

KG 1		Fitness testing				
		Fitness test	C.O.F	Units	Equipment	Procedure
1.		<b>Sit and reach</b>	Flexibility	Cm / inches	- Sit and reach box	<ol style="list-style-type: none"> <li>Sit down, legs straight, feet flat to board</li> <li>Both hands reach forward to maximum</li> <li>Repeated x3 and record best result</li> </ol>
2.		<b>35m sprint</b>	Speed	Seconds	- Stopwatch - Tape measure - Stop watch	<ol style="list-style-type: none"> <li>Measure 35m &amp; mark using cones</li> <li>"Go" = run at max speed &amp; start clock</li> <li>Cross finish line = stop clock</li> <li>Repeat x3 with 5 min break between</li> <li>Record the best score</li> </ol>
3.		<b>BMI</b> (Body mass index)	Body composition	Kg/m <sup>2</sup>	- Weighing scales - Tape measure	<ol style="list-style-type: none"> <li>Measure weight (kg) using scales</li> <li>Measure height (m) using tape</li> <li>Calculate: mass (kg) / height (m<sup>2</sup>)</li> </ol>
		<b>BIA</b> (Bioelectrical impedance analysis)			- BIA machine - Alcohol pads - Weighing scales - Tape measure - Electrodes	<ol style="list-style-type: none"> <li>Lie down on your back</li> <li>Clean testing sites with a wipe</li> <li>Attach electrodes to right ankle &amp; wrist</li> <li>Turn on the BIA machine</li> <li>Record result shown on the machine</li> </ol>
		<b>Jackson-Pollock skinfold test</b>			- Skinfold callipers - An assistant	<ol style="list-style-type: none"> <li>Remove clothing</li> <li>Mark the sites on the individual                             <ul style="list-style-type: none"> <li>- <b>Men:</b> Chest, abdominal, thigh</li> <li>- <b>Women:</b> Triceps, suprailiac, thigh</li> </ul> </li> <li>Take 3 readings at each site</li> <li>Calculate average</li> </ol>
4.		<b>Multi-stage fitness test / Bleep Test</b>	Aerobic endurance /VO <sub>2</sub> max	ml/kg/min	- Tape measure - Cones - MSFT CD & speaker - An assistant	<ol style="list-style-type: none"> <li>Measure 2 points, 20m apart</li> <li>Run in time with the beep</li> <li>Must be on/over the line on each beep</li> <li>The test is over if they miss 3 in a row.</li> <li>Record level/stage</li> </ol>
		<b>Forestry step test</b>			- 33cm bench (F) - 40cm bench (M) - Weighing scales - Metronome - Stopwatch	<ol style="list-style-type: none"> <li>Step height <b>Women:</b> 33cm, <b>Men:</b> 40cm</li> <li>Set metronome to 90bpm</li> <li>Step in time with the beat for 5mins</li> <li>Rest for 15 seconds</li> <li>Measure radial pulse for 15 seconds.</li> </ol>
5.		<b>1 min press-up</b>	Muscular endurance	No. Of reps per minute	- Mat - Stopwatch	<ol style="list-style-type: none"> <li>Start with arms locked</li> <li>Bend elbows to 90°</li> <li>Count number of reps in 1 min</li> </ol>
		<b>1 min sit-up</b>			- Mat - Stopwatch	<ol style="list-style-type: none"> <li>Start lying down on your back</li> <li>Raise until elbows touch knees &amp; lower</li> <li>Count number of reps in 1 min</li> </ol>
6.		<b>Grip dynamometer</b>	Muscular strength	KgW	- Grip dynamometer	<ol style="list-style-type: none"> <li>Hold dynamometer in dominant hand</li> <li>Adjust grip until comfortable</li> <li>Hold horizontally &amp; squeeze for 5 secs</li> <li>Repeat x3 with 1 min rest in between</li> <li>Record the best results</li> </ol>
7.		<b>Illinois agility test</b>	Agility & Speed	Seconds	- Tape measure - Stopwatch - Cones x8	<ol style="list-style-type: none"> <li>Set up course as shown</li> <li>Start lying face down</li> <li>"Go" = run &amp; start timing</li> <li>Run round the course</li> <li>Cross finish line = stop timing</li> </ol>
8.		<b>Vertical jump</b>	Power	Kgm/s	- Vertical jump board	<ol style="list-style-type: none"> <li>Stand dominant-side on to the board</li> <li>Reach up as high as possible and mark</li> <li>Feet together, jump as high as you can and mark point</li> <li>Measure distance between start point and finish point</li> <li>Repeat x3 and record the best result</li> </ol>

KG 2		Fitness Tests – Pre-Test Procedures	
		Pre-Test procedure	Definition
9.		Informed consent	Participants are told what's involved before doing a test and they agree to take part.
10.		Equipment calibration	Check equipment to make sure it's working properly, and it is measuring accurately.

