

St Johnstone F.C. Youth Academy

Sports Science Plan Overview



Age Group	Focus/ Aim of Training	Session Lead By	Duration of Training Block	Monitoring
U 11	<ul style="list-style-type: none"> Development of neuromuscular abilities such as coordination, reaction time and agility Develop proper landing/ sprint mechanics Develop ability to tolerate eccentric load Track Physiological Development and PHV 	<ul style="list-style-type: none"> Coach and sport scientist (alt. weeks) As above As above Sport Scientist 	Each training focus will last 4 weeks at a time and will be cycled for the duration of the season with exception to physiological development which will be monitored continuously	<ul style="list-style-type: none"> Speed and agility tests N/A N/A Anthropometric data
U 12	<ul style="list-style-type: none"> Development of neuromuscular abilities such as coordination, reaction time and agility Develop proper landing/ sprint mechanics Develop ability to tolerate eccentric load Track Physiological Development and PHV 	<ul style="list-style-type: none"> Coach and sport scientist (alt. weeks) As above As above Sport Scientist 	Each training focus will last 4 weeks at a time and will be cycled for the duration of the season with exception to physiological development which will be monitored continuously	<ul style="list-style-type: none"> Speed and agility tests N/A N/A Anthropometric data
U 13	<ul style="list-style-type: none"> Development of neuromuscular abilities such as coordination, reaction time and agility Develop fundamental aerobic conditioning base Develop proper landing/ sprint mechanics Develop ability to tolerate eccentric load Track Physiological Development and PHV 	<ul style="list-style-type: none"> Coach and sport scientist (alt. weeks) As above As above As above Sport Scientist 	<ul style="list-style-type: none"> 4 weeks Once per week 4 weeks 4 weeks Continuous 4 week blocks will cycle repeatedly	<ul style="list-style-type: none"> Speed and agility tests YoYo IR1 or 2 N/A N/A Anthropometric data
U 14	<ul style="list-style-type: none"> Introduction to strength training and weightlifting Begin to develop soccer specific endurance Speed, acceleration and COD Track physiological development and PHV 	<ul style="list-style-type: none"> Sport Scientist Coach and sport scientist (alt. weeks) As above Sport Scientist 	<ul style="list-style-type: none"> Continuous throughout season Once per week Once per week Continuous 	<ul style="list-style-type: none"> Specified test battery (see accompanying sheet) As above As above Anthropometric data
U 15	<ul style="list-style-type: none"> Develop competency in weightlifting technique Increase intensity in soccer specific endurance training Speed, acceleration and COD Track physiological development and PHV 	<ul style="list-style-type: none"> Sport Scientist Coach and sport scientist (alt. weeks) As above Sport Scientist 	<ul style="list-style-type: none"> Continuous throughout season Once/Twice per week Once per week Continuous 	<ul style="list-style-type: none"> Specified test battery (see accompanying sheet) As above and HR monitoring As above Anthropometric data
U 17	<ul style="list-style-type: none"> Strong emphasis on max strength and power production Soccer specific high intensity interval training Speed, acceleration and COD Injury prevention Recovery techniques 	<ul style="list-style-type: none"> Sport Scientist Coach and sport scientist (alt. weeks) As above As above Sport scientist/ player 	<ul style="list-style-type: none"> Continuous throughout season Once/ Twice per week Once per week Every session/ warm up Following matches + training 	<ul style="list-style-type: none"> Specified test battery (see accompanying sheet) As above and HR monitoring As above Start a record of injuries N/A

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Monthly Plan (U11, 12 and 13)



Age Group	Month											
U 11	December			January			February			March		
	Neuromuscular Training (NT)			Landing/Sprint Mechanics (LM)			Tolerating Eccentric Load (EL)			NT		
	April			May			June					
	LM			EL			NT				
This training will be carried out in the first 30 min of each training session and will be carried out by the coach and sport scientist on alternate days												
U 12	December			January			February			March		
	NT			LM			EL			NT		
	April			May			June					
	LM			EL			NT				
This training will be carried out in the first 30 min of each training session and will be carried out by the coach and sport scientist on alternate days												
U 13	December			January			February			March		
	Tue	Wed	Fri	Tue	Wed	Fri	Tue	Wed	Fri	Tue	Wed	Fri
	NT	E	NT	LM	E	LM	EL	E	EL	NT	E	NT
	April			May			June					
Tue	Wed	Fri	Tue	Wed	Fri	Tue	Wed	Fri				
LM	E	LM	EL	E	EL	NT	E	NT				
<p>KEY</p> <p> NT Neuromuscular Training EL Tolerating Eccentric Load LM Landing/ Sprint Mechanics E Endurance Training </p>												

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Monthly Plan (U14, 15 and 17)



