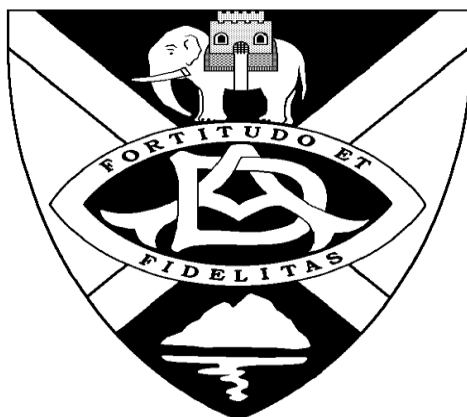


Dumbarton Academy
Physical Education
Standard Grade Course

Skills and Techniques Booklet



**DUMBARTON
ACADEMY**

Name

Teacher.....

Dumbarton Academy

Physical Education Department

Skills and Techniques

You must use this book to help you:

- Complete homework
- Learn at home
- Study for exams and tests

If you prefer to use your computer, you can get the same information on the BBC Bitesize Standard Grade Physical Education website:

www.bbc.co.uk/scotland/learning/bitesize/standard/pe/

Other resources:

- Bitesize DVD
- Evaluating DVD
- Powerpoint disk
- Past papers and answers disk

Remember: the best resource is your teacher! If you have any difficulties seek their help early.

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SKILLS AND TECHNIQUES

This revision bite will help you describe and understand a range of skills and the variety of techniques which can be applied to them.

A skill is any action that's learned for a purpose, and is needed to take part in activities.

SIMPLE AND COMPLEX SKILLS

- **Simple skills** are made up of basic movement actions and are not difficult to perform. For example: chest pass, underarm serve, push pass, straight jump.
- **Complex skills** involve a lot more thought and concentration, and are more difficult to perform. For example: handspring, lay up, overhead kick, spike.

Simple skills	Complex skills
have few sub-routines/parts	have many sub-routines/parts
have limited physical demand	may have high physical demand
may not be dangerous	may be dangerous
may have an uncomplicated order or number of movements	may have a complicated order or number of movements
may be performed under no pressure	may be performed under pressure
may involve limited decision making judgements	may involve many decision making judgements
are easier to learn	are more difficult to learn

PREPARATION ACTION AND RECOVERY

Skills may be described or analysed in terms of **preparation, action and recovery phases**. This means looking at the beginning, middle and end of how a technique is performed.

THE PREPARATION PHASE is how your body moves into position to perform a skill.

THE ACTION PHASE is the movement required to perform the main part of a skill.

THE RECOVERY PHASE is getting back into position/regaining your balance after performing a skill.

Activity	Skill	Preparation	Action	Recovery
Badminton (individual)	Overhead drop shot	Move into position under the shuttle, stand side on to the net, hold non-hitting arm up pointing at the shuttle and racket behind the head	Transfer weight from back to front foot, swing the racket forward, arm straight to strike the shuttle	Follow through down and across the body and move forward back to the ready position, watch shuttle, ready for next shot
Volleyball (team)	Volley-pass	Judging the flight of the ball move into position just behind it with fingers spread, hands at forehead, knees bent and feet apart	Straighten the legs to and extend the arms to meet the ball. Push the ball with fingertips	Follow through with the arms forward and transfer weight forward, move into ready position for the next shot

TECHNIQUES

A technique is the way of performing a skill.

Players select different techniques of a skill on the basis of:

- their **personal preference** - which technique suits their level of skill or confidence
- the **effectiveness** of the technique - which technique gives them most success
- the **situation** - which technique is best at a given time and place, and is within the rules

Here are two examples of different techniques for performing a skill -

Activity - Basketball

Skill - shooting

Technique 1 - Lay-up - used when there is no defender between you and the basket and you can drive in to shoot.

Technique 2 - Jump shot - used to elevate yourself above a defender standing in front of you stopping you getting close to the basket.

Activity - Badminton

Skill - serving

Technique 1 - Long serve - my serves were not reaching the very back of the court and my opponent had a strong smash. He was attacking my long serves and putting me under pressure

Technique 2 - Short serve - this stopped my opponent smashing, but also caused him to lift the shuttle, therefore I could put him under pressure with my smash.

What makes a skill or technique successful?

