



LOG BOOK G452

MOUNTAIN BIKING – BOTTOM BAND 2 – 20

There is no content page.

Not all aspects required are covered as it lacks information relating to the challenge and the planning of the route. The route detailed does not meet the prescribed three hours of cycling.

Equipment for both personal and group is covered well as are the safety aspects.

There is good coverage of the code of ethics and detailed coverage of nutritional planning.

The route card lacks detail.

Physical Education

OCR Advanced Subsidiary GCE Unit G452

Log book cover sheet and authentication statement: Outdoor and Adventurous Activities – Mountain Biking

Centre Number		Centre Name	
Candidate Number		Candidate Name	

Log book element required	Present? (please tick)
Details of the course/expedition undertaken for the assessment	
Details of personal equipment and the reasons for taking it	
Details of group equipment and the reasons for taking it	
Discussion relating to safety principles applied	
Details of any code of ethics relevant to the activity	
Details of route planning together with relevant safety measures	
Route card	
Details of nutritional planning	
Evaluative comments in relation participation and performance in the activity	

Assessment Band Descriptor which log conforms to

Band 1: A detailed and comprehensive log containing all the prescribed information is present	
Band 2: A detailed log containing all the prescribed information is present	
Band 3: A detailed log containing most of the prescribed information is present	
Band 4: A log containing some of the prescribed information is present	
Band 5: A log containing little of the prescribed information is present	
Mark Awarded	

Authentication statement

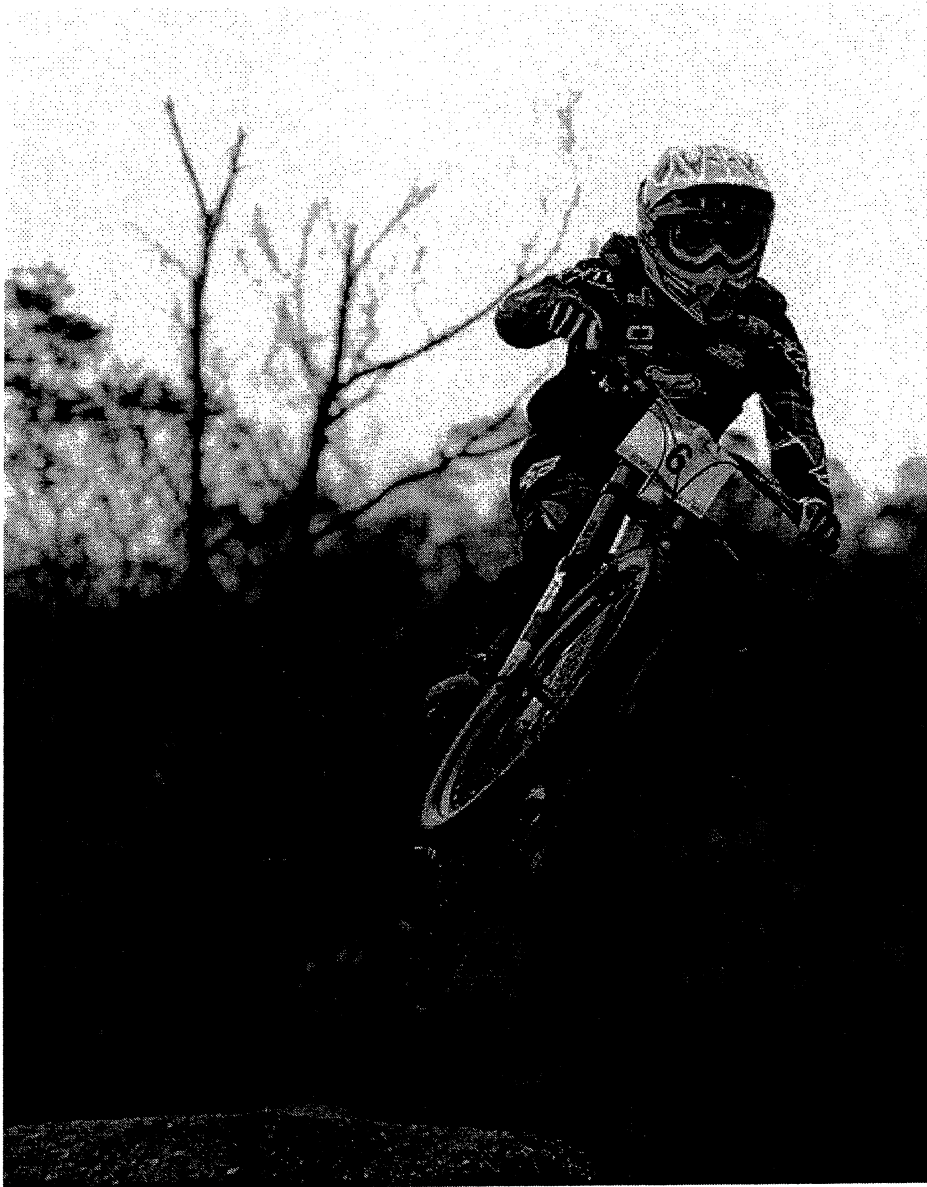
I can confirm that this candidate has fully completed the activity as detailed in this log book, meeting all health and safety requirements, and that the material in this log book is the candidates own work.

