

## **Exemplar for Internal Achievement Standard Physical Education Level 2**

This exemplar supports assessment against:

**Achievement Standard 91333**

Analyse the application of risk management strategies to a challenging outdoor activity

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. These will assist teachers to make assessment judgements at the grade boundaries.

New Zealand Qualification Authority

To support internal assessment

	Grade Boundary: Low Excellence
1.	<p>For Excellence, the student needs to analyse comprehensively the application of risk management strategies to a challenging outdoor activity.</p> <p>This involves evaluating how the applied risk management strategies are relevant to the identified risk(s).</p> <p>The student has explained the risk management strategies that are applied for dehydration and hypothermia (1).</p> <p>The student has explained how the risk management strategy of hypothermia and dehydration is relevant to the identified risk and why the risk management strategy is relevant (2).</p> <p>The student has evaluated the risk management strategy for dehydration by considering if it worked well, and also a suggestion to this strategy for the future (3).</p> <p>The student has briefly explained a modification of the risk management strategies applied for hypothermia (4).</p> <p>For a more secure Excellence, the student would need to provide a more detailed evaluation of the risk management strategy for hypothermia. For example, relating to the strategies (moving to keep warm and clothing worn) that are applied.</p>

**Examples of two risks analysed by the student.**

Dehydration and drinking lots of water was a very appropriate strategy for the activity of biking as it involves exercise and fluid loss through sweat as we are exercising for a long period of time and the amount of physical activity was fairly constant, therefore this is an appropriate risk to consider for any type of physical activity that is over a long period of time as your body could become fatigued and accidents could happen or worse case scenarios could be shutting down of body functions.

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Dehydration holds a physical and emotional risk as it can lead to not feeling well, headaches, and dizziness and in worst case scenarios passing out. It also has an emotional effect as you get far more fatigued quicker which leads to unhappiness and loss of will to keep going. We managed water intake well and ensured that peers and ourselves were drinking regularly, at breaks and throughout the ride. The teacher in charge would break regularly to ensure we kept hydrating. We made sure our water bottles were full and refilled if necessary and that the containers carried by the support vehicles were also full.....

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A positive result of implementing these strategies was that everyone remained hydrated and happy and as a result no one ended up dehydrated and we avoided any unnecessary physical or emotional strain. I one extra strategy we could have added to avoid dehydrate was not having too much clothing on for the conditions, which would have increase the seating rate. An example of this was when we were biking it started to rain so I put my shell on to keep dry, the shower then passed but I left my jacket on to avoid having stop and take it off. However I soon realised that I was getting far more sweaty and uncomfortable as a result of this and ended up stopping. I should have not been lazy and stopped as soon as I felt myself overheating, as by doing this I was increasing my chance of getting dehydrated.

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We are very fortunate that the weather wasn't too hot and we were able to fill the water tanks long the way and along the route. This meant that our two water tanks got us through the biking days. If the weather was warmer, this would have increased fluid loss therefore more water would have consumed to avoid dehydration. As a result we might have needed more that our tanks to refill bottles, so if repeating this activity I would carry more water tanks just in case the weather is warmer and we need to consume more water. Better to be prepared.

I chose to include hypothermia in my RAMS as it is often forgotten and holds a low perceived risk for people in the outdoors; however the actual physical risk presented is very high. As we are doing an outdoor activity in the elements bringing the correct gear and keeping warm is essential. No one really realises to which extent this risk affects us until you become cold and are in the beginning stages of hypothermia. Because exercising regulates your body temperature and keeps you warm it is generally not until you stop and that you cool down and realise how cold it is.