Age Group	Month											
U 14	December			January			February			March		
	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP
	April			May			June					
	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP			
U 15	December			January			February			March		
	Tue SE	Wed SP	Fri ST	Tue SE	Wed SP	Fri ST	Tue SE	Wed SP	Fri ST	Tue SE	Wed SP	Fri ST
	April			May			June					
	Tue SE	Wed SP	Fri ST	Tue SE	Wed SP	Fri ST	Tue SE	Wed SP	Fri ST			
U 17	December			January			February			March		
	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP
	April			May			June					
	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP	Tue SE	Wed ST	Fri SP			
<p>KEY</p> <p>ST Strength Training SP Speed Training</p> <p>SE Soccer Specific Endurance</p>												

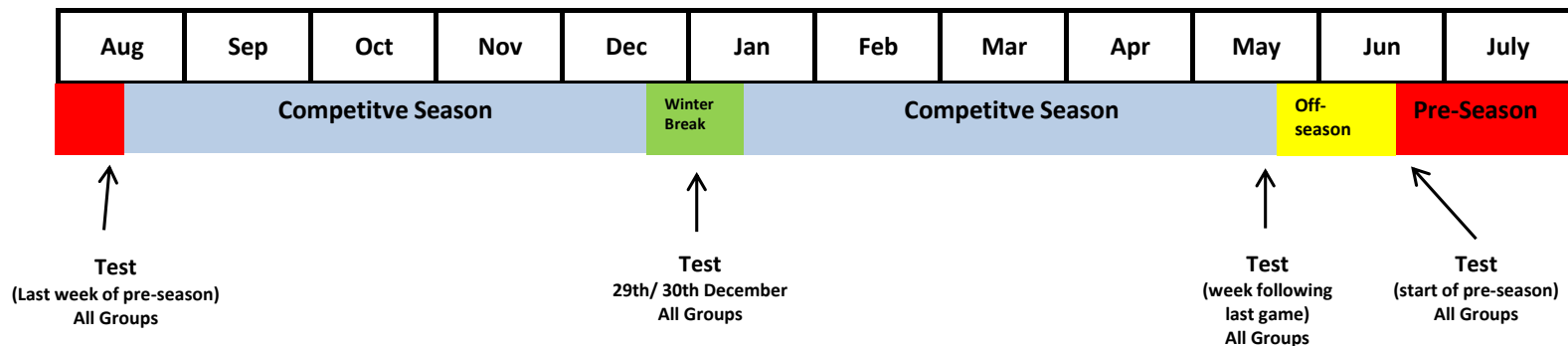
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Physiological Test Battery and Testing Plan



Physiological Parameter	Test	Rationale
Linear Speed (All Groups)	30m Sprint with 10 and 20m split times	This test measures running speed over distances specific to soccer match play. Acceleration is a key predictor of success in vital moments of the game in team sports
Explosive Leg Power (U13, U14, U15, U17)	Bilateral CMJ	Explosive jumping ability is correlated with sprint performance and explosive power. Single leg jump power can identify potential injury risks due to strength imbalances
	Unilateral CMJ	
Soccer Specific Endurance (U13, 14, 15, 17)	YoYo IR1 or IR2	Intermittent running performance is strongly correlated with the amount of sprinting and high intensity running performed during a match. Repeated sprint ability is important in soccer due to the demands of the game
	Repeated Sprint Ability Test	
Flexibility/ Mobility (U14, 15, 17)	AAA/ FMS	A mobility/ flexibility test is important for identifying potential risks of injury and poor movement quality. These test allow us to prescribe corrective exercises to improve overall athletic ability
Strength (U15, 17)	3RM	Measuring strength is useful for monitoring the impact of the strength programme in place. Furthermore, strength plays a role in power development in the force-velocity curve
Agility (All groups)	Arrowhead Agility Test	This test allows us to assess the athletes ability to control body movement at speed and also their acceleration/ deceleration technique. An athlete can be fast but not agile and a soccer player requires both qualities.

Testing Schedule



St Johnstone F.C. Youth Academy

Individual Test Result Feedback Sheet



St. Johnstone F.C. Youth Academy Physical Testing Feedback Sheet

Name:

Date:

Position:

Age Group:



Test	Score	Difference	Ranking Within Team	Norms
20m Sprint				
10m Sprint				
Bilateral CMJ				
Unilateral CMJ				
Yo-Yo				
RSA				
3RM Back Squat				
3RM Bench Press				
Arrowhead Agility				

Coaches Comments

Sport Scientist Comments

Areas for Improvement

Flexibility/ Mobility Issues

Player Signature:

Coach Signature:

Sport Scientist Signature:

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Team Test Result Feedback



St. Johnstone F.C. Youth Academy Physical Testing Feedback Sheet

Team:

Date:

Rank	20m Sprint	10m Sprint	SL CMJ	CMJ	Yo-Yo	RSA
1	First	First	First	First	First	First
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14	Last	Last	Last	Last	Last	Last
Rank	Back Squat	Bench	Agility	Overall	Test	Normative Data
1	First	First	First	First	20m Sprint	
2					10m Sprint	
3					SL CMJ	
4					CMJ	
5					Yo-Yo	
6					RSA	
7					Back Squat	
8					Bench	
9					Agility	
10						
11						
12						
13						
14	Last	Last	Last	Last		