Name of instructor/teacher responsible			
Signature		Date	

AS Physical Education

Mountain Biking Log

Wtht



Name: _____

Contents

1. Introduction
2. Equipment
 - a) Personal equipment
 - b) Group equipment
3. Safety principles
4. Code of ethics
5. Nutritional plan
6. Skills/Techniques
7. Planning of trip/expedition
8. Evaluation of trip/expedition

Introduction

Personal experience

Years of experience:

2 years DH and XC experience, many years cycling experience.

Places visited:

Cwmcaen DH red and black routes + XC (Wales)

Afan Forest park DH +XC (Wales)

Les 2 Alps mountain bike park (France)

Les menieres DH (France)

Addington hills (England)

Leith hill (England)

Strengths and weaknesses:

Strengths:

XC trails and fast burms

Weaknesses:

Steep jumps

Aims of the trip/expedition:

To improve jumping skills, improve fitness and stamina and also to work on skills such as riding burms efficiently, with maximum speed.

Equipment

When mountain biking in the UK, I carry a number of different items, these are in case of accidents or emergencies, or to carry out repairs to the bicycle, these items include:

- 2 inner tubes
- Tyre levers
- Multi tool including Allen keys
- Small bicycle pump
- Brake pads
- Rear gear hanger
- Bicycle lights (front and rear during winter months)
- Compact trail tool kit.

When cycling as a group it is not necessary for all individuals to carry every item of clothing, a group leader or mountain biking instructor may carry items such as a trail tool kit and bicycle pump, however, it is necessary for all individuals to carry 2 inner tubes and bicycle lights.

The above items are all necessary for maintaining the bicycle, however, additional items may be required at times, and these can include:

- Chain splitter (in case of chain breakages)
- Crosshead screwdriver
- Pedal spanner
- Spoke key
- Crank extractor
- Cassette locking tool
- Adjustable spanner
- Shock pump
- Puncture repair kit
- Small bottle of chain lube
- Cable ties
- Duct tape
- Spare chain links
- Spare brake and gear cables.

The majority of these tools and parts can be found in a bicycle tool kit, such as one from Parktool.

It is also important to consider the correct clothing when cycling/mountain biking, there are essentials that should be worn such as a cycle helmet. This is for safety reasons, you should never ride a mountain bike without wearing a helmet. The best types of helmet are made from expanded foam polystyrene and are covered with a protective plastic outer surface. The most important thing to consider is the fit. When the chin strap is fastened, you should not be able to move the helmet forwards or backwards. This usually means that it is too big, and could fall off. Ventilation is another consideration.

Most specialist bike helmets have plenty of scope for ventilation, with multiple air channels stretching from the front of the helmet to the back. If you are going to be doing Downhill Mountain biking, a full face helmet should be considered, this covers the majority of your head and has a protective area around the jaw and chin.

A first aid kit is also essential; this should be kept in your backpack at all times. As a bare minimum, your first aid kit should contain bandages, antiseptic cream, plasters and tweezers, and should be restocked as and when items are used up. A waterproof storage container is the ideal home for these items; however, premade kits are easily available.

There are also many other items that should be considered when packing kit, these are generally not considered as important as a first aid kit and a cycle helmet but are still extremely useful, especially if going for long rides on harsh terrain, many of these are entirely optional:

Glasses

If you are going to be mountain biking in the sun, glasses are an essential piece of mountain biking equipment. They protect your eyes from the damaging rays of the sun. They also protect your eyes from dust, dirt and insects in windy conditions. The typical mountain biking trail is likely to throw up lots of these.

