

PHYSICAL EDUCATION

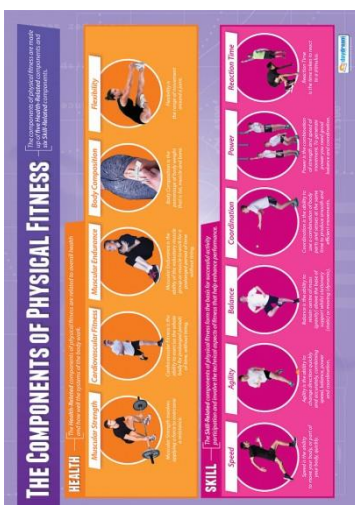
Posters

The posters are colourful and informative. The posters can be displayed along the corridors, on pillars, notice boards, special rooms or even in classrooms. They make learning fun and interesting and teaching becomes easy and effective too. They can also be used during events. E.g. Healthy Lifestyle Week, Sports Carnival, etc.

Reasons for using posters

1. About one third of students in an average classroom are visual learners.
2. Visual learners respond well to **colour**.
3. Images, photographs and diagrams are helpful learning aids for visual learners.
4. Words linked to pictures help visual learners grasp and remember new concepts.
5. Posters help reinforce important concepts and can be referred to regularly.
6. Posters can act as reference for students instead of asking the teachers.
7. Posters can keep your classroom/school fresh and **stimulating**.

Posters – Components of Physical Fitness



Physical Fitness (A1 size)
Code: PE 01 (Refreshed)



Agility (A1 size)
Code: PE 02 (Refreshed)



Balance (A1 size)
Code: PE 03 (Refreshed)

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Posters – Components of Physical Fitness

BODY COMPOSITION

Body Composition is the percentage of body weight that is fat, muscle and bone. It is a health-related component of physical fitness.

SOMATOTYPING

Identifying body type is often misleading. There are many variations in human somatotypes.

Most people fall somewhere in between the extreme body types.

Extreme Endomorph - Wide shoulders, narrow hips, thick neck, fat around the waist.

Extreme Mesomorph - Medium shoulders, medium hips, medium neck, moderate fat.

Extreme Ectomorph - Narrow shoulders, narrow hips, thin neck, little fat.

SKINFOLD CALIPER

Body composition can be measured using a skinfold caliper. Take a pinch of skin with your index finger and thumb, and hold the caliper against it.

Take measurements from your: **Waist (suprailiac) - Front arm (biceps) - Back arm (triceps) - Back (subscapular)**

The average 18-29 year old male has 14.1% body fat, and the average 18-29 year old female has 21.2%. The average teenager that carries body fat percentages with males being 6.7% and females having 15.2%.

SPORTING RELEVANCE

Different body types are suited to different sports.

Endomorph - Suited to activities that require power and endurance (e.g. American football, basketball, and rugby).

Mesomorph - Suited to activities that require strength, agility and speed (e.g. soccer, tennis, and track).

Ectomorph - Suited to endurance activities (e.g. long-distance running and cycling).

Body Composition (A1 size)
Code: PE 04 (Refreshed)

CARDIOVASCULAR FITNESS

Cardiovascular Fitness is the ability to perform the work being done for prolonged periods of time, without being out of breath. It is a health-related component of physical fitness.

The cardiovascular system, which consists of the heart, arteries and blood vessels, vascular, functions based around the lungs to deliver oxygen to energy demanding.

COOPER'S 12-MINUTE RUN

This test entails running as far as possible in 12 minutes, preferably around a 200 or 400 metre track. It is easy to record the distance covered.

After you have finished, calculate your distance in metres and compare your result to the normative data for the Cooper's 12-minute run test as shown in the table below.

Age	Excellent	Good	Average	Poor
Male				
15-19	>3,000	>2,500	>2,000	<2,000
17-19	>3,000	>2,700	>2,300	<2,300
Female				
15-19	>2,100	>1,800	>1,500	<1,500
17-19	>2,100	>1,900	>1,700	<1,700

An Olympic Standard 400m runner would expect to run over 400m in the 12 minutes.

IMPROVING YOUR CARDIOVASCULAR FITNESS

You can improve your cardiovascular fitness by increasing your aerobic energy output. This can be done by increasing the intensity and duration of your cardiovascular exercise.

Interval training is a type of cardiovascular exercise that involves alternating periods of high intensity and low intensity activity.

Interval training can be done in many ways, including running, cycling, swimming, and rowing.

SPORTING RELEVANCE

Cardiovascular endurance is essential for sports that involve prolonged periods of aerobic, low to long-distance running, swimming, cycling and rowing. It is also essential for most individual and team sports, including soccer, tennis, basketball, rugby and rowing.

Cardiovascular Fitness (A1 size)
Code: PE 05 (Refreshed)

COORDINATION

Coordination is the ability to use a combination of body parts and senses of the same time to produce smooth and efficient movements. It is a health-related component of physical fitness.

ALTERNATE HAND WALL THROW

The Alternate Hand Wall Throw measures hand-eye coordination.

To perform this test, stand two metres from a wall, throw a ball against the wall with one hand and catch it with your other hand. Repeat this with alternate hands until you reach the number of successful catches in 30 seconds.

Normative data for the alternate hand wall throw test is shown in the table below.

Age	Excellent	Good	Average	Poor
>15	>35	24-35	30-25	24-20
<20				

IMPROVING COORDINATION

Coordination and motor skills are the basis of all sports. They can be improved through practice and training.

