptations to the body.

Interval training

COF improved: Adapted for different COF. Cardiovascular endurance and speed.

Features: Periods of work followed by periods of rest used to improve aerobic and anaerobic fitness.

Example: 30s sprint followed by 30s recovery x 10



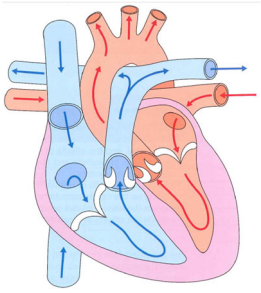
Advantages: Improves body's ability to cope with lactic acid. Easily adjusted to match needs of performer (specificity).

Disadvantages: Need to be motivated to tolerate discomfort. May need longer recovery periods.

Short term effects of exercise

CARDIOVASCULAR

1. Increases heart rate (the amount of times the heart beats per minute).
2. This increases the delivery of oxygen to the working muscles.
3. The blood vessels redistribute more blood to the working muscles (vascular shunt mechanism).



RESPIRATORY

1. Increases breathing frequency (the amount of times you breathe in or out per minute)

2. Increase in the amount of air breathed in or out in 1 breath.

3. More carbon dioxide is expired

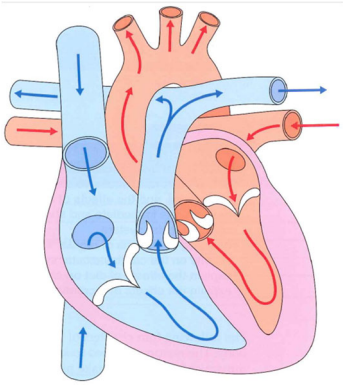
MUSCULAR

1. Increase in muscle temperature
2. Increase in lactic acid in the muscles
3. Muscles become fatigued

Long term effects of exercise

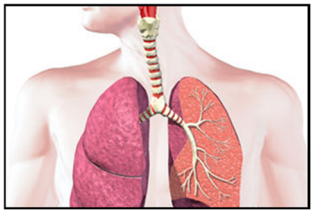
CARDIOVASCULAR

1. Heart muscle gets bigger and stronger (cardiac hypertrophy).
2. Heart can pump more blood out in one go (stroke volume increases).
3. Resting heart rate decreases.



RESPIRATORY

1. Stronger respiratory muscles (diaphragm and intercostal muscles)
2. You can breath more air in or out in one go (tidal volume increases)
3. Increase in the amount of alveoli



MUSCULAR

1. Muscles get bigger (muscular hypertrophy)
2. Increase in muscle strength
3. Increase in muscular endurance as muscles get better at coping with fatigue (lactic acid).

The physical, emotional and social benefits of exercise

PHYSICAL

1. *Increase bone density*
2. *Reduce the risk of injury*
3. *Maintain healthy body weight*
4. *Improves component of fitness*
5. *Improves functioning of the heart and lungs*

EMOTIONAL

1. *Makes you feel happier—releases endorphins*
2. *Relieves stress and reduces anxiety*
3. *Increases self-confidence*
4. *Improves your body image*
5. *Helps to alleviate depression*

SOCIAL

1. *Helps you to make friends*
2. *Encourages cooperation and teamwork*
3. *Increases sense of belonging*
4. *Share common experiences/interests with others*
5. *Decreases chances of loneliness*