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By then you have already got cold and then it required a great amount of energy to warm the body back up. The use of clothing such as wool and polypropylene will keep you much warmer as it doesn't trap the sweat against your skin and wool will keep you warm even if wet. Another common mistake is to allow yourself to get wet. Once we, wind chill and temperature quickly decrease body temp and when wet it

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becomes harder for the body to warm up. The altitude rain and wind are all elements that you are extremely exposed and vulnerable to while on this ride therefore creating a high actual risk and being a very relevant strategy. The risk of hypothermia is present in any outdoor activity and due to the exposure of the route and the bad weather forecast it was one reason that leads to the trip being unsafe for the dates planned. The change in route definitely lowered the actual risk around hypothermia however it was still present. A positive effect of implementing this was on the first day when we arrived at camp we were all wet as it had been raining. We had about an hour to wait before the vans turned up with our gear, and at this stage there was potential to get hypothermia as it was we and very cold. As we were aware of this risk on arrival we made sure to change into dry warm clothes before our body temp cooled down and we got cold. We also played games that kept us active warm until gear arrived container shelter, extra dry clothes and warm food. By doing this we avoided potential risk and everyone remained warm and comfortable. Also by identifying this risk it really highlighted the importance around having decent clothing suited to the outdoors. As we had discussed clothing required prior to the trip everyone was aware that thermal, fleeces, woolly socks, gloves etc., were needed and because everyone was wearing these items even when wet they keep you warm. As I was very aware of this risk I was also able to check on other members of the group to ensure they were keeping warm (during stops especially) and I was able to remind them to put more layer on or coat on to avoid getting cold. Again we were lucky that the temperature wasn't too cold and there wasn't much wind therefore we avoided the wind chill factor. As it was raining for part of the trip and people did get wet, if it was colder/windier this would have increased the chances of cooling down which could lead to hypothermia. We were also fortunate that we don't have any major accidents that involved a lot of sitting round. The bulk of our ride was also under cover of the bush which protected us further as it kept the rain and wind off. One thing I would encourage next time would be to put a coat on as soon as it started spitting to avoid getting wet in the first place.

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	Grade Boundary: High Merit
2.	<p>For Merit, the student needs to analyse in-depth the application of risk management strategies to a challenging outdoor activity.</p> <p>This involves explaining how and why the applied risk management strategies are relevant to the identified risk(s).</p> <p>The student has explained how and why the risk management strategies for mechanical failure and injuries due to inexperience are applied (1).</p> <p>The student has explained how and why the appropriate strategies are relevant to the risk(s) identified for mechanical failure and inexperience (2).</p> <p>The student has provided an evaluation of the risk management strategy for inexperience (3).</p> <p>To reach Excellence the student would need to provide a more detailed evaluation for mechanical failure. For example, who should have looked over the bike and why?</p>

## **Mechanical failure of bike could cause injury and affect the emotional safety of the rider.**

Before the trip we were told to service our bikes so that they would be in a good condition for the trip and that people wouldn't get hurt from problems with their bike. I think most students did this as there were very few problems that we had on the trip with bike faults except for a derailleur that came off and a wheel that wasn't in properly. We are still unsure of the derailleur was because the girl fell off her bike earlier. The reason this is important is that injuries could occur. For example, in xxxxxx case her wheel wasn't in properly and for the first part of the trip it was like biking with the back brakes on. It wasn't until xxxx checked it that the problem was sorted out. This affected her mentally as she got a lot more tired than the rest of the group and this made her a little grumpy. I also affected her physical as she had to do twice the work we did to keep the bike going and therefor her muscles wore out faster which meant she couldn't keep up with the rest of us and made her tired. When LP derailleur fell off she was pedalling up a hill. The derailleur fell off and she stopped pedalling and started to go backwards down the hill almost running into the person behind her. She could have injured herself on the other bike by her legs or back striking the handlebars of the bike behind.

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This was an appropriate strategy to implement because a faulty bike would have led to more accidents, such as brakes maybe failing or having to be out in the bush for a longer period of time which may have led to other problems of the weather had of been bad and maybe other injuries. This also very much applied to the trip as without a bike we couldn't complete the trip. This would mean that we might hold the whole group up because our bike will have broken down and this may cause frustration within the group.

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Even after getting it checked in the bike shop we should have got the people who knew how to check a bike to look over the bikes of those who don't have the knowledge of how to make sure a bike is safe to use.