Coordination and motor skills are also essential for many occupations, such as driving a car, operating a machine, and performing a job that requires fine motor skills.

SPORTING RELEVANCE

Most sports require a degree of coordination. Good coordination will help improve performance.

Hockey - Controlling the ball

Soccer - Kicking the ball

Tennis - Controlling the ball

Football - Controlling the ball

Co-ordination (A1 size)
Code: PE 06 (Refreshed)

FLEXIBILITY

Flexibility is the range of movement around a joint. It is a health-related component of physical fitness.

SIT AND REACH TEST

The Sit and Reach Test measures lower back and hamstring flexibility.

To perform this test, sit on the floor with your legs straight in front of you and the soles of your feet against the reach device. Reach forward as far as you can, hold for three seconds and record the distance reached in centimetres.

Normative data for the sit and reach test is shown in the table below.

Gender	Age	Excellent	Good	Average	Poor
Male	16-19	>14	14-11	10-9-7	6-9-4
Female	16-19	>15	15-12	11-9-7	6-9-4

IMPROVING FLEXIBILITY

You can improve your flexibility through static and dynamic stretching. Static stretching involves holding a stretch for a period of time, while dynamic stretching involves moving through a range of motion.

Static stretching is best for improving flexibility, while dynamic stretching is best for improving performance.

SPORTING RELEVANCE

Flexibility is an important attribute in many sports, especially those that require a wide range of motion, such as soccer, basketball, and swimming.

Tennis Serve - Shoulders & arms

Handball - Hips & legs

Gymnastic Skills - Hips & legs

Swimming - Shoulders & arms

Flexibility (A1 size)
Code: PE 07 (Refreshed)

MUSCULAR ENDURANCE

Muscular Endurance is the ability to perform the work being done for prolonged periods of time, without being out of breath. It is a health-related component of physical fitness.

ABDOMINAL CURL TEST

This test entails performing 20 sit-ups as fast as possible until you are unable to lift your feet from the floor.

You must perform at least 20 sit-ups as fast as possible until you are unable to lift your feet from the floor.

The number of sit-ups completed is your score.

Normative data for the abdominal curl test is shown in the table below.

Gender	Age	Excellent	Good	Average	Poor
Male	16-19	>15	15-14	10-9-7	7-9-7
Female	16-19	>15	15-14	10-9-7	7-9-7

IMPROVING YOUR MUSCULAR ENDURANCE

You can improve your muscular endurance by training your muscles to contract for longer periods of time.

Cardio, fitness and weight training are all great types of training that can help improve muscular endurance.

SPORTING RELEVANCE

Muscular endurance is needed in a huge variety of sporting activities, in addition to long distance events such as running, swimming, rowing and cycling. Muscular endurance is a key attribute in many team and individual sports such as football, tennis, soccer and rowing.

Swimming - Rowing

Cycling - Rowing

Rowing - Rowing

Rowing - Rowing

Muscular Endurance (A1 size)
Code: PE 08 (Refreshed)

POWER

Power is the combination of strength and speed of movement. It is a health-related component of physical fitness.

VERTICAL JUMP TEST

The Vertical Jump Test measures leg power.

To perform this test, stand with your feet shoulder-width apart and your hands at your sides. Jump as high as you can, touching the wall with your fingertips. Measure the height of your jump in centimetres.

Normative data for the vertical jump test is shown in the table below.

Gender	Age	Excellent	Good	Average	Poor
Male	16-19	>42	42-39	39-36	33-31
Female	16-19	>39	39-36	36-33	31-28

IMPROVING POWER

You can improve power through training that involves explosive and dynamic movements, such as plyometrics or weight training using heavy weights and short rest periods.

SPORTING RELEVANCE

Most sports require a degree of power, and increasing your power can help improve performance.

Football - Kicking the ball

Baseball - Hitting the ball

Javelin - Throwing the javelin

Weightlifting - Pressing the weight

Power (A1 size)
Code: PE 09 (Refreshed)

REACTION TIME

Reaction Time is the time taken to react to a stimulus. It is a health-related component of physical fitness.

RULER DROP TEST

The Ruler Drop Test measures reaction time. The test is performed with a partner who holds the ruler.

As your partner holds the ruler, stand with your hand in front of you and position the ruler in between your index finger and thumb. The top of your index finger should be level with the 0 cm on the ruler.

Your partner then drops the ruler and you must catch the ruler as quickly as possible. Measure the point at which you caught the ruler from the top of your thumb. Repeat two more times, and then take an average of your three scores.

Normative data for the ruler drop test is shown in the table below.

Excellent	Good	Average	Poor
<7.5	<8	<9	<10

IMPROVING REACTION TIME

Reaction time is an intrinsic skill. However, it can be improved through practice. For example, a sprinter can practice reacting to a starting pistol, or a football goalkeeper can practice reacting to a shot. Reaction time can also be improved by reading the situation and anticipating the stimulus.

SPORTING RELEVANCE

The ability to react quickly to a stimulus is required in most sports.

Cricketer - A batsman reacting to a ball

Table Tennis - A player reacting to a ball

Football - A goalkeeper reacting to a shot

Rugby - A player reacting to a ball

Reaction (A1 size)
Code: PE 10 (Refreshed)

SPEED

Speed is the ability to move your body, or part of your body, quickly. It is a health-related component of physical fitness.

