**P6, M3 Explanation of the collection of the data and findings**

**Method**

* During this practical carried out the physiological measurements during immediately following a period of exercise. Throughout the activity the students had signed up to participating in a short 20 minute walk with their pulse, temperature and breathing rate being measured throughout at different intervals.

**Equipment**

* Thermometer to measure the body temperature.
* Stop watch – to measure the length of time on the activity. Intervals between the records following exercises and for timing measurement for pulse rate and breathing rate.

**Procedure**

* First the students who are taking place within the practical need to be at their resting point, this involves them just sitting down for a minute.
* Whilst the students were sitting the pulse, temperature and breathing rate was measured before the exercise started.
* The students were then asked to walk briskly for 20 minutes.
* Half way though the exercise the student’s pulse, temperature and breathing rate was measured a second time and recorded down.
* Then once the exercise was finished the students were asked to stop and their pulse, temperature and breathing rate was measured as soon as possible.
* After 2 minutes of the exercise being over the students pulse, temperature and breathing rate was measured once again.
* Also after 5 minutes of the exercise being over the students pulse, temperature and breathing rate was measured a final time.

**Findings**

Below there is my results displayed onto a 3 different charts. Both of my chosen students had baseline measurements for their pulse, temperature and breathing rate that are within expected normal limit.

It is expected that an adult would have a pulse rate of 60 – 80 beats per minute at rest.

It is expected that an adult would have a normal breathing rate at 13-18 breaths per minute at rest.

Finally a normal body temperature for an adult is between 36.4 – 37.1 C depending on what type of environment they are in and also what activity they are doing.

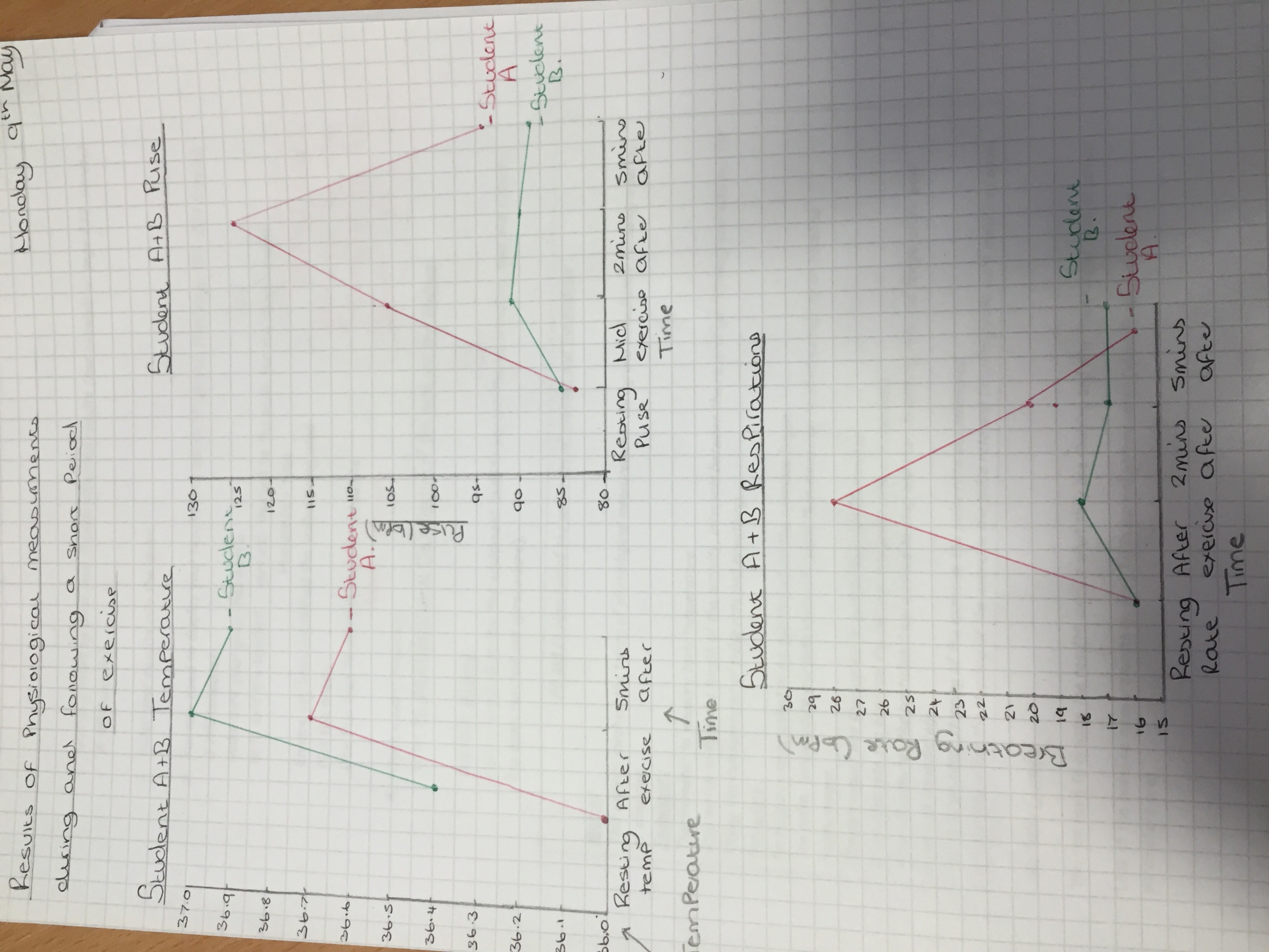
Looking at the graphs there is a clear image that all pulse, temperature and breathing rate increased rapidly after the exercise. This is due to during the exercise there is an increased demand for both oxygen and glucose. As more carbon dioxide is produced chemoreceptors stimulate the respiratory centre and baroreceptors stimulate the cardiac centre to increase the breathing and heart rate to meet the demands for oxygen and glucose to the cells.

The demand remains high soon after stopping the exercise as you can see on the graph for pulse both students take a while for the pulse to get back to normal at resting rate. The recovery time is the time taken from stopping exercise to the return to the normal resting rate. Both students have not returned to their resting pulse rate which would suggest further readings should have been taken to see the length of the recovery time. For example the pulse at least could have been taken at the stopping point of exercise. This is difficult but can be done.

However from the data collected it shows that student B is more fit than student A because their recovery rate is very short, also their pulse and respirations doesn’t shoot up as much as student A’s does. This means they rather didn’t push themselves throughout the exercise or they are very fit and their body is use to this type of exercise.

I would suggest the pulse and breathing results were reliable and could be replicated if we were to carry out the same activity again but this time it would be better to include more measurements in the recovery period until the pulse returns to normal rate again. This can be done by using electronic measuring of pulse rate throughout the exercise would further improve the validity of the results and also will make it a lot more accurate.

Temperature recording shown an increase within the temperature but still both of the students rise in temperatures were still within the normal resting rate mentioned above. This could be because the exercise wasn’t long enough to affect the body temperature. As oral monitoring due to the likelihood of mouth breaking would also affect the reliability of the results, maybe next time an tympanic monitoring would be a more effective may to measure the temperature.

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