

Wester Hailes



PE Department

S3 Elective PE

Introduction to the Physical Factor: Standardised Fitness Tests

Methods of collecting information to analyse factors impacting on performance

Pupil name:

Class:

Factors Impacting on Performance

Table of Sub-Factors

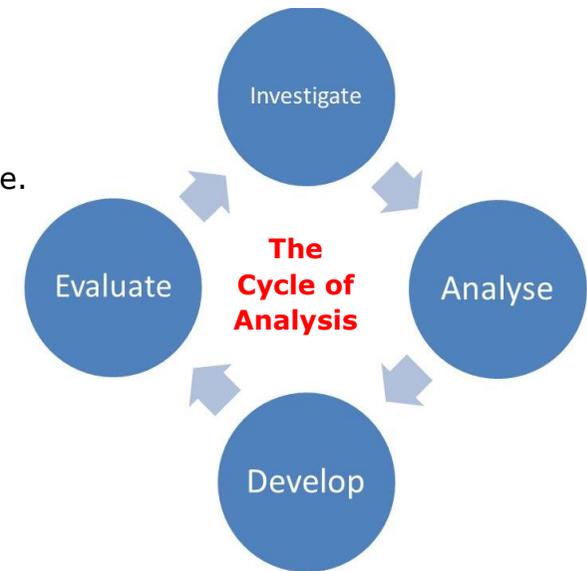
Physical		Mental	Emotional	Social
Fitness	Skill			
CRE	Any skill, e.g. lay-up, passing	Concentration	Happiness/ sadness	Communication
Speed	Accuracy	Determination	Anger	Roles and responsibilities
Agility	Control	Motivation	Fear	Team dynamics
Power	Fluency	Decision making	Confidence	Contributing to the team
Strength	Timing	Anxiety	Trust	
Flexibility		Mental toughness		

Step 1: Investigating Performance

The '**Cycle of Analysis**' is a process that athletes go through to develop their performance.

It is split into 4 main phases:

1. Investigate – here we gather data/collect information.
2. Analyse
3. Develop
4. Evaluate



Why do we investigate performance?

- To identify strengths and weaknesses.
- To help us create a personalised Personal Development Plan (PDP).
- To give us a “baseline” measurement (shows us where we are starting).
- To help us set targets.

How do we investigate performance?

We gather data/information in a range of ways depending on the information we’re looking for.

- **Standardised Fitness Tests (Bleep Test, Standing Broad Jump)**
- Questionnaires (SCAT Test, Mental Toughness Questionnaire)
- Match Analysis (General Observation Schedules)
- Skills Tests (Scatter Graph and P.A.R. Analysis)
- Feedback from peers/coaches/teachers

1. Investigating Performance at Home via Standardised Fitness Tests

To help you to understand the Performance Development Process i.e. The Cycle of Analysis we have created an 'At Home Standardised Fitness' guide. **Ask permission** first, you may need help to complete tests – an extra set of eyes will increase the **reliability** and **accuracy** of your results, but a partner will also help to ensure **safe practice!** **Remember** to wear appropriate clothing whilst completing tests i.e. **sportswear**.

1. **Complete** Standardised Fitness Test: check that you have the space and equipment to complete the test first and then follow the instructions for '**How to test**'.
2. **Record** results in '**1st attempt**' space.
3. Compare results with the **normative data** table for each test on the next page (refer to notes on page 15).
4. **Identify** an appropriate sub-factor for each test (refer to the sub-factor table on page 2).
5. **Identify** whether your results are a **strength** or an **area of development** for each Standardised Fitness Test completed.
6. Repeat steps 1-3 across **pages 5–14**.
7. Select **one** Standardised Fitness Test that you have completed and **describe*** how you did this (page 16).
8. From the data you have gathered, **describe*** your strengths and development needs in relation to Physical Fitness (page 16).
9. Complete Research Task (page 18).

*use the support notes on **page 17** to help you answer both describe questions. Remember to '**Paint a Picture**'.

Standing Vertical Jump Test

The purpose of this test is to measure your explosive leg power.