Factors which influence success include:

- **timing** - the ability to control movement so that effort occurs at the right time
- **agility** - the ability to change body shape quickly
- **co-ordination** - the ability to use muscles in the correct order
- **balance** - the ability to hold a shape using body tension

Simple skills require only low levels of timing, agility, co-ordination and balance, while most complex skills have high levels of some, or all, of these influential aspects.

HOW TO ANSWER

Question

Choose two different physical activities and two different skills. State the technique used to perform each skill and explain why you chose it.

Answer

(i) **Activity** - Badminton

Skill - Overhead shot

Technique - Drop Shot

Explanation - My opponent was at the back of the court so I played a drop-shot into the space they had left at the front.

(ii) **Activity** - Gymnastics

Skill - Rotating

Technique - Dive forward roll

Explanation - It allowed me to clear the box top during my sequence and open up space for my cartwheel.

Once you've selected two appropriate school-based activities and an appropriate skill for each, you'd get:

Two marks for each example, if there are clear explanations of why the chosen technique was relevant to the performance described.

WAYS OF DEVELOPING SKILLS

This revision bite will help you understand the different ways of developing a skill, the process of learning it, the methods of practice you might use and factors which will influence your methods.

PROCESS OF LEARNING SKILLS

The process of learning a skill normally takes place in the following manner:

1. Teacher **N**ames the skill
2. Teacher **E**xplains the skill
3. Teacher **D**emonstrates the skill
4. Learner **I**mitates the skill
5. Learner **C**orrects the faults after feedback from her teacher
6. Learner **T**rains or practises the skill

✓ You can remember this by using the mnemonic **NEDICT**.

METHODS OF PRACTICE

The two main methods of practice are whole part whole and gradual build up.

WHOLE PART WHOLE

Whole part whole is used to learn simple skills which are not dangerous. It is used when a learner has previous experience of the skill. Technical weaknesses can be identified, isolated and practised in parts and it is easier/quicker to learn.

An example of whole part whole is as follows:

Activity - Swimming

Skill - Front crawl

Whole - the swimmer attempts full front stroke and coach identifies that her legs are too far apart and is slowing her down (i.e. leg action needs practise).

Part - the swimmer does 6 breadths of legs only, with a float held in her hands, arms straight out in front.

Whole - the swimmer performs 6 breadths of full stroke, with the improved leg action.

Activity - Athletics

Skill - Long jump

Whole - the athlete attempts a long jump with a ten step run-up. The coach identifies that the run up is too slow, and not getting close enough to the take off board.

Part - the athlete practised the run up on it's on (without jump). Improving foot placement and speed of run up.

Whole - the athlete attempts full jump with improved speed and timing.

GRADUAL BUILD UP

Gradual build up is used when learning a new skill. It allows you to learn a skill which is complex or dangerous. The skill is learned in stages with each stage becoming progressively more difficult. You can master part of the skill and build up confidence before moving on to a more difficult stage and can move back a stage if you are not achieving success.

An example of gradual build up is as follows:

Activity - Basketball

Skill/technique- lay-up

Stage 1 - I practised a jumping shot with a one step run up.

Stage 2 - I practised a jumping shot, with a two step run up.

Stage 3 - I bounced the ball once and then performed two step run up and jumping shot.

Stage 4 - I dribbled the ball in to perform a lay-up.

Activity - Badminton

Skill/technique- Forehand Smash

Stage 1 - I practised playing forehand smash shots back to a feeder. Returning to centre of court each time.

Stage 2 - I practised playing forehand smash shots down the line of the court. Returning to centre of court each time.

Stage 3 - I practised playing forehand smash shots across court. Returning to centre of court each time.

Stage 4 - I chose to play a down the line or cross court smash shots as feeder tried to return. Returning to centre of court each time.

ACTIVE AND PASSIVE DEFENDERS

You can practice against active and passive defenders.

A **passive defender** puts you under little or no pressure and is not attempting to gain possession or win points. This allows you to practice under little pressure and you can concentrate on performing skills. You can get used to performing skills in game like situations, with a defender close to you.

Example

Activity - Volleyball

Skill / Technique - Spike

Our team repeatedly practiced hitting spikes to our opponents who would attempt to return it but we did not attempt to play it again.

An **active defender** puts you under pressure and is attempting to gain possession or win points. This allows you to practice skills in a game-like situation, so you can learn to cope with the demands of performing skills, under pressure.

