

**Year 9 Boys  
Knowledge  
organiser Booklet  
for PE**

# Y9 BTEC Introduction

# Knowledge Organiser

# Theory

**Skill related components:**

**Agility**

**Balance**

**Coordination**

**Power**

**Reaction Time**

**ABCPR**

## Agility

The ability to **change direction quickly** to allow performers to out-manoeuvre an opponent.

## Balance

The ability to **maintain centre of mass over a base of support**.

## Coordination

The ability to **move two or more body parts at the same time smoothly and efficiently**,

## Power

The product of **speed and strength** to allow for explosive movements in sport.

## Reaction Time

The time taken to respond to a **stimulus** (e.g. gun), useful in fast-paced sports to make quick decisions about

**5 Body systems:**

**Cardiovascular**

**Respiratory**

**Muscular**

**Skeletal**

**Energy**

**Physical related components:**

**Muscular Endurance**

**Aerobic Endurance**

**Muscular Strength**

**Speed**

**Flexibility**

**Body Composition**

**MAMSF**

## Muscular Strength

The **maximum force** that can be generated by a

## Speed

Distance divided by time. To reduce time taken to move the body

## Aerobic Endurance

The ability of the cardiorespiratory system to **supply oxygen and nutrients** to the muscles to sustain low to **medium intensity** work

## Flexibility

The **range of motion possible at a joint**

## Muscular Endurance

The ability of the muscular system to **continue to contract at a light to moderate intensity**

## Body Composition

The ratio of **fat mass to fat-free mass** in the body

# Y9 BTEC Introduction

# Knowledge Organiser

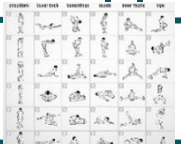
# Practical

## What is a warm-up?

A period or act of preparation for a match, performance, or exercise session, involving gentle exercise or practice.

## What do you need to include within a warm-up?

\*Pulse raiser \*Mobiliser \*Preparation stretches



When organising a warm-up you need to consider the following:

- Space – areas used
- Equipment
- Organisation of participants
- Timing
- Demonstrations
- Positioning

## Delivering a warm-up

### Demonstrations

- \*Help understand the activity more.
- \*Explains the task in a different way.
- \*Helps students not be confused over what they have to do.

### 1 minute sit-up test

– complete as many sit-ups as you can in 1 minute.

**T test** – Complete the course as quick as possible. Keep facing forwards.

### Reasons for fitness testing

- Gives baseline data for monitoring/improving performance.
- Can design training programmes based on test results.
- Determine if training programmes are working.
- Results can give a performer something to aim for.
- Provide goal setting aims.

### 1 minute press up test

- complete as many press up's as you can in 1 minute.



## Fitness Testing

### 12 minute cooper run

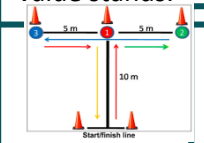
- run around a 400m track or pitch for 12 minutes. Note down the distance.

### Shoulder flexibility test

– Put your right arm straight up and bend your elbow so it bends behind then use your other hand to try and touch it

### Standing Long

Athletes stand behind a marker and have to complete a two footed jump as far as they can. Without falling backwards. 3 attempts – best value stands.



### Measuring Heart Rate

- Measured in BPM.
- Count the beats for full 60 seconds
- Neck (Carotid Artery)
- Wrist (Radial Artery)



### Pulse raiser

A light exercise that slowly increases HR and body temperature.  
**Examples;** jogging, skipping, cycling

### Mobiliser

Activities that take the joints through their range of movement.  
**Examples;** open the gate, close the gate.

### Preparation stretches

Activities to stretch the main muscles that will be used in the activity.

### Aerobic Endurance

- **Continuous training** - working for a prolonged period of time at a steady stress level.
- **Circuit training** - Each exercise is performed for a specified number of repetitions or for a set time before moving on to the next exercise. The exercises are separated by a short rest period.



When leading you need to ensure that individuals are supported. To do this you could:

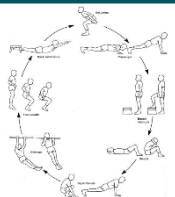
- Observe participants
- Provide clear instructions
- Provide teaching points
- Providing feedback to participants

## Training Methods



### Speed

**Interval training** - Work period followed by a rest or recovery period.



### Power

**Plyometric training** - Plyometrics is a type of exercise training that uses speed and force of different movements to build muscle power.

