Muscle Endurance Year 11 Investigation

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Time in class= 1 lesson to plan, 2 lessons to carry out.

10 days to complete at home. There will be NO Validation on this practical.

What is it all about?

Investigation of Quadriceps muscle endurance in Teenagers. Comparing the Quadriceps muscle endurance of active teenagers (involved in sport/aerobic/load bearing exercise regularly) with inactive teenagers.

Write a scientific report about your investigation, as described below.

1. Plan the investigation

Decide on the **hypothesis, dependent** and **independent variables** in your investigation.

What are the **controlled variables?**

**Research** and provide **background information** on Quadriceps muscle endurance that relates to your hypothesis.

Decide upon the appropriate number of subjects and how many and what **type of measurements**

will be made.

Plan the way you will collect the relevant data.

1. Conduct the investigation

Set up times and places for the measurements to be taken with your subjects.

Carry out data collection from subjects.

1. Process, evaluate and communicate findings

Write up your investigation as a scientific report including the following:

•Introduction–include background information and hypothesis.

•Materials and method –list materials, state how you collected your data, how you minimised the

effect of uncontrolled variables, present raw data in an appropriate format.

• Procedure. Describe in detail how you will **conduct** your investigation.

Write down the **steps** of your investigation in sequence.

•Results –show raw data, and plot by hand a relevant graph.

•discussion –describe the trend and pattern in your data, use your knowledge and understanding to explain your results, comment on the reliability and accuracy of the data collected, comment on the reliability of your collection strategy, list two limitations in the data collection strategy that may have affected the accuracy of your data, list two improvements you could make to the data collection strategy.

•Conclusion –summarise your findings and comment on the validity of the outcome of the investigation.

• References. There needs to be at least two completed in the way stated in the school diary.