



KLiC Activity Scenario Template – Informal Setting

Activity title:

Taekwondo: Basic Stances and Kicks

Subject:

Informal Sports Activity

Athlete age:

All Ages

Estimated duration:

75 minutes (excluding setup time)

Learning content

- 10 minute warm up
- practice patterns
- kick pads in groups of 2 or 4
- sparing
- optional pad work
- stretches to finish

Learning objectives

The aim of the lesson is to advance the athletes skills and techniques with their performance in the lessons material through the use of the SensVest technology. After the lesson with the trainer additional time is granted to convey the results of the wearer's performance to all the athletes as well as any observer.

Inquiry-based character (if applicable)

highlights the IBSE character of the activity, specifies a type of inquiry and lists inquiry-based skills (for details, definitions and terminology to use see 'Short guide for designing inquiry-based teaching materials')

Applied technology (if any)

KLIC SensVest with wrist and ankle accelerometers and base station with a Laptop and projector.

Materials needed (if applicable)

Taekwondo Uniform

At the beginning of the lesson the athletes will be set to warm up their muscles through a series of stretches, to ensure that any athlete won't injure themselves during the course of the lesson. Proceeding the stretches the athletes will then proceed to perform their patterns. This entails the athletes to perform different stances and practicing to improve their patterns. After the patterns exercise the athletes will split up to groups of 2-4 where one athlete will be wearing pads and the others will be practicing their kicks and punches. During these exercises one of the athletes will be wearing the SensVest kit.

During the time of the practice it will be explained to observers what is happening during the athlete's movements and in terms of the output data. During the explanation if any observer has any questions or need clarification of understanding for the output data this will be followed up at the end of lesson discussion.

The SensVest kit will then be removed to prevent damage by the work performed later in the lesson.

The athletes will then be split up into two groups of pairs for sparring. One group will be resting while the other group will be sparring. The groups will be changing every few minutes.

If there is excess time left over in the lesson more work with the pads will be done but without the SensVest.

At the end of the lesson, after the athletes have finished their stretches, everyone will be given a talk on the performance of the SensVest technology worn by the athlete. Explanations of how the output data is to be read will be given and answering of any questions. After the talk the athletes, observers and trainer will then be requested to fill in a questionnaire which will be about their satisfaction of what they learnt while the SensVest technology was used.

Lesson Guidelines:

10 minutes	Warm ups
10 minutes	<ul style="list-style-type: none"> - Low front stance - Forward rising block - Reverse punch
5 minutes	Practicing the <<Something>> currently learnt by the athlete
10 - 20 minutes	Training Exercises
10 minutes	Optional pads work or sparring
5 minutes	Stretches to finish
15 minutes	Discussion about the results from the SensVest data and explain where athletes can improve their skills followed by a quick questionnaire for any observer, athlete and trainer to fill in making it clear in the feedback what they have learnt from the discussion.

Low Front Stance

Move your right foot closer to your left then step forward till your right foot is vertically aligned with your right knee. Your right knee, now your front or leading knee, should be bent so that you are unable to see your toes of the leading foot and the back leg should be straight with the foot pointing at an angle roughly 45° to brace the athlete. Using this basic stance if a punch is being performed the shoulders are kept square with the opponent to the front. If a block is being employed, the hip opposite to the blocking arm is pulled back to give the block more effect and reach.



Forward Rising Block

With your body twisted slightly at the waist so the left side is forward slightly, position your right fist above the right hip, the back of the fist needs to be pointing down to the floor. The left arm will be held before the athlete leaning to the left, the hand is closed to a fist and the arm is bent upward at the elbow so the back of the hand is facing the opponent. To proceed the athlete will lower the left arm in an arching motion to sweep in front of the face while at the same time the right arm is brought around to the front of the body and sweeps upward in front of the face. When the right arm is being brought up the left fist moves into the crease of the right elbow before retracting to above the left hip, the right arm being brought up in the sweeping arc then finishes similar to how the left arm started. The purpose of this block is to be able to protect the upper torso and the head in addition to quickly strike the opponent from the block. Additionally the athlete can counter attack the opponent by bringing the elbow of the blocking arm to strike the opponent at close range.



During this technique the SensVest technology can be used to examine the performance of the wearer and determine if they're correctly holding their posture along with applying enough force in their attack.

Reverse Punch

From Low Front Stance, position yourself with your right hip slightly forward and left hip slightly back, so the upper body is rotated. Make sure you maintain the foot position where the right foot is leading in front and knee above foot with the left leg straight. Left arm extends forward with the back of the hand pointing down, just before impact the left hand rotates so the back of the hand is pointing up. The fist can be aimed for





Project Number

505519-LLP-1-2009-1-GR-KA3-KA3MP

the solar plexus for either the head or torso area. Simultaneously right hand closes into a fist and pulls back to the right hip ready for the next punch. During this technique do not turn the head, keep it fixated on the target. This move is known as the reverse punch because it has the arm that punches is opposite from the forward leg, so either right arm and left leg or left arm and right leg.

During this technique the SensVest technology can be used to examine the performance of the wearer and determine if they're correctly holding their posture along with applying enough force in their attack.

SensVest Discussion

After the athletes have completed the lesson material a 15 minute discussion will be held to explain how the athletes can improve their performance with the use of the SensVest Technology. When a single athlete is wearing the SensVest with the wrist and ankle accelerometers the data will be captured and translated into a graph showing the X, Y and Z of the accelerometers. Indicating to the class what the orientation of the accelerometer when placed on the athletes body, the class will then be shown that when the athlete moves his arm forward the respective axis will show a spike of movement. Through this it can be show how much force a athlete is putting into the movements and what direction it is travelling in.

Assessment (if applicable)

The purpose of this informal scenario is to encourage the understanding of salient features that can be recorded during training, in order to understand movement and force. No specific assessment recommendation is given, as the technology is there to support the trainer in illustrating techniques in an empirical way.