# Table Tennis – Year 9

## Table Tennis Equipment

### The Racket



Red on one side --  
Black on the other  
side --Can be any  
shape, size or weight -  
-Must be a flat surface

### The Ball



Colour: must be  
white or orange  
(Matt)---Spherical ---  
Weigh 2.7g ----  
Diameter of 40mm



The Table --Flat and sturdy --possibly on wheels and secured or static --Dark blue or green colour --2cm white border line with a 3mm centre line

Fitness for Table Tennis:- Players must have good reaction time and hand-eye coordination.

Shakehands grip

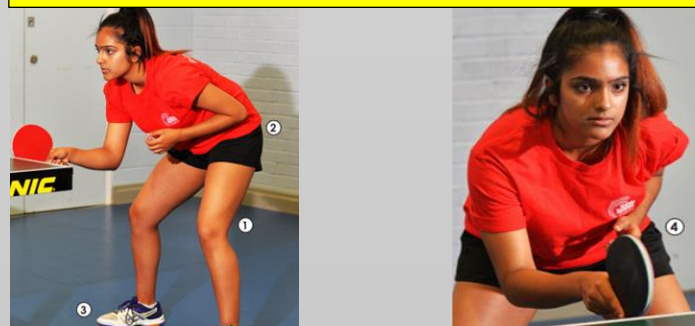


**Shake Hands Grip** Form a 'V' with thumb and forefinger -- Place thumb and forefinger flat against paddle -- Curl 3 remaining finger around handle -- Keep finger and thumb away from middle of

**Pencil Grip** Thumb and forefinger on same side of paddle --3 remaining fingers behind on the back of the paddle --Ensure fingers are away from the center of the paddle.

### Ready Position

1. Knees Bent 2. Leaning slightly forward so your weight is on the balls of your feet. 3. Feet shoulder width apart 4. Racket should be table height and in front of the body.



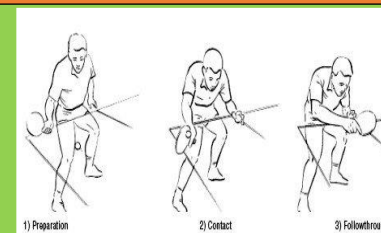
**Forehand Push** Forearm level with and close to the table—Bat angled at 45°---Right foot just behind left foot--- Contact with the ball as soon as it bounces— Push the ball forward the bat should not come up from table surface



**Backhand Push** Feet facing where the shot is to be aimed – Bat in front of body 45° angle close to table surface – Contact with the ball as soon as it bounces, push the ball forward, bat should not come up from the surface of the table. – Step in with right foot if the ball is short.



**Serving** -- Bouncing the ball on your side of the table, over the net and then landing on the opponent's side of the table-- 2 serves each (no 2nd serve) --Serve behind the white line at the end of the table --Ball thrown up 6 inches from the hand --Ball presented on an open hand/ palm --Hit the ball on to your side first and then onto opponents' side --Ball is not allowed to touch the net --'Let' ball touches net and hits opponents side of the table --Single – serve anywhere on the table --Doubles – right to right --Non-racket hand cannot go on the table



**Rally:** The receiver must return the serve by hitting the ball after it has bounced. The ball is then hit alternately over the net onto the table by each player until one player fails to return the ball. The ball must be struck before it bounces twice on the table. The rally ends if the ball does not land on the table or if a player misses the ball, or if a player it's the ball without bouncing on their side of the table.



**A game:** A game shall be won by the player or pair first scoring 11 points unless both players or pairs score 10 points, when the game shall be won by the first player or pair subsequently gaining a lead of 2 points.

# Swimming – Year 9

## Can you save a life?

### What is Sculling?

It's a hand movement technique that when can be applied to all strokes but mostly Front crawl and back stroke in the form of the 'S' pull



- Body position flat – no use of the legs
- Hands down by the sides
- Fingers closed and slightly cupped
- Move hands in a figure of 8.
- Palms pointing down to stay up, palms pointing towards feet to move head first
- Need to feel the water moving in your hands



### Tumble Turn

- **Strokes Used:** for Front crawl and Back crawl
- **Approach:** On front, last big front crawl arm pull into a 'bow', double kick over
- **Turn:** speed, tuck knees in (ball shape – forwards roll), feet over head, plant feet on wall
- **Push and glide:** Extend legs with arms together in pencil shape