30-METRE DASH

The 30 Metre Dash is used to measure maximum sprint speed. It involves running 30 metres as fast as possible, with a rolling start already underway. This is recorded in seconds.

Normative data for the 30-metre dash test in seconds is shown in the table below.

Gender	Age	Excellent	Good	Average	Poor
Male	16-19	<4	4-4.2	4.21-4.4	4.41-4.6
Female	16-19	<4	4-4.6	4.61-4.8	4.81-5

Once your time has been recorded, you can calculate your speed in metres per second.

Your time: 4.4 Distance: 30m Your speed: 6.82 m/s
Time: 4.5

IMPROVING SPEED

Speed can be improved through training methods that concentrate on strength, power and technique.

Video analysis and practicing the activity will improve technique, whereas interval, weight and plyometric training will improve strength and power.

Flexibility training can also help improve speed by increasing the range of movement of joints.

SPORTING RELEVANCE

Speed is essential in many sports, especially for running. However, it is also needed for specific movements, that require a certain amount of speed to be achieved, such as soccer, basketball, and tennis.

Weightlifting - Pressing the weight

Rugby - Kicking the ball

Javelin - Throwing the javelin

Hockey - Chipping the puck

Speed (A1 size)
Code: PE 11 (Refreshed)

MUSCULAR STRENGTH

Muscular Strength involves applying a force to overcome resistance. It is a health-related component of physical fitness.

There are three main types of Muscular Strength:

- Static** - To apply a force to a fixed object. Muscles length stays the same throughout the lift.
- Dynamic** - To repeatedly apply a force to a moving object. Muscles length often frequently changes throughout the lift.
- Explosive** - To apply a force to a fixed or moving object. Muscles contract at a high speed.

HAND GRIP DYNAMOMETER TEST

The test involves squeezing the dynamometer grip together with maximum effort, and measures maximum and then minimum force. Normative data for the hand grip test is shown in the table below.

Gender	Age	Excellent	Good	Average	Poor
Male	16-19	>56	56-51	51-45	44-39
Female	16-19	>36	36-31	31-25	24-19

IMPROVING MUSCULAR STRENGTH

Weight training is a great way to improve muscular strength. Before a single three-day training programme, you should perform a general strength test to establish a baseline. At the end of each session, you should perform a full warm-up and use the correct technique.

Day	Body Parts	Exercise 1	Exercise 2	Exercise 3	Exercise 4
1	Chest, Triceps, Abdominals	Barbell Bench Press	Triceps Pushdown	Plank	Crunches
2	Back, Biceps, Abdominals	Lat Pull Down	Biceps Curl	Plank	Crunches
3	Legs	Squats	Lunges	Leg Press	Core

SPORTING RELEVANCE

Static: A batsman reacting to a ball

Dynamic: Cycling, Swimming, Rock climbing

Explosive: Throwing a ball, Weight lifting

Muscular Strength (A1 size)
Code: PE 12 (Refreshed)

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Posters – Health & Exercise

SAFETY IN SPORT

All physical activity involves the risk of injury. Therefore, it is important to know the rules and how they can be reduced.

BODY
Always complete a full warm-up and cool-down.
Warm-up: Perform a light aerobic activity to increase blood flow and stretch muscles to avoid injury.
Cool-down: Gradually reduce the level of activity to help with the disposal of lactic acid and avoid muscle stiffness.

RULES
Many sports have rules that are implemented to improve safety and protect the participants.
Learn and practice common sporting activities to ensure that participants adhere to the rules, which reduce the risk of injury.

EQUIPMENT
Equipment must be safe and in good working order. For example, do not use damaged or broken apparatus in the gymnasium.
Always strap sports and safety equipment to prevent injury – for example, pad protection in hockey.

ABILITY
Ability levels vary greatly in sport. Therefore, it is important to group participants of similar ability to ensure there is balanced competition.
Age, weight and skill level should be used to identify ability levels and group participants, particularly in contact activities.

KIT
To avoid injury in sport, it is imperative that the appropriate clothes and footwear are worn.
For example, football players must wear their pads and shined football shoes to protect themselves from being gored and various other injuries whilst playing.

SURFACE
Before a sporting activity, evaluate the surroundings and surface risk assessment to ensure it is safe for the activity.
Choose the surface to be used from other surfaces (grass, parkland and school) to avoid unnecessary risk or injury.

REMEMBER!
In addition to the above precautions, correct techniques must be used and coaches' instructions followed. Always be responsible for your own safety.

Safety In Sport (A1 size)
Code: PE 13 (Refreshed)

THE SHORT-TERM EFFECTS OF EXERCISE

When we exercise, the working muscles require more oxygen and the following changes occur:

RESPIRATORY SYSTEM
The respiratory system responds to physical activity by increasing the rate and depth of breathing to increase oxygen delivery and carbon dioxide removal.
Respiratory rate: the number of breaths per minute increases.
Tidal volume: the volume of air inhaled and exhaled in one breath, increases.
The rate of gaseous exchange increases.

CARDIOVASCULAR SYSTEM
The cardiovascular system responds to physical activity by increasing blood flow to the working muscles to increase oxygen delivery and carbon dioxide removal.
Heart rate: the number of heart beats per minute increases.
Stroke volume: the amount of blood pumped out of the left ventricle in one contraction increases.
Cardiac output: the volume of blood pumped by the heart per minute increases.
Vasoconstriction: blood vessels leading to the working muscles open (dilate) to increase blood flow.
Vasodilatation: blood vessels leading to the digestive system close (contract) to reduce blood flow.
Blood vessels near the skin open to allow heat to escape.

