

### Athletic Abilities: Work to Rest Ratios and Answer Sheet

<u>Athletic Ability</u> <u>Linked to</u> <u>“Guidelines for</u> <u>training</u> <u>Athletic</u> <u>Abilities”</u>	<u>Definition</u>	<u>Stage at which</u> <u>Trained</u>	<u>Sample from the Swimming Environment</u>  <b>WORK TO REST RATIOS</b>	<u>Time on</u> <u>Task per</u> <u>Session</u> (minutes includes rest)	<u>Frequency</u> <u>Per Week</u> (break between sessions - in hours)
<b>Agility</b>  <b>Zone: DBA*</b> (*determined by activity)	The ability to execute movements or to move rapidly, with precision and with ease.	<b>Fundamentals +</b>	<b>Full recovery between each drill (1:3, for example - :30/:90)</b> Sprint Lateral Shuffle Figure Runs (e.g. figure 8) H2O Slalom course Underwater fish kick - cones	<b>10-15</b>	<b>2 or 3</b> <b>(48 hrs)</b>
<b>Agility - Balance</b>  <b>Zone: DBA</b>	The ability to achieve and maintain stability. The ability to keep an object or another body under control in a static or a dynamic manner. <u>Static</u> : adopting a controlled body position in a stable environment. <u>Dynamic</u> : maintaining control during movement and/or stabilizing the body by performing muscular contractions to offset the effect of an external force	<b>Fundamentals +</b>	<b>Full recovery between each drill (1:3, for example - :30/:90)</b> Basic 1 Leg Squat & Reach Single Leg Cone Reach Pilates enhance Balance (and strength) H2O on back balance on 3-4 Flutter Boards –“core”	<b>10-15</b>	<b>2 or 3</b> <b>(48 hrs)</b>
<b>Agility - Coordination</b>  <b>Zone: DBA</b>	The ability to perform movements in the correct order and with the right timing.	<b>Fundamentals +</b>	<b>Full recovery between each drill (1:2, for example - :60/:120)</b> Jumping Rope – leg variations – coach progressions Jumping jack – arms/legs progressive variations Dry land – apposing arm swings to circles H2O – Breast or Free arms with Dolphin Kick	<b>10-15</b>	<b>2 or 3</b> <b>(48 hrs)</b>
<b>Flexibility</b>  <b>Zone: A-I</b>	The ability to perform movements of large amplitude about a joint without sustaining injury.	<b>All Stages</b> <i>“Cradle to Grave”</i>	Full recovery between each drill <b>warm up/activate</b> well before starting, Rest: 5 - 10 seconds between reps and 20 - 45 seconds between sets. 4 - 6 routine/exercises Hold the exercise position at its maximum stretch point for a period of 5-10 seconds, 1-3 sets <b>No Pain</b>	<b>5-15</b>	<b>daily</b> <b>(24 hrs)</b>

<u>Athletic Ability</u>	<u>Definition</u>	<u>Stage at which Trained</u>	<u>Sample from the Swimming Environment</u>  <b>WORK TO REST RATIOS</b>	<u>Time on Task per Session</u> (minutes includes rest)	<u>Frequency Per Week</u> (break between sessions - in hours)
<b>Basic Techniques</b>  <b>Zone: - A-I</b>	Acquisition of fundamental skills by means of a systematic process. Feedback is critical e.g. video/partners	<b>Fundamentals</b> +	<b>(1:4 e. g. :30/:120) includes demo/teaching/feedback</b> After basic intro – e.g. balance/bob. Introduce basic of strokes and kicks	<b>20-30</b>	<b>2 or 3+ (24 hrs)</b>
<b>Speed of Limb Movement short bursts</b>  <b>Zone: S-V</b>	Moving or reacting rapidly and energetically; speedy	<b>Mid/Late Fundamentals</b> +	<b>Rest for nervous System</b> = <b>W 1: R 5/10</b> = full recovery between each drill Start - reaction to signal to flight Safe Plyometric training – hop (e.g. box jumps then rebounding as quickly as possible upon ground contact try 10 sets 2 x rebound resting 20 seconds )	<b>5</b>	<b>2 or 3 (72 hrs)</b>
<b>Anaerobic Speed (Effort &lt; 8 seconds – less than 8 seconds) Fast Fun</b>  <b>Zone: S-V</b>	The ability to cover a given distance during the shortest possible time during an <i>fast cadence or all-out effort series</i> .	<b>Mid/Late Fundamentals</b> +	<b>8-10 Repeats with long Rest!!</b> <i>W 1: R 5/10</i> = full recovery between each drill Timed swim 5m to 15m x 10 @ :60 Start- react dive S/L kick to breakout stop @ :60 Turn – flag to flag 10m sprint timed @ :60 Race finish – timed last 5m sprint Running lines(10-15 steps) in gym 6 to 8 on relay	<b>10-15</b>	<b>2 (+) (48 hrs)</b>
<b>Aerobic Endurance Fun Fitness</b>  <b>Zones: A-I and A-II or mixed, possibly R-III</b>	The ability to sustain a dynamic effort over an extended period of time (normally, efforts lasting several minutes or even hours).	<b>Introduce at Learn to Train</b>	<b>Rest is always short - (W 3/10:R 1) 10-30 seconds</b> Basic Endurance: e.g. 6/10 x 100 at 60 -70% effort holding best stroke length Threshold Endurance: e.g. 2/4 x 200 at 80-85% effort ( <b>note:</b> 9 year olds must maintain technique holding best stroke length, therefore we suggest avoiding big volumes in the formative years!)	<b>15-30 minutes</b> <b>10-20 minutes</b>	<b>2 or 3 (24-48 hrs)</b>