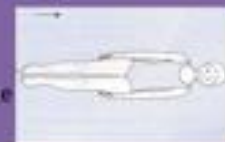
### Side stroke – to support chin tow

- **Body side on**, head out the water but try and keep body position almost level
- **Arm under body** reach forward, cup the water and pull to belly button (pick the apple, give it to the other hand)
- **Arm on top** goes from the belly button and push hand away (put the apple in the basket on the hip)
- **Legs split**, one leg forward, one leg backwards in a scissor action – then close together



### Lifesaving back stroke – to support cross arm tow

- **Body position** is on the back, head back and looking up – keep body flat
- **Breast stroke leg kick** – Big kick following technique points above but on back (try and keep knees in the water)
- **Double or single arm** - pushes up in the water above head and then pull down to side in an arc
- **Timing** – Arms go over as the legs push, arms pull down as the legs come up (everything in, everything out)



### Saving a casualty using a lifesaving tow:

If you see a casualty in the water always alert a lifeguard and help from adults. To perform one of these tows, check for dangers first, keep talking to the casualty and enter the water safely. Swim to the injured person and perform one of the two tows shown below:



**Chin tow** – fingers under chin, straight arm, ensure face out the water and use lifesaving stroke

**Cross arm/chest tow** – Arm under casualties arm, across chest and hold under arm pit, pull body up so face out of the water. Perform lifesaving stroke



### How to officiate a swimming race:

- **Starter** – Blows the whistle to get swimmers ready, then "Take your marks, go!"
- **Finish/place judge** – help to give finish positions to the swimmers in the race e.g. 1<sup>st</sup> – 6<sup>th</sup> (check for correct finish 2 hands for butterfly and breaststroke)
- **Changeover judge** – for relays they check that the next swimmer doesn't go too early
- **Stroke judge** – checks to make sure correct technique is used for the full race
- **Time keeper** – each lane has one. Records the time to 100<sup>th</sup> of a second e.g. 12.83ses

### Lifesaving equipment



### Lifeguard wade

If the casualty is the shallow end, lifesavers should walk towards them with the equipment out in front



# Basketball – Year 9

## Defending:

**Full court press** – defensive team apply the man to man defence as soon as the opponents gain possession of the ball.

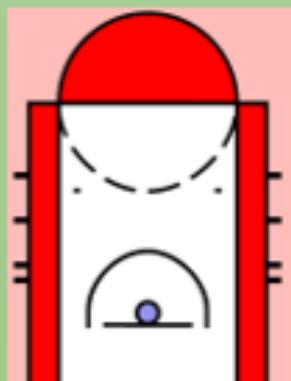
**Half court press** – defensive team apply the man to man defence when the opponents enter their half of the court.

## Screen:



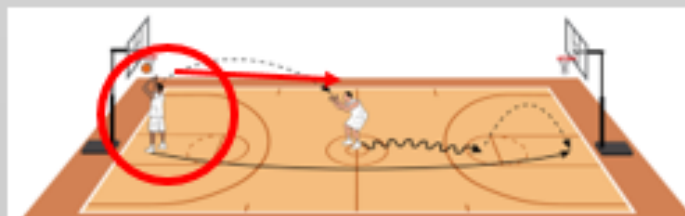
Is a blocking move by an attacking player in which they stand beside or behind a defender in order to free a teammate to drive to the basket.

## 3-second rule:



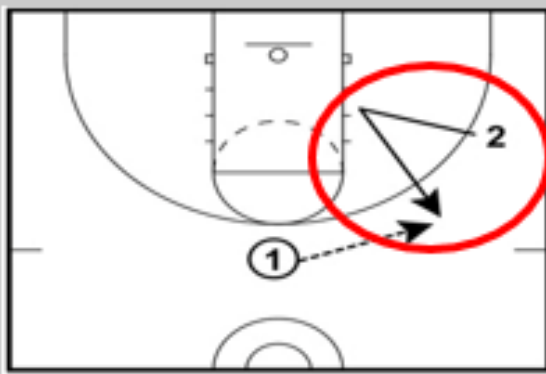
Attacking players can only spend 3 seconds in opponents key

## Outlet pass:



Defender rebounds the ball, pivots and passes the ball to a teammate. This leads to a **'Fast Break'**

## Cut:



Player 2 runs in and back out in a 'V' shape.  
Player 1 passes him the ball.  
This creates space between number 2 and his defender.

## Dominant/ non-dominant hand:

**Dominant hand** = your *strongest* hand

**Non-dominant hand** = your *weakest* hand

## Fake and drive:

A player with the ball fakes/ pretends to shoot.  
Hoping to trick the defender.

Putting the defender off balance, and they drive to the basket for a shot.