MUSCULAR SYSTEM
During exercise your working muscles require an increased supply of oxygen and glucose to create energy in the form of adenosine triphosphate (ATP).
Increased muscle contraction.
Carbon dioxide production increases.
These organs are not available, lactic acid is created.
Muscle fatigue.
Muscle temperature increases.

Short Term Effects of Exercise
Code: PE 14 (Refreshed) (A1 size)

THE LONG-TERM EFFECTS OF EXERCISE

Regular exercise has many benefits for your health and fitness. It can help you to lose weight, improve your mood, and reduce your risk of heart disease, diabetes, and other chronic conditions.

THE CARDIOVASCULAR SYSTEM
Regular exercise helps to maintain blood pressure.
It can help to reduce the risk of heart disease and stroke.
It can help to improve the efficiency of the heart and blood vessels.
It can help to reduce the amount of cholesterol in the blood.
It can help to reduce the risk of atherosclerosis.

THE RESPIRATORY SYSTEM
Regular exercise helps to improve lung capacity.
It can help to reduce the risk of respiratory infections.
It can help to improve the efficiency of the respiratory system.
It can help to reduce the risk of chronic obstructive pulmonary disease (COPD).

THE MUSCULOSKELETAL SYSTEM
Regular exercise helps to maintain muscle mass.
It can help to reduce the risk of osteoporosis.
It can help to improve the strength and endurance of the muscles.
It can help to reduce the risk of injury.

HEALTHY FITNESS BENEFITS
Regular exercise helps to improve your mood.
It can help to reduce stress and anxiety.
It can help to improve your sleep.
It can help to reduce your risk of depression.

Long Term Effects of Exercise
Code: PE 15 (Refreshed) (A1 size)

Exercise More!

Many people believe exercise is only for those who take part in competitive sports, games, fitness and body building. In fact, exercise is something we all should do regularly.

How Much is Good?
Surprisingly, very little is needed to make a big difference. About 20-30 minutes a week is a good start. Just think about how much time you spend sitting at your computer, watching TV, how you use your phone that won't leave you exhausted.

Popular Exercises
Rugby, Basketball, Running, Football, Cycling, Swimming.

Simple Exercises
Some exercises can be done without even thinking about it!
Walking the Dog, Housework, Climbing the Stairs, Cleaning the Car, Dancing, Shopping.

Remember: Try yourself!
If you don't enjoy the exercise you take up, the chances are you won't keep it up. Whatever you do must be enjoyable and leave you feeling good. If you don't like it, change the amount or type of exercise.

Exercise More (A1 size)
Code: PE 30 (Refreshed)

Why Exercise?

Regular physical activity is very important for all people who want to lead a healthy and fulfilling life. Here are some of the reasons why.

- Exercise increases your energy.
- Exercise increases your strength and muscle tone.
- Exercise helps you sleep more restfully.
- Exercise burns off unwanted calories.
- Exercise improves your circulation.
- Exercise helps your joints stay loose and supple.
- Exercise improves endurance.
- Exercise helps relieve stress.
- Exercise helps provide you with a good posture.
- Exercise increases your ability to concentrate and learn.
- Exercise makes you happy.

Why Exercise (A1 size)
Code: PE 31 (Refreshed)

MOTIVATION

Motivation is what makes you want to do something.

To be motivated to learn we need to know how learning will help us achieve our goals.

Goals can be specific, broad or a mixture.
Goals can be vague, clear or be unrealistic.

Goals are broken down into smaller steps which we call targets.
We need to make sure that targets are:

- POSITIVE** - What do I want to achieve?
- MEASURABLE** - How do I know when I have hit my target?
- ACHIEVABLE** - Can I do this in the time I have available?
- REALISTIC** - Am I really able to do this?
- WELL-TIMED** - Have I set myself a deadline for this target?

The most important targets are those which we set ourselves.

Targets are the milestones which show the road to the goal.
Show the road to the goal.

Remember when you are going well motivate you to stay on the road to learning.

Motivation (A1 size)
Code: MOT 01

TEAMWORK

Teamwork is the ability to work together to achieve a common goal. Motivation and morale increase when people feel part of a team.

Individuals have to rely on their own knowledge and skills. It is essential for a group of individuals who offer motivation, ideas, thoughts, and skills.

TOGETHER
EVERYONE
ACHIEVES
MORE

THE KEY TO TEAM SPIRIT

- Communicate and work with those who are different from you.
- Share and help each other.
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Communicate and work with those who are different from you. Share and help each other.

Teamwork (A1 size)
Code: MOT 07

JOINTS

Joints are where two or more bones meet. There are three main types of joint.

- Immovable joints (e.g. skull) allow little or no movement.
- Partially movable (cartilaginous) joints (e.g. spine) allow a limited range of movement.
- Fully movable (synovial) joints (e.g. elbow) allow free movement.

FREELY MOVABLE (SYNOVIAL) JOINTS
Bones at freely movable joints are held together by connective tissue.
Ligaments are fibrous tissues that connect bones to connective tissue.
The ends of bones are covered in cartilage to aid movement and stop the bones from rubbing together.
Synovial fluid reduces friction at joints, allowing movement to be smooth.