## **Injuries due to inexperience when riding**

For every practical lesson when the weather was good we went for class bike rides so that we could practice riding safely as individual and as a group. This was important as both types happened during the trip. When we were on the road we were biking in a single file line as a group and when we were on the tracks in the hill we were spread out more. There were many safety issues we covered like having distance between the rider in front of you and yourself in case of a sudden stop from the rider in front which would mean that you would run into them and maybe cause injury to yourself and them. Also when riding on the road riding on the left hand side of the road as far to the left as possible, this is because you want to give the traffic as much space as possible so that if there is another car coming on the other side of the road the car that is passing you has plenty of room to get past you on your bike and they don't hit you or come so close that you may get caught up in the back draft by the car causing you

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to wobble on your bike and fall off. When we were biking in the bush we needed to have a larger gap between rider as you could not see what was coming up and if there was a tree root or drop off the rider in front may need to stop in a hurry. Leaving a bigger gap helps to prevent you going into the back of another rider and injuring yourself.

This was an appropriate strategy because of the wide variety of risks that come with riding as a group and in unfamiliar conditions. We would be doing a lot of riding in groups so I thought that this was an appropriate strategy. Also because most of us had had little experience riding in groups or riding at all then we needed strategies like this to keep us safe when riding. On a positive note most people did practice and listen to the teachers advice and therefore made up for the dangerous bikers.

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This was a useful strategy to use during our time riding we rode on the left hand side of the road and no-one got hit by any cars. At times some of the boys would ride a little bit further out into the middle of the road when there were no cars coming. This could have been avoided by maybe having teachers in the middle of the group when riding to tell them to ride closer to the left and stay in single file. We could have also put some more responsible riders by these people who may have made them stay in single file. We were a lot closer on the road as we could see a bit further ahead and be prepared for any obstacles that may cause a rider to brake making the person behind them into them. We also used this single file to draft riders so that we went faster. I think we should have had a bit more practice on this in class, as at times I was catching up to the person in front of me and if they had of braked there may have been an accident. In the bush we might have want to have a bigger gap as at times people were riding together on the track chatting with each other, a gap of about 8m might have been appropriate. In the future rider might want to be set out at time intervals with faster riders going at the front so that slower riders don't hold them up. Sometimes a fast rider would zoom past you on the track and cause me to wobble.

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	Grade Boundary: Low Merit
3.	<p>For Merit, the student needs to analyse in-depth the application of risk management strategies to a challenging outdoor activity.</p> <p>This involves explaining how and why the applied risk management strategies are relevant to the identified risk(s).</p> <p>The student has explained how and why the risk management strategies are applied for the people risk of not following or listening to instructions and equipment failure (1).</p> <p>The student has explained how the risk management strategy of listening to instruction is relevant to the risk(s) (2).</p> <p>For a more secure Merit, the student would need to explain in more detail how the other risk management strategies are relevant to the identified risk(s). For example, how the strategy for equipment risk, is relevant to the risk of falling and injury.</p>



What outdoor activity did you do?

Student 3: Low Merit

NZQA Intended for teacher use only

The challenging outdoor activity we did was rock wall climbing and abseiling.

What risk management strategies did you select and apply during the outdoor activity?

For people risk, the risk management strategy I chose to apply was to listen to instructions and also to have clear and positive communication between you and your team and others. This will help to reduce the risk of falling by falling instructions and listening to my partner. I think this is a relevant strategy because this is the most important part of climbing. When top rope climbing you are relying on your partner to stop you falling to the ground, if you slip or lose your grip which could cause broken bones or even death, so having clear communication and listening to instructions of the instructors on how to belay is the most important part of rock climbing

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For equipment the risk management strategies I chose and applied were to inform the teacher/ person in charge when the equipment was worn out or even broken, and an 'Equipment log book' to write in when equipment had been used. Also to wear the correct clothing on the trip and have prior training in how to use the equipment correctly. This will help reduce accidents that may happen like falling from ropes or the rock face because of equipment failing or getting loose clothing stuck in devices which could cause injury to fingers and skin.

The environmental risk management strategies I chose and applied were to check for the weather forecast before going on the trip and in person look and check the place where you would like to climb for any dangers. Also check road ways and organise proponent dated for the climb. Checking weather will mean it will be safer to climb and less chance of things like hypothermia.

