



KLiC Activity Scenario Template – Informal Setting

Activity title:

Karate: Advanced Techniques Part 1

Subject:

Informal Sports Activity

Athlete age:

All Ages

Estimated duration:

75 minutes (excluding setup time)

Learning content

- 10 minute warm up
- basic punches, kicks, blocks and strikes in mid air
- practice Kata
- training exercises
- optional pad work or sparring
- stretches to finish
- 15 minute lesson review

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)

During the course of training the athletes may find themselves in a position where they're unsure to why or how a technique should be employed. For example a athlete may ask at what instance would a roll towards the opponent be necessary? In this instance the answer would be to avoid an attack and to prevent your opponent blocking your own.

Applied technology (if any)

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

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Materials needed (if applicable)

Floor mats, Gi (clothing worn by athletes and trainer), hand pads

Description of Activities

Brief

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. Following this the athletes will be demonstrated by the karate master the lessons basic techniques which will include punches, kicks, blocks and mid air strikes. During these exercise where athletes practice the techniques one of the athletes will be wearing the SensVest kit and their data will be recorded. This will also be done for the Kata.

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 have any questions or need clarification of understanding for the output data this will be followed up at the end of lesson discussion.

After the performance of the athletes Kata the SensVest will be removed from the athletes to prevent damage.

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	Within the second lesson the athletes will learn: <ul style="list-style-type: none">- The Zenkutsu Dachi stance- Gedan Berai, a downward block- Oi Zuki, a stepping punch from Gedan Berai
5 minutes	Practicing the Kata 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.

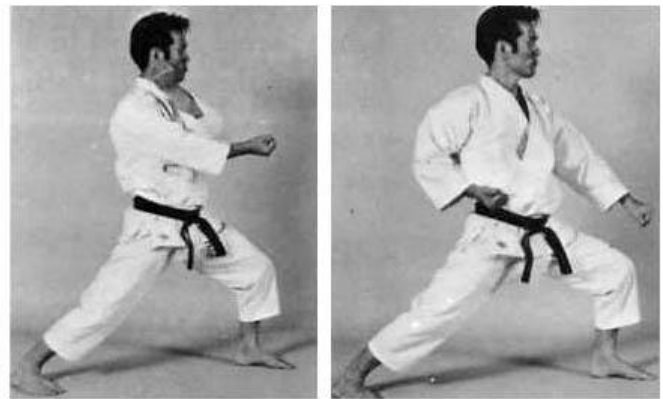
Zenkutsu Dachi Stance

From Yoi stance, move your left foot closer to your right then step forward till your left foot is vertically aligned with your left knee. Your left 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, this would leave the athlete in a stance similar to Kokutsu Dachi.



Gedan Berai

From Yoi position, move your left arm, hand still as a fist, slowly over your right shoulder with palm facing downwards. Your right arm moves slightly to towards your left side to cover your groin area. The left arm then travels downwards over the right arm, palm facing the right arm and hand still as a fist as it travels along. The arm continues until the arm is straight out in front of you, palm down as a fist. The arm should not extend further than the shoulder and should be level with the groin. Additionally when moving the arm the leg work must be in the same position as Zenkutsu Dachi, left leg leading forward with the knee above the foot and right leg fully extended forward. The torso does not twist in position but remains straight. Simultaneously the right arm travels straight backwards and twists so the fist face palm up and stopping just above belt height.



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.

Oi Zuki

The left arm comes up level with the centre of the chest. Then while stepping forward in the stance the left arm comes slowly backward and twists palm up and goes back to resting above the belt on the hip. Simultaneously the right arm comes forward from the hip towards until straight. As it travels it twists from a palm up fist to a palm down fist and should Finish twisting as the technique reaches maximum distance. The timing of the step and the punch should coincide together. The punch is less affective if completed after the step has





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finished and also if the stepping is only part way though. This technique is similar to the other punches in manner but from the Zenkutsu Dachi stance rather than Yoi.

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Training Exercises

The athletes will be separated into two teams; one team will be out training while the other team rests. The training till will be grouped in twos where they then train against each other and practice the moves they've been learning in that lesson. The instructor will be going around the class examining the performance of all the athletes and if they require any additional assistance the instructor will use provide it at his own discretion.

Optional Pads Work

It can be sometimes found that the athletes' performance is going ahead of schedule for the planned lesson. In these cases optional pads work can be done. During this the SensVest must be taken off encase of damage. The athletes will be arranged into groups of two to four where once will be wearing the hand pads and the others will be practicing their attacks. This is because during the training exercises the athletes withhold their attacks from making contact with their opponents. In this time athletes can make contact.

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.

Glossary of Terms

Kata – form.

Kamae – posture.

Zuki – punch.

Gedan Berai – low area block.

Oi Zuki – Step/lunge punch.

Gi – traditional martial arts attire, commonly loose fitting trousers, shirt and a coloured belt dependant on your grading.

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Image References

http://vckarate.com/files/Basic_info/stances/Zenkutsu-dachi.jpg

http://www.kenshinkanakamine.cl/Publicaciones/Gedan%20Barai/gedan%20barai%20imagenes/EI_Gedan-barai_de_Shotokai.JPG

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.