TYPES OF SYNOVIAL JOINTS

- Hinge**: Provides movement in one plane for flexion and extension. Example: enables flexion and extension of the elbow when performing a push-up.
- Ball and Socket**: Provides 360° rotation and movement in all planes for flexion, extension, abduction and rotation. Example: enables rotation of the arm when handling.
- Pivot**: Provides rotational movement around a single axis. Example: enables rotation of the neck when looking at a friend while sitting.
- Condyloid**: Provides movement in two planes for flexion and extension, abduction and rotation. Example: enables rotation and flexion of the wrist when holding a tennis racket.

RANGE OF MOVEMENT

- Flexion**: When the angle at a joint decreases.
- Extension**: When the angle at a joint increases.
- Abduction**: Movement away from the midline of the body.
- Adduction**: Movement towards the midline of the body.
- Rotation**: A turning movement around an axis.

Joints (A1 size)
Code: SC 06 (Refreshed)

HOW MUSCLES WORK

The human body contains more than 600 muscles, of which there are three main types.

- Cardiac Muscles**: Involuntarily controlled. Found in the walls of the heart. Cannot fatigue.
- Smooth Muscles**: Involuntarily controlled. Found in the walls of hollow organs such as the intestines.
- Skeletal Muscles**: Voluntarily controlled. Found throughout the body, attached to bones by tendons.

ANTAGONISTIC MUSCLE PAIRS
Muscles contract to pull bones, but they cannot push them. Therefore, in order to achieve a full range of movement, muscles have to work in pairs. These muscles are called antagonistic pairs.

Flexing the Arm
The biceps and triceps are antagonistic muscles that work together to bend and straighten the arm.

- Flexing the Arm**: Antagonist: Triceps relax to allow the movement to happen. Agonist: Biceps contract to allow flexion of the arm.
- Straightening the Arm**: Antagonist: Biceps relax to allow the movement to happen. Agonist: Triceps contract to allow extension of the arm.

Swinging the Leg
The hamstrings and quadriceps are antagonistic muscles that work together to bend and straighten the leg.

- Swinging the Leg**: Antagonist: Hamstrings relax to allow the movement to happen. Agonist: Quadriceps contract to allow flexion of the leg.
- Swinging the Leg**: Antagonist: Quadriceps relax to allow the movement to happen. Agonist: Hamstrings contract to allow extension of the leg.

How Muscles Work (A1 size)
Code: SC 07 (Refreshed)

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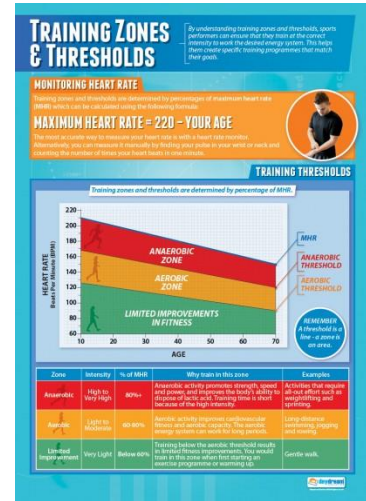
Posters – Training Methods, Skills & Diet



Principles of Training (A1 size)
Code: PE 16 (Refreshed)



Training Methods (A1 size)
Code: PE 17 (Refreshed)



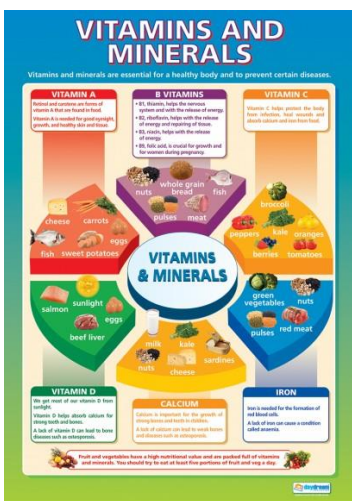
Training (A1 size)
Code: PE 18 (Refreshed)



Periodisation (A1 size)
Code: PE 19



Classification of Skills (A1 size)
Code: PE 20 (Refreshed)



Vitamins & Minerals (A1 size)
Code: DT 20 (Refreshed)



Nutrition (A1 size)
Code: DT 32 (Refreshed)



The Food Pyramid (A1 size)
Code: PE 29 (Refreshed)

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New Posters

GENERAL HEALTH

There are a number of lifestyle choices that can affect your health and sporting performance.

SMOKING

Respiratory effects on health:
High blood pressure and heart rate
Increased risk of coronary heart disease (CHD), lung cancer, bronchitis, and emphysema
Higher risk of complications during medical operations
Reduced lung capacity and reduced health performance
Increased risk of respiratory infections in the chest and reduced oxygen carrying capacity. Causes chronic bronchitis and emphysema, which makes it difficult to take part in endurance sports.

ALCOHOL

Respiratory effects on health:
Liver damage
Highly addictive with high alcohol content
Psychological problems such as depression
Higher risk of falls and injury from slips, trips and falls
Possible effects on sporting performance:
Loss of concentration and coordination
Reduced reaction time
Reduced speed and accuracy in sports where a high level of skill is required
Reduced ability to take part in team sports

DRUGS

Performance enhancing drugs: Athletes who gain an advantage from artificial or prohibited substances are called performance enhancing drug users. Some of the most commonly used performance enhancing drugs are:
Stimulants: Stimulants increase the heart rate and blood pressure, which can improve performance. However, they can also increase the risk of heart disease and stroke.
Anabolic steroids: Anabolic steroids increase muscle mass and strength, but they can also cause liver damage and other health problems.
Diuretics: Diuretics are used to reduce body weight, which can be an advantage in sports where weight is a factor. However, they can also cause dehydration and other health problems.