Backpack

A backpack is useful for storing mountain biking equipment that you need to take with you but have no room for elsewhere. Some types of backpack have mesh lining to help with circulation and general stability. Look for one with a hip belt, as you can't guarantee that shoulder straps alone will be enough to keep the backpack attached to you.

Although many of the essential bike parts needed to help repair damage to your bike (see the following paragraph for a list of the bare minimum that will often prove useful) are intended to be lightweight enough to fit underneath the bike seat, it is often much easier to keep them in a backpack instead. Given the physical nature of mountain biking, they can easily come loose.

Bike Parts

Spare bike parts are essential mountain biking equipment, although not everyone would consider packing them. As a general rule of thumb, recommended items include:

- A contact multi-tool
- A spare rear mechanism
- A spare set of brake pads
- A spare mountain bike chain
- Tools to fix a flat bike tyre, including tyre levers (to help remove the bead from the rim of the tyre), a pump (to help inflate the tyre valve), spare inner tubes, extra patches (to temporarily mend damage to the tyre) and rubber cement (to fix the patches in place)

First Aid Kit

A first aid kit is an essential piece of mountain biking equipment, and should be kept in your backpack at all times. As a bare minimum, your first aid kit should contain bandages, antiseptic cream, plasters and tweezers, and should be restocked as and when items are used up. A waterproof storage container is the ideal home for these items.

Cycle Shorts

Cycle shorts can be either tight fitting (Lycra) or baggy, this is entirely down to personal preference, however each has its benefits. The main advantage of tight-fitting Lycra is the fact that it limits wind resistance and is often more comfortable than baggy clothing. For many mountain bike riders (and cyclists in general), this is the most important item of clothing to get right, as choosing the wrong pair of cycle shorts can make your whole ride uncomfortable. If you choose a good quality pair of cycle shorts, they can last for years.

Cycle Trousers

Cycle trousers are a good alternative to cycle shorts, especially in winter conditions where joints should be covered to prevent injury, a good pair should allow movement around the knee.

Cycle Jerseys

Cycling jerseys tend to be made from tight-fitting lycra or synthetic material. Cycling jerseys rarely get as sweaty as t-shirts, which helps to retain warmth. They can be long sleeved, sleeveless or short sleeved, depending on the conditions in which you will be mountain biking. Many cyclists wear cycle jerseys as part of a layering system.

Reflective Cycling Clothing

If you plan to be mountain biking after dark, this is an essential clothing item. Reflective cycling clothing can range from cycle tops/ jerseys to cycle shorts and gloves.

Cycle Gloves

Cycle gloves provide added comfort while cycling, especially on long rides when your hands can easily get sore from constantly gripping the handlebars. Look for gloves with added padding. If you don't mind spending a little bit extra, there are cycle gloves available that are filled with gel in the palm area for added comfort. These are designed to limit vibration, and provide an extra cushion for your palms if you fall off the bike. Full fingered cycle gloves are good for cross country mountain biking during the winter, although it's usually the palms of your hands that come off worst if you fall off the bike. Mountain biking gloves offer a large amount of protection if you fall off, they often have padded knuckle areas made from tough rubber or plastic.

Shin and Knee Pads

These are recommended if you are starting out or are likely to fall off the bike.

Cycle Socks

Cycle socks should be tight-fitting, and be made from cotton or Gore-Tex (a waterproof material that allows the skin to breathe). If it's particularly cold or damp, you might want to wear a lighter pair underneath or over the top to retain heat. In this case, the inner pair should be thin cotton, and the outer pair should be Gore-Tex or slightly thicker cotton.

