



KLiC Activity Scenario Template – Informal Setting

Activity title:

Karate: Advanced Techniques Part 2

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

Inquiry-based character (if applicable)

During the course of training the students may find themselves in a position where they're unsure to why or how a technique should be employed. For example a student 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 students and teacher), hand pads

Description of Activities

Brief

At the beginning of the lesson the students will be set to warm up their muscles through a series of stretches, to ensure that any student won't injure themselves during the course of the lesson. Following this the students 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 students practice the techniques one of the students 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 student'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 students Kata the SensVest will be removed from the students to prevent damage.

At the end of the lesson, after the students have finished their stretches, everyone will be given a talk on the performance of the SensVest technology worn by the student. Explanations of how the output data is to be read will be given and answering of any questions. After the talk the students, observers and teacher 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 third lesson the students will learn: <ul style="list-style-type: none">- Gyaku Zuki, a reverse punch- Mae Geri, a front kick from Gedan Berai in Zenkutsu Dachi
5 minutes	Practicing the Kata currently learnt by the student
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 students can improve their skills followed by a quick questionnaire for any observer, student and teacher to fill in making it clear in the feedback what they have learnt from the discussion.

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Gyaku Zuki



From Zenkutsu Dachi, position yourself with your left hip slightly forward and right hip slightly back, so the upper body is rotated. Make sure you maintain the foot position where the left foot is leading in front and knee above left foot with the right leg straight. Right arm extends forward with the back of the hand pointing down, just before impact the right hand rotates so the back of the hand is pointing up. The fist can be aimed for the solar plexus for either the head or torso area which would make them either a Jodan Gyaku Zuki or Chudan Gyaku Zuki respectively. Simultaneously left hand closes into a fist and pulls back to the left 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.

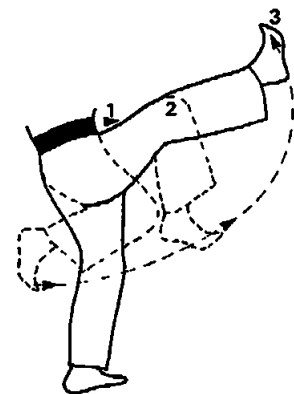


During this technique the SensVest technology can be used to examine the performance of the wearer and determine if they're correctly holding their posture along with applying enough force in their attack.

Mae Geri

Move both arms to the sides of the body held away from the body but straight. Fists should be level with the hips.

The back leg is brought forward and upwards bending the knee. The knee should now be in front of the body. The leg is then extended at the knee until almost straight. The leg should not be completely straight as this could damage the knee. The foot should be angles to kick with the ball of the foot with all toes pulled back. The leg should then be brought back to the knee. Then the kicking leg now the front leg should be placed down in front and the student should end as a zenkutsu dachi with the kicking leg now in front.



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.

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.



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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 in case 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 students have completed the lesson material a 15 minute discussion will be held to explain how the students can improve their performance with the use of the SensVest Technology. When a single student 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 students body, the class will then be shown that when the student moves his arm forward the respective axis will show a spike of movement. Through this it can be shown how much force a student is putting into the movements and what direction it is travelling in.

Glossary of Terms

Kata – form.

Kamae – posture.

Zuki – punch.

Geri – kick.

Zenkutsu Dachi – forward stance.

Mae Geri – front kick.

Gyaku Zuki – reverse punch.

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

Image References

<http://www.ju-jitsu-jkl.ch/uploads/images/articles-jujitsu/armes-naturelles-1/gyaku-zuki.gif>

<http://mawashido.free.fr/techniq/bases/pieds/239.gif>

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.