PERSONAL HYGIENE

Having a good level of personal hygiene will help prevent infections and illness.
To be in a good level of personal hygiene you need to:
Wash regularly and dry yourself thoroughly
Brush your teeth at least twice a day and use the dental floss regularly
Clean your clothes, especially after taking part in a physical activity
Prevention of ear, nose and throat infections:
Bad breath, tooth decay or gum disease
Stuffy nose
Allergies, hay fever and sinusitis
Increased risk of illness

ENVIRONMENT

Respiratory effects on health:
Stress and tiredness from high noise levels
Respiratory problems caused by pollution
Cardiovascular disease by high humidity levels
Possible effects on sporting performance:
The weather conditions can cause people to be distracted. For example, rain can make pitches too slippery for play and reduce the grip on a tennis racket. High humidity can make it difficult to breathe and can cause dehydration. High temperatures can cause heat stress and dehydration, which can lead to illness.

General Health (A1 size)
Code: PE 34 (NEW)

HEALTHY ACTIVE LIFESTYLE

A healthy active lifestyle helps regular physical activity and contributes to physical fitness and overall well-being.

PHYSICAL BENEFITS

Fitness:
Fitness is the ability to respond to the demands of your environment, which is different for everyone. Fitness benefits include:
Improved strength and muscular endurance
Improved cardiovascular fitness
Improved flexibility
Health:
Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Health benefits include:
Stronger bones
Reduced chance of disease and illness such as coronary heart disease, obesity and stroke
Increased life expectancy

SOCIAL BENEFITS

Participating in physical activity can help:
Meet new people
Improve mood
Improve social skills
Improve communication skills
Improve teamwork and cooperation skills
Improve confidence

MENTAL BENEFITS

An active lifestyle can improve mental health. Physical activity can help:
Reduce stress and tension
Reduce the chance of developing stress-related illnesses, such as depression
Improve confidence
Increase serotonin levels and improve mood

REASONS FOR TAKING PART IN PHYSICAL ACTIVITY

- Competition – making your efforts to achieve personal goals and achieve a common goal
- Challenge – pushing yourself mentally and testing yourself against others
- Physical Challenge – pushing yourself outside of your comfort zone
- Aesthetic Appreciation – appreciating the quality and visual beauty of a performance
- Friendship and socialising – developing bonds with other participants

Healthy Active Lifestyle (A1 size)
Code: PE 35 (NEW)

PARTICIPATION ROLES

As a participant, you can play a role in your own performance and the performance of others.

ROLES

Participant: A person who takes part in a sport or game.
Observer: A person who watches a sport or game.
Referee: A person who makes decisions about the rules of a sport or game.
Coach: A person who trains and guides participants.
Manager: A person who is responsible for the overall running of a team or organization.
Supporter: A person who provides support and encouragement to participants.

QUALITIES

High level of fitness to take part in training and competition.
High ability to learn to complete and improve performance.
Highly motivated to continue training even when unsuccessful.
Good knowledge including fundamental skills and techniques.
Good communication skills to manage teams and training.
Good organizational skills and the ability to act as an advisor.
Good analytical skills to assess standard of performance.
Good leadership skills to encourage high performance.
Good time management skills to manage facilities, personnel and training.
Good time management skills and the ability to meet deadlines.
Ability to maximize performance and participation.
Flexibility and a willingness to take on new responsibilities.
Talent to create, design and arrange performances.
Good communication skills to convey ideas and concepts.
Strong knowledge of choreography as well as dance and movement techniques.
Strong analytical skills to assess standard of performance.
High level of fitness to keep pace with the activity.
Good communication skills to make decisions.
Decisive and quick at making decisions.
Strong knowledge of the game's rules and regulations to ensure that they are followed.

SPORTS PARTICIPATION PYRAMID

In the UK, there are four stages of participation to sports, as illustrated in the sports participation pyramid.
The pyramid focuses on how the level of participation in sports, as illustrated in the sports participation pyramid, changes over time.
Foundation: People choose to participate in a specific sport. Participation is low and is supported by national governing bodies.
Participation: People perform competitively against national and international levels and are supported by national governing bodies.
Performance: People perform competitively against national and international levels and are supported by national governing bodies.
Elite: People perform competitively against national and international levels and are supported by national governing bodies.

Participation Roles (A1 size)
Code: PE 37 (NEW)

SMART TARGETS

When you set a target, it is important to set it right and goals. SMART targets will help you:
Stay motivated and focused
Monitor your progress
Plan your training sessions

SPECIFIC

Clearly explain what you want to achieve and ensure your target is specific and relevant.
✓ **Specific:** I want to improve my pass completion percentage.
✗ **Not Specific:** I want to be better at football.

MEASURABLE

Set measurable targets so you can track your progress and measure your target has been achieved.
✓ **Measurable:** I want to improve my 50-4m time by five minutes.
✗ **Not Measurable:** I want to be better at cycling.

ACHIEVABLE

Set targets that you have the ability to reach. Unachievable targets are demotivating and result in failure.
✓ **Achievable:** I want to improve my shooting accuracy by 10%.
✗ **Not Achievable:** I want my shooting accuracy to be 100%.