<u>Athletic Ability</u>	<u>Definition</u>	<u>Stage at which Trained</u>	<u>Sample from the Swimming Environment</u>  <b>WORK TO REST RATIOS</b>	<u>Time on Task per Session</u> (minutes includes rest)	<u>Frequency Per Week</u> (break between sessions - in hours)
<b>Tactics and Decision Making</b>  <b>Zones: A-II, R-III, S-IV</b> (or DBA see Note)	The ability to analyse a situation and produce a correct response, i.e. one that gives a competitive advantage and/or increases the probability of good performance. <i>Note: We must teach imaginative/ varied ways to employ our great skills and drills.</i>	<b>Introduce at Learn to Train</b>	<b>Discuss and teach:</b> “Outside smoke/Inside choke” 😊 Tempo 1 <sup>st</sup> half / then sprint Even split tempo race Accelerate the turn	<b>Class or in Pool Session or in Race</b>	<b>2 or 3+ Integrated into each practice session</b>
<b>Aerobic Power (Specific Endurance)</b>  <b>Mixed Zones: R-III and S-IV</b>	Ability to simulate Intense efforts	<b>Introduce at Train to Train</b>	<b>W:R 1:1 Broken or Whole Distance</b> <b>3 sets of (4 x 50 on 1:15 at 200 race pace) with 1-2:00 break for each set</b> or <b>3 x 300 at 80-85% race speed resting 5:00 ea. 300</b> or Mountain Bike race 1-2 km for time (late GPP)	<b>12-20</b>	<b>2 (72 hrs)</b>
<b>Strength-endurance</b>  <b>Zone: S-IV</b> (age appropriate)	The ability to perform repeated muscle contractions at intensities below maximum strength (normally, 15 – 30 repetitions, or more).	<b>Introduce at Mid F /Late M Train to Train</b>	<b>Rest for full recovery</b> <b>W 1: R 2 or 3</b> <b>Timed 25m sprint swim (e.g. 8x25 on 1:30)</b> <b>push-ups in 15-30 reps</b> <b>sets of single-leg squats 15 right/15 left</b>	<b>10-20</b>	<b>1-2 (72 hrs)</b>
<b>More advanced techniques</b>  <b>Zones: A-II, R-III, S-IV, S-V</b>	Acquisition of complex skills by means of a systematic process. Feedback is critical e.g. video/partners	<b>Introduce at Mid F /Late M Train to Train</b>	<b>Drills (perfect skill execution with short rest) includes demo/teaching/feedback</b> One-step relay start, complete breast turns w/legal pull out Or at Daily Practice “a skill” feedback & correction Rock Climb Class – blind folded (for Kinaesthetic) Race – achieve targets for Splits and Stroke Count	<b>20-30</b>	<b>2 or 3 (24-48 hrs) or Integrated into each practice session</b>

<u>Athletic Ability</u>	<u>Definition</u>	<u>Stage at which Trained</u>	<u>Sample from the Swimming Environment</u>  <b>WORK TO REST RATIOS</b>	<u>Time on Task per Session</u> (minutes includes rest)	<u>Frequency Per Week</u> (break between sessions - in hours)
<b>Speed-endurance</b>  <b>Zones: R-III, S-IV</b>	The ability to sustain efforts at near maximum speed for as long as possible (normally, very intense efforts lasting 8 - 60 seconds). Note: Speed endurance session is created by reducing the work to rest ratio (i.e. 1:1) and increasing the work intervals (i.e. >30 seconds)	<b>Introduce at Late Learn to Train</b>	<b>Two to Three sets of 3-5 repeats with <u>long Rest!!</u></b> <i>W 1: R 3</i> = full recovery between each set (note: preceded by warm-up & technique work) 2 (or 3) sets of 5 X 25 stroke <i>all out effort</i> 1:20 (EZ different movement drill for 3-4:00 each set) Long Rest for each set as this is very fatiguing work Note 2: Adjust sets for Train to Train swimmers	<b>18-20</b>	<b>2 (72 hrs)</b>
<b>Maximum Strength</b>  <b>Zones: S-V, S-IV</b>	The highest level of tension generated by a muscle or a muscle group during a maximum contraction (regardless of the duration of the contraction).	<u>Introduce low load Technique Only @ Train to Train</u>  <b>Caution- wait until post Growth</b>	<b>Rest for full recovery</b> <b>W 1: R 5/10</b> Dive Prepare for Launch off wall Chin-up (add light weight as needed)	<b>Not advised (see your LTAD Optimal Windows of Trainability)</b>	
<b>Speed-strength (muscle power)</b>  <b>Zone: S-V</b>	The ability to perform a muscle contraction or overcome a resistance as fast as possible (normally very brief efforts of 1 – 2 seconds).	<b>Introduce at Mid Train to Train</b>	<b>Rest for full recovery</b> <b>W 1: R 10</b> Start Position to Dive to Entry Turn Action at feet on Wall Vertical jump (e.g. 8 sets of 3 wall jumps for height in 2 seconds with 30 seconds rest)	<b>5</b>	<b>1+ (72 hrs)</b>