How to test:	Equipment needed:
<ul style="list-style-type: none">• Stand side-on to a wall and reach up with the hand closest to the wall. Keeping your feet flat on the ground, the point of the fingertips is recorded by a partner. This is called the standing reach.• Stand slightly away from the wall and jump vertically as high as possible using both arms and legs to help to project your body upwards.• Performer to touch the wall at the highest point and this is recorded by partner observing. This is called the jump height.• The distance between the standing reach and the jump height is the score.• The best of three attempts is taken.	<ul style="list-style-type: none">• Measuring tape / ruler• Pen• Record Sheet
Results:	Date completed:
1 st attempt (before PDP)	
2 nd attempt (after PDP)	

Normative Data

Gender	Excellent	Above Average	Average	Below Average	Poor
Male	>65 cm	56-65 / 50-65 cm	50-55 / 40-49 cm	49-40 / 30-39 cm	<40 / 30cm
Female	>60/58 cm	51-60/ 47-58 cm	41-50 / 36-46 cm	35-40 / 26-35 cm	<35 / 26 cm

15 - 16 / 16-19 year olds

Identify sub-factor:

Identify sub-factor as strength or area of development:

Standing Stork Test

The purpose of this test is to assess the ability to balance on the ball of the foot.



<p>How to test:</p>	<p>Equipment needed:</p>
<ul style="list-style-type: none"> • Remove shoes and place the hands on the hips, then position the non-supporting foot against the inside knee of the supporting leg. • You have one minute to practice the position. • The performer raises their heel to balance on the ball of the foot. • The stopwatch is started as the heel is raised from the floor. The stopwatch is stopped if/when any of the follow occur: • The hand(s) come off the hips. • The supporting foot swivels or moves (hops) in any direction. • The non-supporting foot loses contact with the knee. • The heel of the supporting foot touches the floor. 	<ul style="list-style-type: none"> • Stopwatch • Pen • Record Sheet
<p>Results:</p>	<p>Date completed:</p>
<p>1st attempt (before PDP)</p>	
<p>2nd attempt (after PDP)</p>	

Normative Data					
Gender	Excellent	Good	Average	Fair	Poor
Male	>50 seconds	41-50 seconds	31-40 seconds	20-30 seconds	<20 seconds
Female	>30 seconds	23-30 seconds	16-22 seconds	10-15 seconds	<10 seconds
16-19 year olds					
Identify sub-factor:					
Identify sub-factor as strength or area of development:					

The Sit Up Test

The purpose of this test is to measure the muscular endurance of your core muscles.



How to test:

- This test requires the athlete to perform as many sit-ups as possible in ***1 minute***.
- The athlete lies on the mat with the knees bent, feet flat on the floor and their hands on their ears where they must stay throughout the test
- Partner holds the athlete's feet on the ground.
- Partner gives the command "GO" and starts the stopwatch.
- The athlete sits up touching the knees with their elbows.
- Partner counts sit ups and gives the command "STOP" once test is completed.

Equipment needed:

- Exercise mat
- Stopwatch
- Pen
- Record Sheet

Results:

1st attempt (before PDP)

2nd attempt (after PDP)

Date completed:

Normative Data

Gender	Excellent	Good	Fair	Poor
Male	60	45	30	15
Female	50	40	25	10

<35 year olds

Identify sub-factor:

Identify sub-factor as strength or area of development:

The Press Up Test

The purpose of this test is to measure the muscular endurance of your upper body muscles.



How to test:

- This test requires the athlete to perform as many press-ups as possible in **1 minute**.
- Take up the starting position, with your arms straight, elbows locked, body straight, hands placed slightly wider than shoulder-width apart (with fingers pointing forward) and both feet on the floor.
- From the starting position, on the command 'GO', start the press-up by bending your elbows and lowering your body until the shoulders drop below the level of the elbows. Then return to starting position. Pausing to rest is only permitted in the starting position.
- Your partner should count how many full press ups are completed in one minute or up to the point where the performer retires from the test.
- Beginners have the additional option of performing the press-up on knees.

Equipment needed:

- Exercise mat
- Stopwatch
- Pen
- Record Sheet

Results:

1st attempt (before PDP)

2nd attempt (after PDP)

Date completed:

Normative Data

Gender	Age	Excellent	Good	Above Average	Average	Fair	Poor
Male	17-19	>56	47-56	35-46	19-34	11-18	<11
Female		>35	27-35	21-26	11-20	6-10	<6
Male	20-29	>47	39-47	30-38	17 - 29	10 - 16	<10
Female		>36	30-36	23-29	12-22	7-11	<7

Identify sub-factor:

Identify sub-factor as strength or area of development:

Standing Broad Jump Test

The Standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power.



How to test:

- The athlete stands behind a line marked on the ground with feet slightly apart.
- A two-foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive.
- The subject attempts to jump as far as possible, landing on both feet without falling backwards.
- Three attempts are allowed.
- The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels).
- Record the longest distance jumped, the best of three attempts.