Example

Activity - Basketball

Skill / Technique - Lay-up

I performed lay-ups repeatedly against an opponent who was making an attempt to block or win the ball.

AUTOMATIC STAGE OF LEARNING

When a skill can be performed with little or no conscious thought and at a high level of speed, control and accuracy it is said to be automatic to the performer.

A performer may use a **pressure practice** at the automatic stage of learning who can cope with the game like pressure and demands of the situation.

Example

Activity - Badminton

Skill / Technique - Smash

I was fed 20 shuttles quickly one after the other by two feeders, with me having to return to the ready position each time.

FACTORS AFFECTING PRACTICE

DURATION AND REGULARITY

You should vary the length of time you train and the number of times you practise a week. Most people learn better in the first half-hour of practice. If you practise for too long, you'll get tired, lose concentration, lose motivation, become bored and even risk injury.

ADAPTING THE ACTIVITY

Most people learn skills and techniques when they're young, but most activities are designed for adults. So, in some cases, your teachers will adapt the activity to help you learn more easily and allow you more success. Changes can be made to the equipment you use, the layout of the playing area, the rules of the activity or the number of people taking part.

PERSONAL QUALITIES

Personal qualities can influence practice. These include how motivated we are, how able we are to concentrate and whether we can co-operate with team-mates, coaches and teachers.

PHYSICAL QUALITIES

Physical qualities can influence practice. These include how strong you are (this allows you to hold a position), how quick you are in getting into position, and how good your stamina is (this allows you to practice for a long time without tiring).

VARIATION OF PRACTICE

Practices should be varied and enjoyable to keep the learner motivated and to prevent boredom. Practices should have rest periods and a learner should not spend too long practising on one specific skill to prevent boredom or possible injury. Practices must be specific to improving weaknesses in your skill or performance.

FEEDBACK

Feedback is information you receive about your performance. It is best to be given feedback immediately while it is still fresh in your mind, so that you can alter your performance of the skill and make it better. For feedback to be effective it should only involve one or two pieces of specific information, so that the performer does not get confused and can focus on one particular point. Feedback should be precise, accurate and positive.

Internal and external feedback

Feedback can have a big effect on practice situations. There are two types:

- **Internal (or kinaesthetic)** feedback is what you feel during or after you have performed or practised the skill. Your feelings provide you with information about your performance and can be very valuable in helping you to analyse it. For example you might say "I felt that I sliced across the ball in my golf swing and the ball veered off the left."

- **External** There are many different examples of external feedback

Verbal - given by a teacher/observer after watching your performance. Telling you points to improve and points you have done well. An example of this would be, "My coach told me I had to straighten my legs during my cartwheel."

Written - given by your teacher/observer and is available for you to look at, normally an observation sheet. An example of this would be, "my partner had ticked a box to identify that I was not standing side on when performing an overhead clear."

Visual - watch model performance or video and watch your own performance to see strengths and weaknesses. An example of this would be, "I was videoed when performing my gymnastics routine so I could watch it back to identify weaknesses."

Knowledge of results - scores and results or where the ball/shuttle goes. An example of this would be, "I saw that my badminton long serve was landing in the middle of my opponents court enabling my opponent to play an attacking shot."

HOW TO ANSWER

Question

A skill or technique can be developed using gradual build up.

Select an activity.

Name a skill or technique that you have practised in stages.

Describe three practice stages you used to develop this skill or technique.

Activity - Swimming

Skill/Technique - Front crawl

Stage 1 - I held a float in front and practised pushing and gliding from the wall.

Stage 2 - I continued my push and glide but added the leg action.

Stage 3 - I continued my push and glide but added the whole stroke.

Once you've selected an appropriate school-based activity and an appropriate skill/technique, you'd get:

Two marks for describing each stage.

MECHANICAL PRINCIPLES

This revision bite helps you understand the key movements and positions which affect skills and techniques.

HOLDING A BALANCE

Balance is holding your body weight and centre of gravity over or through your base of support. Balance can be static, for example a headstand, or dynamic, for example when dribbling in football. It is easier to balance with a low centre of gravity and the bigger the base the easier it is to balance. To be balanced you should have your body weight above your base of support.

BASE OF SUPPORT

Your base of support is the area which is covered by the parts of your body which are touching the ground. When you're standing still your feet provide the base of support.

CENTRE OF GRAVITY

Your centre of gravity is your body's point of balance. It's close to your belly button. The lower your centre of gravity is, the more stable you are. When you put your centre of gravity outside your base of support, you lose your balance.

