

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

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>	Specialist equipment needed Assistant required Minimal equipment, easy to set up Can be conducted anywhere
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>	Assistant required Timing errors give inaccurate results. Minimal equipment, easy to set up Can be conducted anywhere
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>	Doesn't take into consideration muscle mass Easy to calculate and access.
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>	The equipment is expensive Many pre-test procedures that can affect the reliability and validity Simple and quick perform
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>	Removing clothes = embarrassing Assistant required Minimal equipment, easy to set up
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>	Reliability easily affected. Accommodates large groups Minimal costs Maximal test - measures VO <sub>2</sub> Max.
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>	Adequate fitness and coordination required to keep stepping rate. Minimal equipment and costs, Possible to self-administer
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>	Assistant required No equipment required Simple to set up and conduct
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>	Assistant required No equipment required Simple to set up and conduct
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>	Specific equipment required Minimal equipment, easy to set up The athlete can self-administer
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>	Footwear and surface affects times. Assistant required Minimal equipment, easy to set up
25.	Vertical jump	Only measures power of the leg muscles	<ul style="list-style-type: none"> <li>- Technique affects result</li> </ul>	Score dependent on technique. It's a quick and easy test to perform