Cycle Shoes

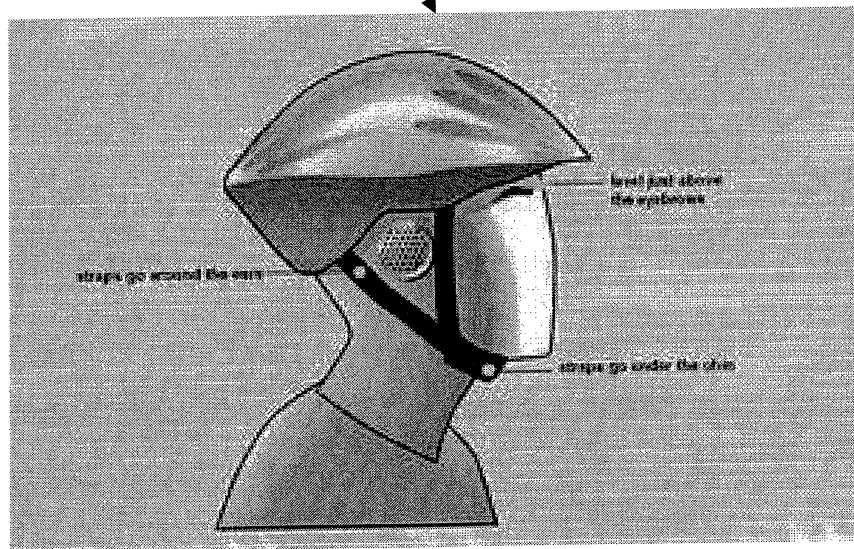
Cycle shoes can be useful for cycling XC or on less varied terrain, however, they may not be suitable for downhill as feet may often need to come off the pedals. When choosing bike shoes, pedals need to be considered, as there are many different types of pedal such as SPD and SPD SL pedals that will have different compatible shoes. The shoes should be made from a combination of soft leather (on the upper part) and perforated plastic (on the soles) to allow sweat to easily leave your body. There should also be a cleat on the soles to grip the pedal and hold your feet in place while riding. This stops your foot from slipping when you push upwards or downwards on the pedal during climbs.

Safety principles

The first and most important safety rule when mountain biking is that your helmet should stay on your head secured at all times when cycling, this means that your helmet should fit comfortably on your head, not be too tight or loose, if it is it should be adjusted or replaced for a helmet that correctly fits your head, it should not slip forwards or backwards. The side straps should also be adjusted so that they are pulled up close to your ears. The chin strap should also be tight enough to stop the helmet from falling off but not be too tight to restrict movement and suffocate you, one way to test this is to open your mouth and check that you can feel the helmet pulling down against your head, this way you will be sure that the helmet is secure and the chin strap is tight enough.

Equipment should also be considered depending on the type of mountain biking you are doing, if you are cycling on XC routes and perhaps less dangerous tracks then shin pads and elbow/knee pads or body armor may not be necessary or appropriate these may get in your way and become very uncomfortable on long rides, however, if you are riding on DH tracks where there may be many dangerous routes or jumps, some sort of body protection may be more advisable.

Correct fitting of bicycle helmet:



When riding as a group, it is important that all the group members are aware of each others fitness levels, if there is a member of the group who is less fit than others, he/she should not be made to push themselves too hard or perform manoeuvres that they are not comfortable with, as this can ultimately be very dangerous, an example of this is dehydration and sun stroke, particularly for a less fit individual if they are pushed too hard, they are at a higher risk of getting sun stroke or being dehydrated as they are likely to lose a lot more water and salt.

Another safety principle is that all riders should know where they are going and where the route leads to; this is to avoid individuals getting lost or disorientated. There should also be a person not on the expedition who knows your plans (where you will be heading and at what time you are likely to be back), this is so that if you are significantly longer than the time you said they are able to take appropriate action as a member of the group may be in significant trouble.

When risks are being taken they should be calculated risks and not be beyond the riders capabilities, this is one of the most important safety principles as this can result in the whole group being in danger because of one persons actions, the rider should know what

the consequences of his/her actions are, they should also be able to assess the situation, for example, if attempting a jump that the rider is unsure of, he/she should get off the bike first and assess whether they are able to successfully complete the jump, they should also look ahead to see if the route is clear and whether there is adequate room to land, if there is little room for error it may not be advisable to try the jump.

All members of the group should have some level of first aid knowledge, there should also be at least one fully trained first aider to help if there are any injuries, some basic knowledge in first aid can save lives. If any member of the group is not feeling 100 percent before the ride it should be carefully considered whether they should take part at all.

The bicycle you are riding should also be in good working condition with no parts that will be hazardous to you when riding, this will involve thoroughly checking the bicycle before leaving for the ride.

There are some common faults that should be checked for:

Cable stretching

Worn brake pads

Tyre pressure

Gear adjustment: listening for any loud noises that should not be.

Loose parts, including brake levers, saddle adjusters, pedals etc.

The bicycle should also be checked and maintained after the ride, keeping your bike in good working condition will help to minimise the risk of faults when riding.