How and why did you apply these particular strategies?

Were these the best/most appropriate strategies for the day? Why/why not? What was the effect of applying these strategies on physical emotional and cultural safety? Give specific examples?

I made sure that I listened to what the instructors were telling us when we were climbing like how to put the harness on correctly and how to belay the person correctly when they were climbing. The instructors told us that the harness waist belt should be above our hips and that it is tight enough so that it won't fall down over our hips so that we fall out of it when we are climbing. They said the leg loops should be comfortable so that you are not just sitting on your waist belt when climbing. They also showed us how to belay person which was a belay movement which was pull, slide, and brake. We wanted to spend as much time in the brake position as which meant if the climber fell off the wall we could easily lock the rope preventing any more to go through which means the climber would not fall as far and help to prevent injury to them.

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One of my equipment risk management strategies I chose was to inform a teacher or a person in charge or that is in charge of the equipment when it is worn-out or broken so that they didn't use any equipment that may cause an injury like frayed harnesses or ropes. I also made sure that I filled in the log book when using the ropes. Recording this information and letting people know that equipment may be faulty means that it will prevent people from getting injured or falling when climbing as the rope may break if it has had too many falls on it. For example on the trip I informed Mr xxxx that the rope we were using kept getting caught in the belay device as it had been curled up to many times before. I chose this because it minimizes the chances of me and others from being injured. This was an appropriate strategy for the day because it allows safe climbing for all including myself. Another equipment risk management strategy that I chose to apply was the wearing of the correct clothing and equipment. I chose this because it was a safety act and it was an appropriate strategy for the day because loose clothing can get caught in the belay device and cause injury for myself and others. Therefore by wearing correct clothing and equipment it decrease the chance of injury or death. For example wearing a loose top that gets caught in the belay device causing it to jam. This could lead to the person belaying getting injured by jamming fingers in the device when trying to get loose clothing out of it. Finally the last equipment management strategy I chose to apply was to have prior training in using the equipment correctly with the help of an experience climber, for example xxxxx showed me how to belay properly when someone was climbing by showing me the correct technique of pull, slide brake. I chose this strategy because it allowed me to provide safety for the person that was climbing allowing them to relax and not worry about falling as they knew that I had done the prior training with the instructor. This made them feel safety emotionally.

How and why did you apply these particular strategies?

*Were these the best/most appropriate strategies for the rock climbing day? Why/why not? What was the effect of applying these strategies on your physical emotional and cultural safety? Give specific examples.*

One of my risk management strategies I chose to apply was to check the weather forecast before we left to leave on the trip. I chose this because is provided us an idea of what the weather we were in stall for also to check of the trip was still one. This was an appropriate strategy for the day because it allowed me and the others to know if the weather was good to climb and abseil in especially as we were locates very close to the sea. The effect of this stagey on my safety was that it minimized any chances of accidents or injuries to occur form unknown weather. For example we are able o estimate when the tides were to come in and out. Some other environmental risk management strategies that I did not personally do but Miss xxxx and Mr xxxxx did were check the location we were going to and organise a postponement date. These were appropriate strategies for the day because by checking the location of where we were going to climb the teachers were able to see if there were many major hazards that needed to be avoided, also by organising a postponement date it meant that even if we weren't able to go on the day we set out to we still had a chance of doing it on a different day.

	Grade Boundary: High Achieved
4.	<p>For Achieved, the student needs to analyse the application of risk management strategies to a challenging outdoor activity.</p> <p>This involves explaining how and why the applied risk management strategies are applied.</p> <p>The student has explained the risk management strategy of supervision, why the strategy is applied, (1) and how the strategy was applied (2).</p> <p>The risk management strategy for dehydration has also been explained, how it is applied, (3) and why it is applied (4).</p> <p>The student has also explained how the risk management strategy is relevant to the identified risk (5).</p> <p>To reach Merit, the student would need to explain how the risk management strategies of supervision and being pressured by others are relevant to the identified risks of physical safety and injury.</p>

