

1, 3, 5 - Lesson plans for Adult Skiers - Fitness and Efficiency

5 Fitness based cross-country skier - Classic Technique – 5x 1hr30 mins sessions

Nordiq Canada offers a series lesson plans for training adult recreational/fitness skiers in the classic technique with an emphasis on technical efficiency and application towards building greater personal ski capacity and community competition readiness (Loppet participation/racing). This delivery of this plan is consistent with the coaching competencies acquired through the Train-to-Train workshop.

The presumption is that skiers will be familiar with the different classic techniques and possess a foundational ski competency (diagonal stride, climbing, descending) as addressed in the Development lesson plan series.

!Attention! - Please note that the efforts/intensities suggested within the following session plans should be adapted to the fitness and capacities of the group and individual participants. Anaerobic repetitions/workouts are not recommended for master skiers.

Session 1

Session Objectives	Optimizing energy output <ul style="list-style-type: none"> Refining power position and balance Getting the best return on effort Understanding pacing <ul style="list-style-type: none"> Identifying and feeling sustainable efforts 			
Practice Plan				
	Outcome	Terrain	Drill suggestions	Duration (approximate)
Warm-up	Raising body temperature, activation of muscles Mobility, increasing range of motion	Easy tracked trail Tracked – flat transitioning into incline (max. 6% grade), 30-45 secs in length	Easy ski Double Pole to Diagonal Stride at easy effort <i>*Encouraging greater range of motion and transition between techniques.</i>	10 mins 10 mins

Skill Development Power position and Power line	Moving the Centre of Mass (COM) forward, reducing vertical movement	Flat tracked trail	Explanation & demonstration of power position and power line for Diagonal Stride (DS) and Double Poling (DP) <i>*Emphasis on dynamic nature of technique and balance</i>	10 mins
		Tracked trail, false flat down	Acceleration Drill I Over 50-75m, skiers should continuously accelerate down the track performing diagonal stride, only reaching top speed at the end. Alternate repeats with double poling	12 mins
			Acceleration Drill II As per above, however skiers should be encouraged to only perform diagonal stride while maintaining rhythm with increasing speed. Alternate repeats with double poling.	12 mins

Fitness Development	Pacing Understanding how Rate of Perceived Effort (RPE) and rate of respiration act as indicators to applying effective effort	Moderate tracked climb Skiers should be able to diagonal stride throughout	Pyramid Challenge 2 sets of variation of: 15 secs, 30secs, 60 secs, 90 secs, 60 secs, 30 secs, 15 secs. Rest between repetitions is time required to return to start. 3-5 mins rest between sets 15 sec start is to encourage skiers to start (a bit too) fast and settle into appropriate pace identifying speed, sensation and breathing cues. <i>*Skiers are reminded to go at their own appropriate pace/effort. Framed as a personal challenge.</i> <i>Skiers are encouraged to find the consistent effort/pace that they can maintain for all repetitions.</i>	30 mins
Wrap-up	Understanding training benefits of long & fast efforts.		Review cues and importance of respect personal capacity/pace	5 mins

Session 2

Session Objectives	The importance of the timing of movements <ul style="list-style-type: none"> • Phases of technique • Developing greater speed of movement • Developing more effective application of force 			
Practice Plan				
	Outcome	Terrain	Drill suggestions	Duration (approximate)

Warm-up	Raising body temperature, activation of muscles	Easy tracked trail	Easy ski	10 mins
	Mobility, increasing range of motion	Flat tracked trail	Slow motion skiing (technique of choice) <i>*Focus on the phases of movement, provide cue for each phase (break down each phase: reposition phase, power position and pole plant, etc...)</i>	15 mins
Skill Development Power position, Timing	Developing speed of motion	Flat or undulating terrain	Speed Zones Skiers ski incrementally faster in each segment of a loop, no faster than fastest speed they can maintain synchrony and coordination.	10 mins
			Synchroski Drill Ski behind another skier of similar ability and try to follow their tempo <i>*key in on pole plant</i>	10 mins
			Pursuit Loop Multiple skiers chase each other around a loop in attempt to catch the person in front (one point for each person they pass). <i>*To the technical cues as means to effective technique.</i>	10 mins