REALISTIC

Always keep SMART in mind. For you personally, factors such as work and injuries, affect your ability to meet your targets. At each step, the next target should be realistic.
✓ **Realistic:** I want to train three days a week.
✗ **Not Realistic:** I want to train seven days a week.

TIMED

Create a timeframe for you to achieve your targets. Set an end point so you know when your target has been achieved.
✓ **Timed:** I want to finish my personal best (PB) within two months.
✗ **Not Timed:** I want to improve my accuracy.

Having SMART targets will motivate you to stay on track!
Always check that your targets are SMART!
✓ Specific ✓ Measurable ✓ Achievable ✓ Realistic ✓ Timed

Smart Targets (A1 size)
Code: PE 39 (NEW)

EXERCISE SESSIONS

All exercise sessions, whether aerobic or anaerobic, should consist of a warm-up, a main session and an end-of-session.

WARM-UP

A warm-up session prepares the body, physically and mentally, for the main exercise activity and reduces the risk of injury. A warm-up should be specific to your activity and include the following:
A Pulse Raiser: Raising your pulse through gentle aerobic activity will help warm up your muscles and prepare your body for the main session.
Stretching: Helps and prepares stretching. Helps improve range of motion and reduces the risk of injury.
Drills: A warm-up should include drills that are specific to your activity. This helps to prepare your body for the main session.

MAIN SESSION

The main session can be a training programme or a game or match. If the main session is a training programme, it is vital to ensure it is tailored to meet your specific needs and incorporate the principles of training.
COOL-DOWN
An effective cool-down aids recovery, reduces heart rate and helps with the removal of lactic acid and other waste products.
Take a warm-up, a cool-down should include light cardio exercise and stretching. This helps to slowly return the heart rate and breathing rate to resting rates. Increase muscle tension and return muscles to a pre-exercise state.

Exercise Sessions (A1 size)
Code: PE 40 (NEW)

SPECIFIC SPORTS NUTRITION

A balanced diet is one that includes a variety of nutrients, including carbohydrates, proteins, fats, vitamins, minerals and water.

LEVEL OF PARTICIPATION

Having food provides the body with energy. Therefore, the amount of food and energy you need depends on the level of participation in physical activity. The more active you are, the more food and energy you need.
Energy Balance: Energy balance is the balance between the energy you take in from food and the energy you use. If you take in more energy than you use, you will gain weight. If you take in less energy than you use, you will lose weight. If you take in the same amount of energy as you use, you will maintain your weight.

WHEN TO EAT

It is vital to consume the right foods at the right time when exercising.
Before Exercise: Eat a meal 2-3 hours before exercising. This meal should be high in carbohydrates and low in fat and protein. This helps to provide energy for the main session.
During Exercise: Drink water regularly to stay hydrated. Consume carbohydrates during exercise to provide energy. Consume protein after exercise to help with muscle recovery.
After Exercise: Eat a meal 1-2 hours after exercising. This meal should be high in carbohydrates and protein. This helps to provide energy for the main session and aid muscle recovery.

DIFFERENT DIETS FOR DIFFERENT SPORTS

High-protein Diet: Protein is broken down into amino acids, which help grow and repair muscle tissue. High-protein diets can be difficult to digest and should be avoided before training or competing.
Carbo-loading: Carbo-loading increases the amount of glycogen stored in the muscles and provides a slow-release form of energy that helps to delay fatigue.
Low-carbohydrate Diet: Low-carbohydrate diets can be found in foods such as nuts, seeds and oils. They are generally high in protein.
Low-fat Diet: Low-fat diets can be found in foods such as lean meats, fish, and vegetables. They are generally high in protein and carbohydrates.

Specific Sport Nutrition (A1 size)
Code: PE 41 (NEW)

WEIGHT-RELATED CONDITIONS

Having a healthy weight is important for overall health and performance. Weight-related conditions can affect your health and performance.

OPTIMUM WEIGHT

Optimum weight is the weight that allows you to perform at your best. It is determined by your height, age, sex, muscle mass, and bone structure.
Anorexia: Anorexia is a mental health condition where a person has a distorted view of their weight and body image. It leads to extreme weight loss and can be life-threatening.
Underweight: Underweight is a condition where a person's weight is significantly below their healthy weight. It can lead to health problems and affect performance.
Overweight: Overweight is a condition where a person's weight is significantly above their healthy weight. It can lead to health problems and affect performance.
Obesity: Obesity is a condition where a person's weight is significantly above their healthy weight. It can lead to health problems and affect performance.

Weight Related Conditions (A1 size)
Code: PE 42 (NEW)

PERFORMANCE-ENHANCING DRUGS

Performance-enhancing drugs can improve performance, but they can also have side effects. It is important to understand the risks of these drugs.

BETA BLOCKERS

Reduce heart rate and lower blood pressure. They can be used to improve performance in sports where a low heart rate is an advantage.
NARCOTICS/ANALGESICS
Reduce pain and inflammation. They can be used to improve performance in sports where pain is a barrier.
STIMULANTS
Increase heart rate and blood pressure. They can be used to improve performance in sports where a high heart rate is an advantage.
DIURETICS
Reduce body weight by increasing fluid loss. They can be used to improve performance in sports where weight is a factor.
ANABOLIC STEROIDS
Increase muscle mass and strength. They can be used to improve performance in sports where muscle mass is an advantage.
PEPTIDE HORMONES
Increase muscle mass and strength. They can be used to improve performance in sports where muscle mass is an advantage.