The RAMS document was to identify potential and perceived risks we wrote strategies to prevent these risks from happening on our expedition ensuring the trip was safe and enjoyable. Now that I have finished completed the bike expedition I realise how important the risk management was for the expedition. Before we went on our bike expedition we had planned and constructed lists of equipment and emergency procedures that might have been needed throughout the trip. On the trip we did not need any of our emergency plans or risk management information as no one got injured. However now completing the expedition there were a few factors within our planning that could have been improved. Despite these improvements they didn't have any negative effect on our safety. By completing the RAMS form we discussed things like

- Dehydration
- Injury
- Emotional trauma
- Extreme Weather conditions

I believe the list above was appropriate because it reduces the chances of negative outcomes which could have otherwise been associated with our expedition.

On the bike expedition one strategy was to have plenty of supervision. For example if we had poor supervision there would be higher risks of injury, discomfort and an overall safety hazard. As such, supervision proved to have a positive effect because it provided a safety net which allowed us to worry less about safety concern and improved the quality of our overall experience.

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The supervision was mostly carried out by 6 adults, 4 of the 6 adults were also on bikes placed in the middle, front and back of the pack so as to ensure all the students were at all times kept safe and that no-one could take off by themselves or no-one would get left behind. By having such supervision on the expedition it lowered the potential risk of injury, malfunction and the possibility of getting separated/lost/trapped and also damaging the environment by leaving belongings behind. Overall therefore supervision has a positive impact on our physical safety.

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Injury was a risk on the expedition. This is because each participant was not looking out for themselves but also looking out for others. A strategy that we used was not being pressured by other into something too physical demanding. For example on the first day there was a very steep slippery downhill part which we supposed to bike down, but me and many other decided to walk our bikes down as we were not confident in ourselves and the bikes. I actually was thinking about the potential risk that might be associated with falling off my bike while going down the steep hill as I was traveling away for sports week the week after, which made me very hesitant when riding. We could have got broken bones or sprained something if we fell off while going down this hill and then not have been able to participate in sports. This perceived risk was very important to me and many others as it was a risk everyone had to encounter, therefore without any sort of pressure the participants were able to

do what was right for themselves. For example xxxx and I discussed while walking down the hill what the risk and the potential risks were from falling off your bike.

Dehydration was a vital part of the expedition, as being dehydrated can lead to weakness and a lack of energy, fatigue which meant that people may not be able to complete the bike and therefore it ensures that you are staying focused on your biking technique therefore potentially staying safe and reducing injury. As we were riding over a long period of time and the weather was fairly hot this was a real risk for us. We ensured that everyone was drinking enough water and keeping hydrated throughout the expedition.....

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. This helped our overall safety as it meant that all participants were getting reminded to keep drinking and we also had 3 big 20 litres carton of water in the trucks so that we had no excuses of not keeping drinking. We could also use this to fill up our drink bottles on our bikes as well.....Drinking is important, without it you would start to have lost of ached and cramps in your body. This is because water is exiting your body through sweat if you don't replace the water that has been lost, then your will start to dry out your body which make you become dehydrated and unfocused. For you own safety be watchful of specific signs of dehydration when biking like muscles cramps, dry mouth and eyes, you become fatigued, urine appear dark yellow, sudden light headedness, heart rate increase, you overheat and your skin loses elasticity. By having any of these symptoms on the bike expedition it would be safe if you had a break and make sure you start to drink regularly.

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	Grade Boundary: Low Achieved
5.	<p>For Achieved, the student needs to analyse the application of risk management strategies to a challenging outdoor activity.</p> <p>This involves explaining how and why the applied risk management strategies are applied.</p> <p>The student has explained how and why the risk management strategy of listening to instructions and paying attention is applied (1).</p> <p>The student has explained why the strategy of checking equipment is applied (2) and briefly explained how equipment is checked (3).</p> <p>For a more secure Achieved, the student would need to explain in more detail how the risk management strategy (checking equipment) is applied.</p>

Three risk management strategies that I used at the rock climbing place where people, equipment failure and weather.

One of the risk management strategies I chose and applied was behaviour of people at the rock climbing site. You had to not muck around and be looking all the time or you might get hit by falling rocks or not pay attention to things like doing up your partner's harness. The strategy was listening to instructions and always paying attention to what is going on around you.