You hold your balance by tightening the muscles in your body. This is called **body tension**.

Performing rolling actions

To perform a rolling action we need to consider the three axes of rotation:

- Vertical axis
- Transverse axis
- Antero posterior axis

To increase the speed of rotation bring your body as close to the axis of rotation as possible.

To slow down the speed of rotation move more of your body away from the axis of rotation.

Rotating the whole body or part of the body quickly can help you perform many techniques.

Examples

Gymnastics - I tucked in tight to rotate quickly to get up onto my feet.

Table tennis - I rotated my wrist as I hit my backhand, giving the ball top spin.

Football - I rotated my body quickly as I did an overhead kick, so that I swung my leg up fast to hit the ball hard.

TRANSFER OF WEIGHT

The transfer of weight allows you to move your body weight in any direction from one part of the body to another. It allows you to apply force to actions to get power to throw, hit, jump and kick hard and far.

To transfer your weight in any direction, you must apply a force in the opposite direction. The force is created when you **contract your muscles**. When muscles are contracted against a resistance, thrust or propulsion is achieved in the opposite direction.

FORCE AND RESISTANCE

For movement to occur in activities, muscles must contract and apply a force against a resistance to allow movement in the opposite direction. (Newton's third law - 'for every action there is an equal and opposite reaction').

For example, to gain height for a basketball lay up, the performer must push down with powerful leg muscles on the floor (the resistance).

As well as the force that our muscles apply, there are a number of other forces, which have an effect on our performance. Friction is caused when two surfaces rub together, which leads to an increase in resistance. In activities resistance can be an advantage and a disadvantage.

- Example of an advantage - footballers wear studs to increase the friction between their boots and the ground. This allows them to stop or change direction quickly.
- Example of a disadvantage - resistance can hold you back and slow you down. Air resistance can be a disadvantage in cycling. The cyclist wears tight clothes to reduce the friction and increase their speed.

Example

When preparing for an overhead clear, the weight is on the back foot, the body is turned side on, and the non-hitting arm is held high above the head. As you complete the shot, you transfer the weight from the back foot to the front, pulling the non-hitting arm down and stepping forward with the back foot. This allows power and therefore distance to be added to the shot.

STREAMLINING

Swimmers have to overcome the resistance of water. This is achieved by using a **streamlined** body position. To streamline the body the swimmer would put their body into a shape or position, which offers the smallest surface area and offer the least resistance. This would allow the swimmer to cut through the water easier and swim faster.

Many outdoor activities have to overcome the resistance of wind. Some may adopt a different body position (e.g. cyclists) or wear appropriate tight fitted clothing (e.g. downhill skiers)

FOLLOW THROUGH

In striking/kicking/throwing actions the part of the body (arm, leg, hand etc) or piece of equipment (racket, club, stick etc) continues after the object that has been struck or released.

An example of this is the chest pass in basketball. The follow through is the part of the throwing action which occurs after the ball has been released from the hands of

the player and follows in the direction of the pass. It allows you to get more power and accuracy into a throw. It also keeps the player balanced and can prevent injury.

Other methods of follow through may not necessarily be in the direction of the object. Some follow through actions may involve rotation of body parts (ball and socket joints). For example, a golf swing involves rotation around the hips and shoulder joints.

HOW TO ANSWER

Question

Select an individual skill or activity. Select a skill/technique where balance is important.

- Describe **how** you made yourself balanced.
- Describe how being more balanced **improved your performance** of this skill/technique.

Answer

Individual activity - Gymnastics

Skill/Technique - Headstand

Description - I created a triangular base by placing my head and both hands on the mat and slowly brought my hips and legs above my base.

Description - I was able to keep my headstand under control for longer.

Question

Select a team activity. Select a skill/technique where balance is important.

- Describe **how** you made yourself balanced.
- Describe how being more balanced **improved your performance** of this skill/technique.

Answer

Team activity - Basketball

Skill/Technique - Defensive stance

Description - I got into a balanced position by spreading my feet, bending my knees and bringing my arms out.

Description - I was able to change direction quickly to stay with my opponent.

Once you've selected two appropriate school-based activities and two appropriate skills/techniques you'd get:

- two marks for each clear description of how they made yourself balanced in order to perform that skill
- one mark for each description of how the performance was thereby improved