## 24-second rule:

When a team gains possession of the ball, they have 24 seconds to get a shot off.

**Why a time limit?**



## Substitutions:



In Basketball you are allowed an unlimited number of substitutions.

**Why unlimited?**

## Fast break:

After an **OUTLET PASS**.

A team attempts to move the ball up the court quickly as possible, so that the defence is outnumbered and does not have time to set up.

### Lofted pass:



Great for clearing your lines, switching play or passing the ball over the top to a striker to run onto.

Striking the bottom half of the ball and have a high follow through, leaning back

### Curling the ball:



Striking the bottom left or bottom right of the football with your instep.

Curling the ball around an opponent (s), or into a team mates run.

### Committing a defender



Waiting until a defender is close enough so when you pass/ dribble around them they are out of position/ off balance

# Football – Year 9

### Step over:



Attacking move

Take on a defender

Knees bent

Done at pace/ speed

### Overlapping:



Pass, and then overlap that teammate.

Creating space for a cross into the box

### Volleying:



Focus on the ball

Leg bent, toes pointing down, ankle held firm

Strike the centre or top half of the ball

### Crossing and finishing:



Attacking move.

Wingers cross the ball into opponent's box

This creates goal scoring opportunities.

In-between penalty spot and 6 yard box

### Cruyff turn:



Shape your body as if you were going to pass or cross the ball.

But then drag the ball behind your standing leg with the inside of your foot.

Turn your shoulders and your hips so that you are back in line with the ball and then race away.  
Your marker will not be happy!

# Fitness and preparing for BTEC Sport – Year 9 (1)

## Skill related fitness components (ABCPR)

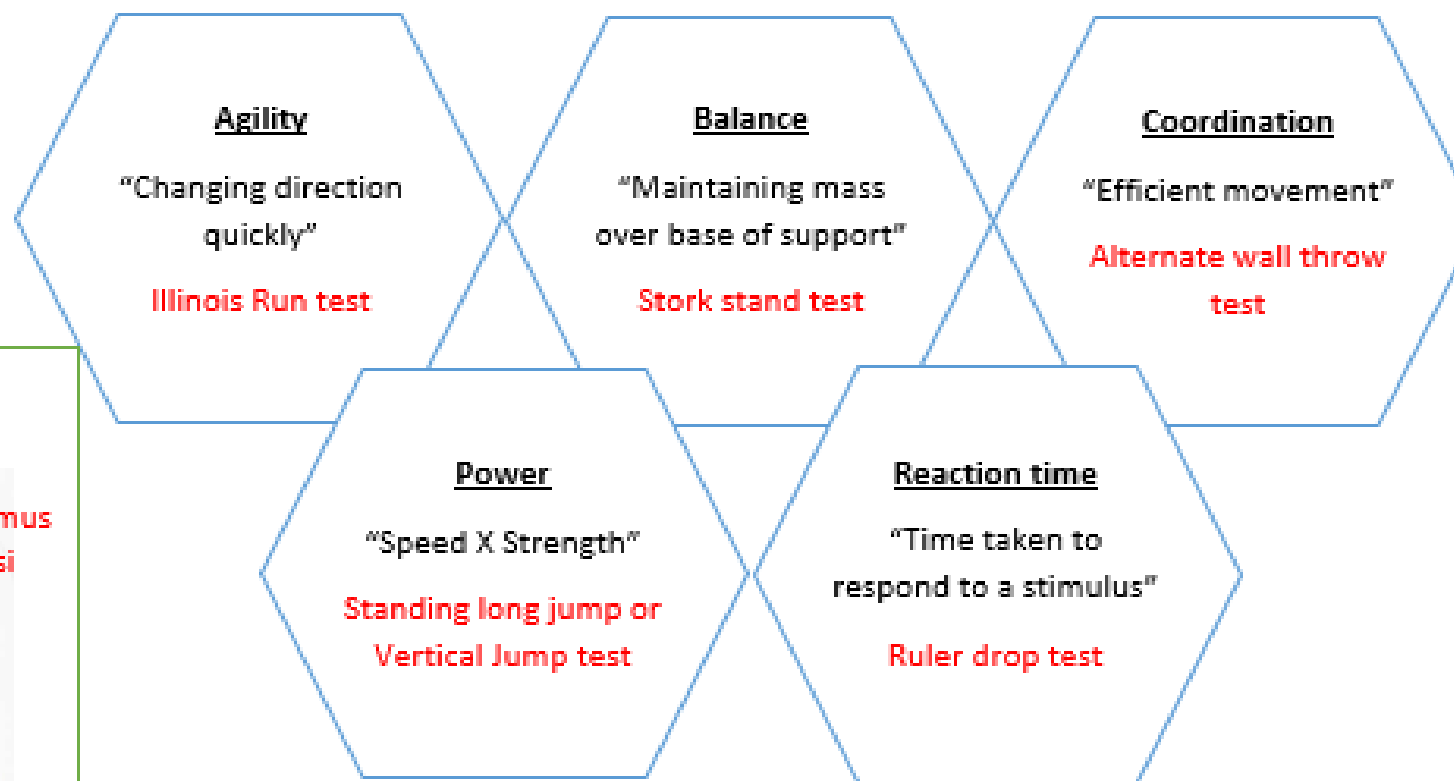
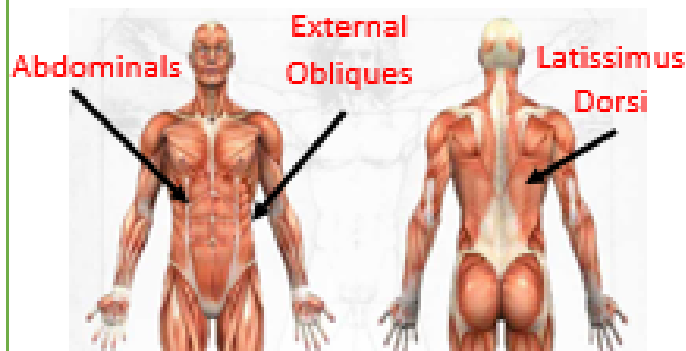
Is there a 3<sup>rd</sup> phase to a warm up?