Equipment needed:

- Measuring tape
- Cone markers
- Pen
- Record Sheet

Results:

1st attempt (before PDP)

2nd attempt (after PDP)

Date completed:

Normative Data

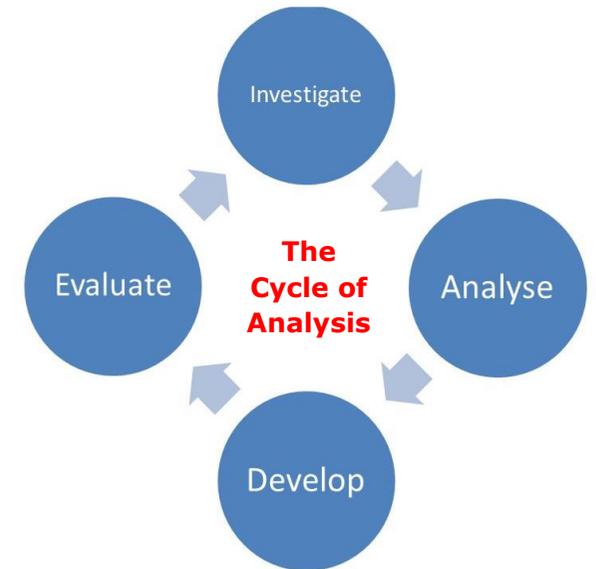
Gender	Age	Excellent	Above Average	Average	Below Average	Poor
Male	14	> 2.11m	2.11 - 1.96m	1.95 - 1.85m	1.84 - 1.68m	<1.68m
Female		>1.91m	1.91 - 1.73m	1.72 - 1.60m	1.59 - 1.47m	<1.47m
Male	15	>2.26m	1.26 - 2.11m	2.10 - 1.98m	1.97 - 1.85m	<1.85m
Female		>1.85m	1.84 - 1.73m	1.72 - 1.60m	1.59 - 1.50m	<1.50m
Male	16	>2.36m	2.36 - 2.21m	2.20 - 2.11m	2.10 - 1.98m	<1.98m
Female		>1.83m	1.83 - 1.68m	1.67 - 1.58m	1.57 - 1.45m	<1.45m
Male	>16	>2.44m	2.44 - 2.29m	2.28 - 2.16m	2.15 - 1.98m	<1.98m
Female		>1.91m	1.91 - 1.78m	1.77 - 1.63m	1.62 - 1.50m	<1.50m

Identify sub-factor:

Identify sub-factor as strength or area of development:

Step 2: Analysing Test Results

- To support the analysis of our test results, we compare our own data against national statistics.
- These are referred to as **normative data** in standardised fitness testing.
- Using these, help us to identify how we perform within our gender and age range.
- They will rank you from poor, below average, average, above average and excellent.
- These help to identify whether your test results show an **area of development** or **strength** in performance.



Analysis of Results

1. Select *one* data collection method. **Describe** how you have collected data on Physical Fitness (4 marks).

2. From the data you have gathered, **describe** your strengths and development needs in relation to Physical Fitness (4 marks).

Support Notes for answering a 'Describe' question:

DESCRIBE: "Paint a Picture"

- Aim to pick up **a mark in every sentence.**
- Keep sentences **short and sharp** without justifying anything.
- *Imagine you have a programme on Sky+ on pause; paint the picture: what is on the screen? How does something look or how is it step up? NOW, hit play: how is something completed in chronological order?*
- In Court, the Judge will ask you to present your case to the jury by painting a picture, so that members of the jury can imagine they witnessed an accurate representation of events to provide a fair verdict.
- This is the same process for answering a **Describe** question.

E.g. Q2. Describe a method for gathering data on the Physical Factor.

A. The Multistage Fitness Test is set up with 2 cones, 20 metres apart. (1 mark) Participants run between these cones before hearing the bleep. (1 mark) As the test goes on, the beep gets faster... (1 mark)

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Research Task:

Use Google to research and identify which sub-factor is being investigated for the following methods of gathering data in the table below:

Method of gathering data	Sub-factor being investigated
Bleep test	
Agility T-test	
Sit and reach test	
Skills tests	
Team Feedback	
Sport competition anxiety test (SCAT)	
Profile of mood states (POMS)	
Standing broad jump	
Harvard Step test	
Social Observation Schedule	

Research Tips:

- Refer to the sub-factor table on Page 2.
- Access BBC Bitesize National 5 Physical Education.