The group should also carry equipment for safety measures, including a first aid kit, mobile phone, snacks and food, warm clothing such as a fleece and money.

To summarise, there are a number of basic principles that should be covered when going out for a mountain biking expedition, these simple steps will help to remind the riders of precautions that they should take:

Gear Up

Always wear a helmet and any other appropriate safety equipment for the riding conditions.

Never Ride Beyond Your Abilities

For your own safety, never ride beyond your abilities even if peers are pushing you to do so.

Use Appropriate Equipment for the Terrain

Your bike may not be appropriate for the terrain, some terrains may require specialist downhill bikes.

Keep Your Speed In Check

Always keep your speed at a level that will allow you to adjust to any unforeseen obstacles or changes in trail conditions.

Know The Trail

Never push the limits on a trail you are not familiar with. You need to get to know the trail you are riding at slower speeds before you can ride it like the trails you're used to.

Slow Down for Blind Corners

Dangers can be around the corner, you should ride at a speed that allows you to adjust for this.

Stop and Look

Stop and look at sections of the trail that look like they may pose a challenge before you ride them.

Plan on the Crash

Always look at the consequences of crashing in a particular section or on a particular stunt before trying to ride through it. Sometimes a section can look easy to ride but can have fatal consequences to a crash.

Start Small, Go Big

Work your way up to obstacles and jumps. Find ways to practice moves in less difficult and dangerous situations or at lower speeds before committing yourself to something more dangerous.

Play It Smart

If you think what you are doing is not the smartest, you are probably right. Think about what you are doing and trust your instincts.

Code of ethics

There are some official regulations that should be taken into consideration when planning a mountain biking trip of any kind, this list has been made by the International Mountain Biking Association (IMBA), these rules have been designed to minimise the impact on the environment and create a safe environment to bike in, every biker should be aware of these rules:

1. Ride On Open Trails Only.

Respect trail and road closures - ask if uncertain; avoid trespassing on private land; obtain permits or other authorization as may be required. Federal and state Wilderness areas are closed to cycling. The way you ride will influence trail management decisions and policies.

2. Leave No Trace.

Be sensitive to the dirt beneath you. Recognize different types of soils and trail construction; practice low-impact cycling. Wet and muddy trails are more vulnerable to damage. When the trail bed is soft, consider other riding options. This also means staying on existing trails and not creating new ones. Don't cut switchbacks. Be sure to pack out at least as much as you pack in.

3. Control Your Bicycle!

Inattention for even a second can cause problems. Obey all bicycle speed regulations and recommendations.

4. Always Yield Trail.

Let your fellow trail users know you're coming. A friendly greeting or bell is considerate and works well; don't startle others. Show your respect when passing by slowing to a walking pace or even stopping. Anticipate other trail users around corners or in blind spots. Yielding means slow down, establish communication, be prepared to stop if necessary and pass safely.

5. Never Scare Animals.

All animals are startled by an unannounced approach, a sudden movement, or a loud noise. This can be dangerous for you, others, and the animals. Give animals extra room and time to adjust to you. When passing horses use special care and follow directions from the horseback riders - ask if uncertain. Running cattle and disturbing wildlife is a serious offense. Leave gates as you found them, or as marked.

6. Plan Ahead.

Know your equipment, your ability, and the area in which you are riding -- and prepare accordingly. Be self-sufficient at all times, keep your equipment in good repair, and carry necessary supplies for changes in weather or other conditions. A well-executed trip is a satisfaction to you and not a burden to others. Always wear a helmet and appropriate safety gear.

It is important to remember that mountain bikers are often not the only people who use the trails, it is not uncommon to come across walkers, horse riders, animals, children and other cyclists. Bikers should be considerate of others and follow mountain like etiquette, this means, you should only cycle on permitted trails and must follow any rules and guidelines and observe any signs that are encountered on route.

Nutritional Planning

When planning a mountain biking expedition nutrition is one aspect that should not be overlooked, nutrition should be carefully planned and should comprise of simple and complex carbohydrates, protein, fat and sugars.

It is also important to remember that anything that you are going to eat you will have to take with you and possibly cook; this can limit what you eat due to space available and time/equipment.