KG 3		Factors Affecting Fitness Test Results	
		Key Term	Definition
11.		Reliability	A test is reliable if the same results can be gained when it is repeated.
12.		Validity	If a test measures the component of fitness it's meant to, it links to the athlete & their sport.
13.		Practicality	How easy the test is to carry out for an athlete or group of athletes.

	Test	Validity	Reliability	(DIS) Advantages
14.	Sit & reach	Only measures the flexibility of the back and hamstrings.	<ul style="list-style-type: none"> <li>- Bent legs = better score</li> <li>- Not using two hands can give better score</li> </ul>	<p>Specialist equipment needed</p> <p>Assistant required</p> <p>Minimal equipment, easy to set up</p> <p>Can be conducted anywhere</p>
15.	35m sprint	This is a valid test of speed for sports that involve running but not valid for other sports e.g. rowing	<ul style="list-style-type: none"> <li>- Inaccurate timing can affect result</li> <li>- Inaccurate measuring of 35m</li> </ul>	<p>Assistant required</p> <p>Timing errors give inaccurate results.</p> <p>Minimal equipment, easy to set up</p> <p>Can be conducted anywhere</p>
16.	BMI	Doesn't differentiate between fat and non-fat mass	<ul style="list-style-type: none"> <li>- Inaccurate measurements of height and weight</li> </ul>	<p>Doesn't take into consideration muscle mass</p> <p>Easy to calculate and access.</p>
17.	BIA	Most valid measure of body fat when done correctly. Dehydration causes body fat to be overestimated.	<ul style="list-style-type: none"> <li>- Calibration of equipment</li> <li>- Client doesn't follow pre test procedures e.g alcohol and physical activity</li> </ul>	<p>The equipment is expensive</p> <p>Many pre-test procedures that can affect the reliability and validity</p> <p>Simple and quick perform</p>
18.	Jackson-pollock skinfold test	It is important to maintain correct calibration of the calipers	<ul style="list-style-type: none"> <li>- Poor measuring technique</li> </ul>	<p>Removing clothes = embarrassing</p> <p>Assistant required</p> <p>Minimal equipment, easy to set up</p>
19.	Multi-stage fitness test / Bleep Test	Maximal test so if the performer stops before they are too tired to carry on, the results are not valid.	<ul style="list-style-type: none"> <li>- Motivation levels</li> <li>- Weather conditions</li> <li>- Inaccurate measuring 20m</li> <li>- Not meeting the bleep</li> </ul>	<p>Reliability easily affected.</p> <p>Accommodates large groups</p> <p>Minimal costs</p> <p>Maximal test - measures VO<sub>2</sub> Max.</p>
20.	Forestry step test	Submaximal test - only estimates the athletes' aerobic endurance	<ul style="list-style-type: none"> <li>- Correct bench height</li> <li>- Accurate pulse readings</li> <li>- Accuracy of timing</li> <li>- Timing of stepping</li> </ul>	<p>Adequate fitness and coordination required to keep stepping rate.</p> <p>Minimal equipment and costs,</p> <p>Possible to self-administer</p>
21.	1 min press-up	Only measures the muscular endurance of the upper body	<ul style="list-style-type: none"> <li>- Poor technique can affect the result</li> </ul>	<p>Assistant required</p> <p>No equipment required</p> <p>Simple to set up and conduct</p>
22.	1 min sit-up	Only measures the muscular endurance of the abdominal muscles	<ul style="list-style-type: none"> <li>- Poor technique can affect the result</li> </ul>	<p>Assistant required</p> <p>No equipment required</p> <p>Simple to set up and conduct</p>
23.	Grip dynamometer	The test only measures muscular strength of the forearm.	<ul style="list-style-type: none"> <li>- Requires regular calibration</li> <li>- Inadequate rest affects result.</li> </ul>	<p>Specific equipment required</p> <p>Minimal equipment, easy to set up</p> <p>The athlete can self-administer</p>
24.	Illinois agility test	Valid for the sports that involve running, less valid for other sports e.g. kayaking.	<ul style="list-style-type: none"> <li>- Weather conditions</li> <li>- surface and footwear</li> </ul>	<p>Footwear and surface affects times.</p> <p>Assistant required</p> <p>Minimal equipment, easy to set up</p>
25.	Vertical jump	Only measures power of the leg muscles	<ul style="list-style-type: none"> <li>- Technique affects result</li> </ul>	<p>Score dependent on technique.</p> <p>It's a quick and easy test to perform</p>