The effect of this strategy on my safety was that when I was belaying and walking around the area, I made sure that I knew what was going on around me and what I needed to look out for. For example, when xxxx was climbing there were heaps of rocks falling from under her feet so she called out 'falling rocks' and we knew not to look up and to face our heads downwards, this is so we didn't get hit in the head by falling rocks.

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The second risk management strategy I chose, and applied was checking equipment. I chose this because I wanted to know the equipment might fail and how to fix it if it did, this was an appropriate strategy for the day because if for example my harness was fraying I would need to know that it was a hazard and that I would need to tell the teacher about it. I made sure I checked all the equipment before I used it so that it would not break if I was using it.

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The effect of this strategy on my safety was so I would not fall or injure myself because of incorrectly worn or old worn out equipment. An example of this was when I was abseiling my harness could be fraying and it could break and I could slip and fall to the ground.

2

The third risk management strategy that I chose was the weather. I chose the weather because when we go climbing or not depends upon the weather. This was an appropriate strategy to use for the day because if it was raining there could be injuries from people slipping on the rocks and grazing their knees or scrapping their fingers on the rocks. The effect of this strategy on my safety was good because it turned out to be an amazing sunny day because I checked the weather forecast prior to the event which meant there was no slips due to the wet ground or rocks. For example when I climbed one of the really high rocks, the rock face was really steep and I didn't slip because it was dry and I had full grip and control.

I applied these particular strategies because I could then know all the main hazards of rock climbing so I could sort them out at the time and be aware of them. These were the most appropriate strategies for the rock climb day because I was able to climb correctly and cautiously with no worries on what to do. The effect of these strategies was to ensure the full safety of the climbers and make sure everyone was aware on what to do when a situation occurred.

	Grade Boundary: High Not Achieved
6.	<p>For Achieved, the student needs to analyse the application of risk management strategies to a challenging outdoor activity.</p> <p>This involves explaining how and why the applied risk management strategies are applied.</p> <p>The student has briefly explained how and why the risk management strategy of looking out for possible hazards is applied (1).</p> <p>The student has explained why a strategy (equipment failure) may be useful (2).</p> <p>To reach Achieved the student would need to:</p> <ul style="list-style-type: none"><li>• identify clearly the risk management strategies for equipment failure</li><li>• explain in more detail how and why the strategies are applied.</li></ul>



Three risk management strategies I used at the rock climbing were rock climbing site dangers, equipment failure and weather.

One of the risk management strategies that I chose and applied was rock climbing dangers. I chose this because of it focuses on what could potentially go wrong with rock climbing at any time. An appropriate strategy for the day was looking out for all the possible hazards. For example falling rocks, loose rock, not paying attention to the surrounding, swing and hitting your head and even when you are moving around the rock climbing site.

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The effect of this strategy on my safety was so that when I was rock climbing or walking around the area I knew all of what was going on and what I needed to look out for so like falling or loose rocks so that I didn't get injured. For example, when xxxxxx was climbing there were heaps of falling rocks form under her feet so she called 'falling rocks' and we all knew not to look up and to face our heads downwards.

The second risk management strategy I chose and applied was equipment failure. I chose this because I wanted to know the possible failure and how to correct them. This was an appropriate strategy for the day because if for example my harness was freying I would need to know that it was a hazard want he I would need to tell the teacher about it. The effect of this strategy on my safety was so I would not fall or injure myself because of incorrectly worn equipment or old worn out equipment. An example of this was when if I was abseiling my harness could be freying and it could break and I could slip and fall to the ground.

2

The third risk management strategy I chose was the weather. I chose this because whether we go climbing or not depends on the weather, this was an appropriate strategy for the day because if it was raining there could be injuries. This effect on this strategy on my safety was good because it turned out to be an amazing sunny day because Ms xxxx checked the weather forecast prior to the event which meant there were no slips due the wet ground/rock. For example when I climbed one of the really high rocks the rock face was very steep and I didn't slip because it was dry and I had full grip and control.