### Sport Specific Phase

- Completed after Pulse raiser and Stretching – but before main
- Replicates the actions that will be used in the main sport
- E.g. Shooting or Passing

What muscles do I need to know?

Here are the main torso muscles to learn:



How do I plan my training so that it is safe and effective? – Use the Basic principles of training: FITT

### Frequency

Plan the right number of sessions per week

e.g.: twice a week to start with then build up

### Intensity

Plan the right intensity for the fitness component

e.g.: Speed = high intensity  
Endurance = low intensity

### Time

Make your session last the correct amount of time

e.g.: 30-60 minutes to start with then can build up

### Type

Select the right training method for your goal

e.g.: Speed = interval,  
Endurance = Continuous



# Fitness and preparing for BTEC Sport – Year 9 (2)

When planning a goal, make sure it's:

S	<b>Specific</b> - clear and meets your training/sports needs
M	<b>Measurable</b> – to see if improvements have been made
A	<b>Achievable</b> – and challenging for you personally
R	<b>Realistic</b> - in relation to ability and time
T	<b>Timed</b> - set a date to complete by
E	<b>Evaluated</b> - progress regularly & adapt if you're not on track
R	<b>Rewarded</b> - keep yourself motivated through rewards

## Energy – where does it come from?

- Energy comes from our diet (the food and drink that we take in)
- Different food/drink have different number of calories in that our body stores up and converts into energy when we begin to exercise
- The more calories we intake, the more exercise we need to do otherwise the body will store this excess as fat
- Good news is: our bodies burn calories without having to do anything approx. 1600kcal depending on body size
- Averages: Adult male needs: 2500kcal      Adult female needs: 2000kcal



RPE is another way to measure how hard your working

It uses a scale of 6-20 to measure how hard you think your exercising

Rating of Perceived Exertion Borg RPE Scale		
6		How you feel when lying in bed or sitting in a chair relaxed. Little or no effort.
7	Very, very light	
8		
9	Very light	
10		Target range: How you should feel with exercise or activity.
11	Fairly light	
12		
13	Somewhat hard	
14		
15	Hard	
16		
17	Very hard	How you felt with the hardest work you have ever done.
18		
19	Very, very hard	
20	Maximum exertion	
Don't work this hard!		

What physical features might you see of someone working in the red zone?

Sweating, going red, tiring/ slowing down, poor technique, very high HR and BR

# Athletics – Yr 9

## Competition formats:

There are often qualifying stages before a final in Athletics

## Running races:

This means heats where the fastest runners from each race or 'fastest losers' = qualification to the next stage. This continues until the final.

## Throwing and Jumping events:

In the qualifying stages athletes have a number of attempts (usually 3) to achieve the best score possible. The top 8 or 12 athletes then qualify for a final.