A suggested day's nutrition could be:

An Oat based cereal such as porridge before start of expedition

Banana

Isotonic energy drink/gel

Isotonic Energy Drink

Jam sandwiches

Pasta

Mars bar/ energy bar with high sugar content

Isotonic energy drink/gel

Isotonic Energy Drink

Pasta with meat

Yoghurt

High protein bar/drink

Recovery drink/gel

I have put together this nutritional plan as a suggestion of what type of foods would provide adequate carbohydrates (simple and complex), fat and protein.

The Oat cereal in the morning will provide slow releasing energy from complex carbohydrates whilst the banana will release simple carbohydrates for a more sudden boost in energy, the isotonic energy drink/ gel will give energy in the form of glucose and fructose, the glucose will be for a sudden release in energy as this is a fast acting sugar and the fructose will release energy more steadily as it is a more complex sugar, If space is limited gels can be used instead or a powdered mix, alternatively a sugar and salt solution can be used.

For lunch, the Jam sandwiches will provide energy from the jam, this will be fast releasing energy as it comes from glucose in the Jam, whilst the bread will be more complex carbohydrates and will release slower, and it is also relatively easy to digest, this will mean that it can be digested easily whilst exercising and the energy can be utilised. Pasta will provide complex carbohydrates and a chocolate bar will provide a fast release in energy.

For dinner, if the expedition is being continued the next day, complex carbohydrates should be consumed, this can come from pasta and protein can be gained from eating meat such as chicken, this will help recovery for the next day's mountain biking or physical activity. Alternatively a recovery drink can be used as these contain a mix of carbohydrates and protein.

Isotonic energy drinks should be drunk throughout the day, this will decrease the change of dehydration occurring which can have fatal consequences, they should be sipped throughout exercise and preferably not drunk all at once, isotonic energy drinks are a better alternative to water as they will provide energy at the same time as hydration which will keep you fuelled for longer.

Skills/Techniques

There are a number of different techniques that should be used whilst mountain biking, depending on the terrain and type of riding, such as XC or DH.

Here are a list of some of the basic techniques that should be known by bikers:

The attack position:

- . The ready for anything position.
- . Pedals level, body position relaxed and central over the bike.
- . The start and finish of every MTB technique.



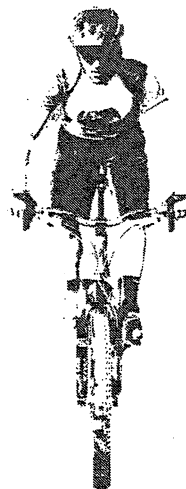
Step down:

- . It's all about weight shift at the right time.
- . Look where you want to go and keep your momentum



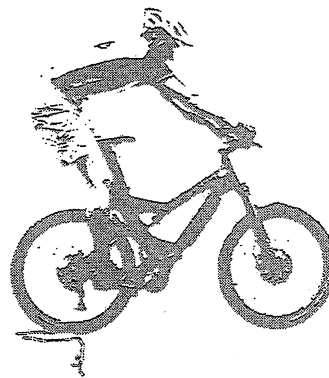
Controlled braking:

- . Anticipation is the key.
- . Brakes should be feathered / squeezed to allow the front and back brakes to be balanced.
- . Push on the bars to stop your body being pitched forward.



Drop off:

- . Decide on technique to be used depending on your speed and drop height.
- . Perform either a weight shift, manual or powered front wheel lift to clear the drop.



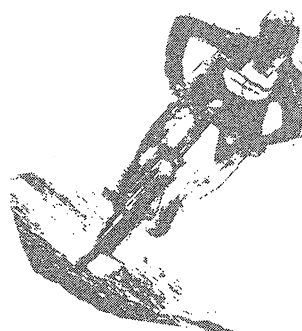
Berms:

Key points for the perfect berm -

- 1 - Brake before you enter.
- 2 - Look at where you want to go.
- 3 - Lean bike (shift your weight).

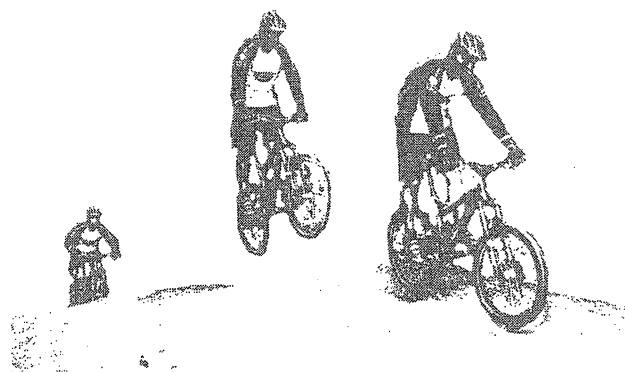
Using arms & feet push down through the berm.