Fitness Development	Threshold	Variable loop 500-1000m	Cadence Ski Skiers ski a 500-1000m loop, 3-4x at a cadence quicker than their normal/comfortable default tempo Rest between reps according to feeling <i>*To the range of motion relative to speed. Relationship between endurance and muscular force</i>	30 mins
Wrap-up	Review on how retaining momentum can be impacted by cadence			5 mins

Session 3

Session Objectives	Descending comfortably <ul style="list-style-type: none"> • Maintaining body position in descending • Step turns • Choosing lines • Being around other skiers 			
Practice Plan				
	Outcome	Terrain	Drill suggestions	Duration (approximate)
Warm-up	Raising body temperature	Easy tracked trail	Easy ski	10 mins
	Activation of workout specific abilities	Easy open slope	Ski Ballet Allowing the skiers to move in a natural, free, and creative manner. Exploring the limitations of movement & equipment	10 mins

<p>Skill Development Athletic posture/position</p>	<p>Step turns</p> <p>Agility in descending</p> <p>Line choice</p>	<p>Flat terrain</p> <p>Open slope</p>	<p>Flow Slalom Focus on position, moving body through turn, maintaining speed</p> <p>Prison Break Increasing drill difficulties in the following order: Free run to hockey/skidded stop Free run to side slipping</p> <p>Pursuit Cross Skiers start at intervals and try to catch skier in front on single slalom course</p> <p>Double Cross Multiple skiers depart at same time on single slalom course</p> <p><i>*Skiers are encouraged to maintain continuous activity throughout drills climbing back up at own pace.</i></p>	<p>60 mins</p>
<p>Fitness Development</p>	<p>Endurance</p>			<p>5 mins</p>
<p>Wrap-up</p>				

Session 4

<p>Session Objectives</p>	<p>Transitions</p> <ul style="list-style-type: none"> • From one technique to another • From one terrain to another 			
<p>Practice Plan</p>				
	<p>Outcome</p>	<p>Terrain</p>	<p>Drill suggestions</p>	<p>Duration (approximate)</p>

Warm-up	Raising body temperature, activation of muscles	Easy tracked trail	Easy ski	10 mins
	Mobility, increasing range of motion	Flat of undulating terrain	Technique Zones Applying a specific technique in the require segment of a short loop	15 mins
Skill Development Power position and power line, Timing	Feeling the efficiency of effort and selecting the best technique	Flat leading into a hill	Double Pole Till No More Drill Beginning on flat, skiers DP as far up the hill as possible	15 mins
		Climb with increasing gradient	Technique Zones On hill	15 mins
Fitness Development	Racing pace	Variable loop 2-3 mins	Team Relay (teams of 3) Each skier must complete at least three loops. Encourage skiers to go as fast as they consistently can without compromising technique. Select best expression of technique to environment.	35 mins
Cool-down	Review how inefficient technique saps energy			5 mins

Session 5

Session Objectives	Fast power			
Practice Plan				
	Outcome	Terrain	Drill suggestions	Duration (approximate)

Warm-up	Raising body temperature, activation of muscles	Easy tracked trail	Easy ski	10 mins
	Mobility, increasing range of motion		Acceleration Drill I Over distance of 50-75m, skiers should continuously accelerate down the track while double poling	15 mins
Skill Development Power position	Building strength into technique	Flat tracked terrain	Tractor-Pull (DP) Emphasizing proper timing in muscle contractions and avoiding dead spots in technique	15 mins
		Flat leading into hill	High-Point Drill (DS) Limited number of strides	15 mins
Fitness Development	Maintaining momentum	Two variable terrain loops with short climbs (45 secs & 90 secs)	Team Relay (teams of 2) Each skier alternates between 90 sec and 45 sec loop. Skiers are encouraged to carry and maintain speed into climbs and to accelerate over the top before descents.	35 mins
Wrap-up	Ski, ski, ski!			5 mins