## Medals for top 3 places



## Olympic record (OR):

Best score achieved by anyone at the Olympic games

## World record (WR):

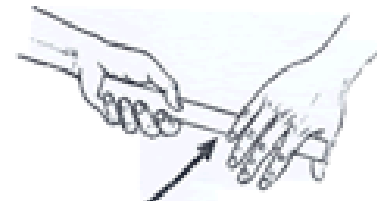
Best score achieved by anyone at any formal competition (including Olympics)

## Personal best (PB)

Best score achieved by that person

## Relay Changeover

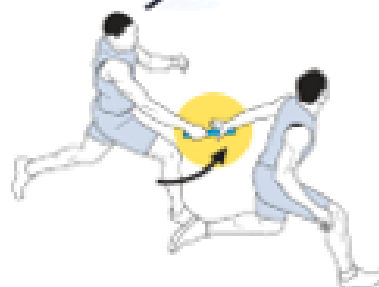
Receiver holds out hand with palm facing down



Receiver starts running when carrier reaches the 'mark' (10m away)

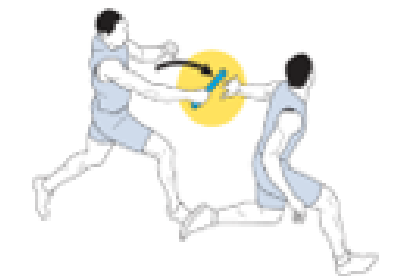
Carrier gives command 'Hand'

Receiver gives call when baton is in their hand



Carrier sweeps baton from low to high

Receiver holds out hand with palm facing up



Carrier sweeps baton from high to low

Relays include 4 runners who compete as a team to get the baton to the finish line first.

There are two main relays:

**4 x 100m (1 lap race, each person runs 100m): Runners must stay in their lane**

1<sup>st</sup> leg (runner) – should have good reactions and a fast start (they run the first bend), 2<sup>nd</sup> leg – runs a straight, 3<sup>rd</sup> leg – runs the other bend, 4<sup>th</sup> leg (anchor) – runs the last 100m to the finish line (tactically this is often the fastest runner).

**4 x 400m (4 lap race, each person runs 400m)**

1<sup>st</sup> leg (runner) – should have good reactions, a fast start and must run in their lane, 2<sup>nd</sup> leg – usually runs 100m in their lane they moves to the inside lane. 3<sup>rd</sup> and 4<sup>th</sup> legs can run on the inside lane. This race is also sometimes ran as a mixed gender race.

### Wicket keeping



- Player who stands behind the batsman on strike
- Wear protective clothing: gloves, pads, box, Helmet (if under 18, and if standing up close to the stumps)

### Spin bowling



Bowling puts spin/ revolutions on the ball.  
Hits the pitch and deviates away or to the batsman.  
Making it hard for batsman to hit cleanly.

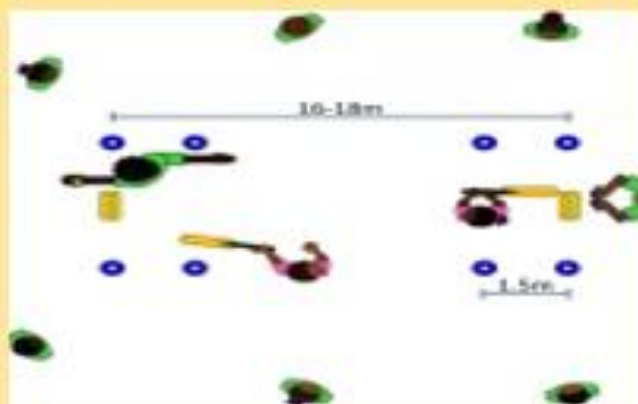
### Swing bowling



Keeping one side of the ball shiny  
Moving the ball in the air  
Cricket ball to deviate sideways as it moves through the air towards or away from the batsman

# Cricket – Year 9

### Pair's cricket



- Adapted small sided game.
- Everyone bats, bowls, WK and fields.
- Every pair bat for 2 overs.
- A pair bowl and WK 1 over each.

### Backing up



- The non-striking batsman leaving his crease during the delivery. He is anticipating a run, getting closer to the other end.

### Square cut



Played to a short/ wide delivery.

A square cut is a shot hit into the off side at near to 90 degrees from the wicket

Back foot goes back and across, chop down on the ball.

### Pull shot



Cross-batted shot played to a ball bouncing around waist height.  
Pulling it around to the leg side towards mid-wicket or square leg.