- 4 - Carry speed on exit, flowing fast out.....



Jumping:

- . Arrive with enough speed to clear the jump.
- . Prior to take off pre load your body and as the bike hits the jump lip explode forwards and upwards allowing the bike to leave the ground.
- . As you travel through the air keep an eye on your landing, allow the bike to come through you body to ensure the wheels match the angle of the ground. Absorb the landing with your body before moving back into attack position.



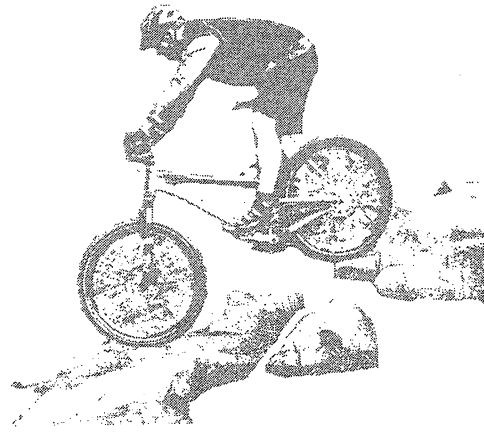
Step up:

- . Lift front wheel with either powered or manual front wheel lift.
- . Weight transfer forward.



Rocky Step down:

- . This is all about weight shift at the right time.
- . As your terrain moves so do you.
- . easy on the brakes and look where you want to go. Too slow and you'll lose momentum.



The above are all techniques that should be known and used whilst mountain biking, this will help to ensure safe biking and also skilful riding.

Planning of Trip/Expedition

ROUTE CARD (use one per day)				NAME OF GROUP MEMBERS							NAME OF GROUP OR UNIT	
Day of the week	Date	Day of venture 1st, 2nd, etc.	Distance in Km/miles	General Direction or bearing	Height climbed in m/ft	Time allowed for leg	Time for stops or meals	Total time for leg	Estimated time of arrival E.T.A.	Setting out time	Details of route to be followed	
	28/4									9 am		
<div> <div>PLACE WITH GRID REF.</div> <div>Dorking Park.</div> </div>												
1	TO Chadhurst farm	S	2					10	9:10		Steady downhill	
2	TO Leigh hill	SSE	5					22	9:32		Steady uphill then steep downhill	
3	TO Holmby hill.	W	4					20	9:52		- Uphill	
4	TO YHA Car park.	N	2.5					13	10:05		- flat	
5	TO Hurt wood.	SSW	1.5					9	10:14		Steep downhill	
6	TO NE of Burrows cross.	N	4					20	10:34		gradual uphill / incline	
7	TO Wotton	E	4					20	10:54		moderate flat	
8	TO Car Park W of clocking	NNE	3.5					15	11:09		flat	
			Totals	-					2h 9min		Supervisor's name, location tel no.	

N.B. a break was taken at 10.05 for 10 minutes to recover slightly and take on fluids.

Evaluation of Trip/Expedition

In this log book I have outlined different principles and techniques that should be considered when mountain biking, the rules and regulations of the trails should also be adhered to. This log book should help to show the rider how to ride the trails, it also holds reminders of essential techniques such as how to ride berms, the attack position (the basis of every technique) and how to ride step downs in a controlled and safe way.

I have also planned a route; this will help the biker to keep his/her placing on the route, providing they have the necessary equipment such as a compass and the route map. The two routes for the two different days have been designed so that they will last approximately 6 hours, riding at an approximate speed of 15 km per hour. I have also given checkpoints in case a member of the group is to get lost. The group also has an organiser who knows these checkpoints and timings in case of emergency.

On the expedition we covered a number of different terrains, from gravel to slippery leaves and rocks, we also covered a number of varying gradients and steep downhill's with roots, and this allowed us to improve our biking skills on these different terrains, improving techniques such as riding in the attack position, rocky step downs, step ups and using braking in a controlled way.

We also realised the importance of keeping well hydrated and fuelled to avoid dehydration and loss of energy, this is one of the most important factors when biking over a long period of time as once you realise you are dehydrated it is already too late to do something about, keeping energy levels high was especially important at the end of the first day leading into the second day as if we had recovered poorly the second day would have been a lot more strenuous.