Performance Enhancing Drugs (A1 size)
Code: PE 43 (NEW)

INJURIES

Injuries can occur in a variety of ways and can affect performance. It is important to understand the causes and prevention of injuries.

CAUSES

Intensity caused injury: Intensity caused injuries occur when the intensity of the activity is too high for the individual. These include muscle strains, sprains, and stress fractures.
Environment caused injury: Environment caused injuries occur when the environment is not suitable for the activity. These include slips, trips, and falls, and heat-related injuries.
Equipment caused injury: Equipment caused injuries occur when the equipment is not suitable for the activity. These include injuries from poorly maintained equipment and equipment that is not used correctly.

COMMON INJURIES

Hamstring Strain: A tear or pull of the hamstring muscle. It is caused by overexertion or a sudden increase in speed.
ACL Injury: A tear or pull of the anterior cruciate ligament. It is caused by a sudden change in direction or a landing from a jump.
Knee Injury: A general term for any injury to the knee joint. It can be caused by a variety of factors, including overexertion and poor technique.
Shoulder Injury: A general term for any injury to the shoulder joint. It can be caused by a variety of factors, including overexertion and poor technique.
Concussion: A blow to the head that causes a temporary loss of consciousness. It is caused by a sudden impact to the head.
Open Soft Tissue Wound: A wound where the skin is broken and the underlying tissue is exposed. It is caused by a sharp object or a fall.
Closed Soft Tissue Wound: A wound where the skin is not broken but the underlying tissue is damaged. It is caused by a blunt object or a fall.

RICE PRINCIPLE

The RICE principle is used to rest, ice, compress and elevate injured tissue to reduce swelling and pain.
R - Rest: Stop taking part in physical activity and rest the injury.
I - Ice: Apply an ice pack to the injury.
C - Compression: Apply a bandage or elastic bandage to the injury.
E - Elevation: Elevate the injured limb above the level of the heart.

Injuries (A1 size)
Code: PE 44 (NEW)

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New Posters

ANAEROBIC RESPIRATION

Anaerobic respiration is a type of respiration that does not use oxygen. It occurs when there is not enough oxygen for aerobic respiration.

HOW IT WORKS

Anaerobic respiration takes place when the body is unable to supply muscles with sufficient oxygen for aerobic respiration. It is anaerobic because it does not use oxygen.

GLUCOSE → ENERGY + LACTIC ACID

Glucose is broken down to produce energy and lactic acid.

Anaerobic respiration produces approximately 7-10% of the energy that can be produced through aerobic respiration. Lactic acid can cause muscle pain and cramps.

OXYGEN DEBT AND RECOVERY

Oxygen debt refers to the extra oxygen that is needed after intense aerobic exercise to convert lactic acid into waste products carbon dioxide and water, that can be removed from the body.

To facilitate this process we:

- Take deeper or quicker breaths to help with the intake of oxygen and removal of carbon dioxide.
- Attempt to lower the body's temperature and remove excess water through sweat.
- Excrete excess water and other waste products through urine and faeces.
- A good cool down will help with the breakdown and disposal of lactic acid.

SPORTING RELEVANCE

Anaerobic respiration is used during intense exercises that require a short, sharp burst of energy.

Sport	100m Sprint	Weightlifting	Javelin
Howkey	Running for a ball	Lifting a weight as fast as possible	Throwing a javelin
Relevance	Requires 100% of energy	Requires 100% of energy	Requires 100% of energy

Anaerobic Respiration (A1 size)
Code: PE 45 **(NEW)**

THE MUSCULAR SYSTEM

The muscles contract and relax to provide us with movement. They also contract to hold things in place during movement and help maintain posture.

ANTERIOR

Deltoid
All actions of the arm at the shoulder. For example: Raising a wheelbarrow.

Biceps
Flexion of the arm at the elbow joint. For example: Pulling the handle when rowing.

Pectoralis
Responsible for movement around the shoulder joint. For example: Pushing a door open.

Abdominals
Flexion of the trunk and movement with breathing. For example: Lifting a weight.

Quadriceps
Extension of the leg at the knee joint. For example: Pushing a door open when you are sitting in a chair.

POSTERIOR

Trapezius
Extension of the neck and movement of the arm. For example: Shrugging the shoulders.

Hamstrings
Extension of the leg at the knee joint. For example: Pushing a door open when you are sitting in a chair.

Latisimus Dorsi
Extension of the arm at the shoulder joint. For example: Rowing a boat.

Gluteal Muscles
Extension of the leg at the hip joint. For example: Pushing a door open when you are sitting in a chair.

Hamstrings
Extension of the leg at the knee joint. For example: Pushing a door open when you are sitting in a chair.

Gastrocnemius
Extension of the leg at the ankle joint. For example: Pushing a door open when you are sitting in a chair.

The Muscular System (A1 size)
Code: PE 48 **(NEW)**

PLANES & AXES OF MOVEMENT

Planes and axes of movement are used to describe the direction of movement in the body.

Planes	Examples
Sagittal Plane Divides the body into anterior and posterior parts.	Flexion and extension of the arm at the elbow joint.
Frontal Plane Divides the body into superior and inferior parts.	Abduction and adduction of the arm at the shoulder joint.
Transverse Plane Divides the body into superior and inferior parts.	Internal and external rotation of the arm at the shoulder joint.

Planes & Axes of Movements
Code: PE 50 **(NEW)** (A1 size)

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