



Toolkit to Success Making Outdoor Activities Accessible

Toolkit to assist providers of outdoor recreation in delivering accessible outdoor activities for people with disabilities

Introduction

This toolkit has been developed by Venture Outdoors in partnership with Disability Sports Northern Ireland (DSNI) to provide outdoor activity providers with a useful set of guidelines on how to fully engage people with disabilities in outdoor activities.

There has been a noticeable demand from people with disabilities wishing to participate in outdoor activities. The experience of disability organisations would suggest that people with disabilities participate in outdoor activities for the same reasons as non disabled people; to exercise and keep fit, to gain a sense of achievement or challenge, to socialise and make friends, or simply for the fun and enjoyment of taking part.

This toolkit provides information on the key issues that outdoor activity providers need to be aware of when planning and running outdoor recreation activities for people with disabilities. Further, it provides practical guidance on how these issues can be addressed to ensure participants have a safe, meaningful and enjoyable experience.

In addition, relevant and experienced experts provide activity specific guidance, highlighting best practice and providing practical inclusion guidelines and tips for the following 5 activities:

Climbing • Canoeing • Orienteering • Archery • Cycling

It is important to note that people with disabilities can participate in many more sports and outdoor activities other than those listed above, often with little or no adaptations. However Venture Outdoors and DSNI believe that these 5 outdoor activities currently offer the most potential for the development of opportunities for people with disabilities.

The 'Venture Outdoors - Creating Healthy Communities' project is an initiative of Outdoor Recreation NI, which addresses the barriers to participation in outdoor recreation by underrepresented groups in Northern Ireland.

DSNI is Northern Ireland's main disability sports organisation, representing people with physical, sensory and learning disabilities. The organisation is recognised by Sport Northern Ireland and works to provide disabled people with the same opportunities as non disabled people, to lead a full and active life through sport and physical recreation.

Contents

	Page
Section 1: Planning outdoor activities for people with disabilities - inclusion guidelines	02
Section 2: Climbing by Graeme Hill	08
Section 3: Canoeing by John Crosbie	13
Section 4: Orienteering by Helen Baxter and John Ford	17
Section 5: Archery by Aubrey Bingham, Helen George and John Ford	21
Section 6: Cycling by Aubrey Bingham, Marian Lamb and Hermine Briffa	26
Section 7: Communicating with people with disabilities	30
Section 8: Useful organisations and resources	33



Section 1 - Planning

Planning outdoor activities for people with disabilities: inclusion guidelines

In order to successfully include people with disabilities in outdoor recreation, activity providers will need to pro-actively plan the inclusion of people with disabilities in their programmes and activity sessions. This can be achieved by adopting the following inclusion guidelines:

1.1 Disability and functional ability

Disability relates to an impairment of a physical, sensory, or learning nature, or a combination of these. However, disability affects everyone differently, so the functional ability of individuals will vary greatly, even if they share the same medical condition. For example, a person with Cerebral Palsy may be ambulant, use walking aids, use a manual or a power chair and will require either none or varying degrees of support when participating in an outdoor activity.

It is therefore advised that when planning the inclusion of people with disabilities in programmes, activity providers should concentrate on determining an individual's functional ability rather than focusing on their 'disability'. Information on an individual's functional level of ability can be gathered by asking participants to complete a registration form and/or by asking the person about the effects of their disability.

To aid understanding, people with disabilities are commonly broken down into the following 4 'impairment groups':

- **People with physical disabilities:** This term refers to people with an impairment of motor function, limited mobility, loss of limb or restriction in height. The impairment may affect the upper limbs, lower limbs, trunk or a combination of these areas of the body. Physical impairments include Cerebral Palsy, Amputation, Dwarfism, Spina Bifida and Spinal Cord Injury. It is important to remember that only a small proportion of people with physical disabilities are wheelchair users
- **People with learning disabilities:** Learning disability relates to an impairment of cognitive function i.e. reduced intellectual ability. Learning disability is a broad spectrum ranging from moderate to more significant conditions such as Down's Syndrome
- **People who are deaf or hearing impaired:** This term refers to people with mild to severe hearing loss. Many deaf people whose first or preferred language is British Sign Language (BSL) consider themselves to be part of a distinct Deaf community
- **People who are blind or partially sighted:** This term refers to people with a visual impairment ranging from no light perception at all to a mild visual impairment

Section 1 - Planning

1.2 Targeted programmes & opportunities

Due to the complex range of barriers that prevent people with disabilities from accessing current opportunities, disability organisations advise that the most successful way of encouraging people with disabilities to participate in activities is through the development of targeted programmes. Programmes which are designed specifically to meet the needs of people with disabilities, but also include non disabled friends and family, often work best.

1.3 Information & promotion

Outdoor activity providers can encourage more people with disabilities to participate in their activities by consulting with local disability groups and by specifically targeting people with disabilities when promoting programmes and activities. Local disability groups, special schools and adult centres will usually help with this by distributing information on planned programmes.

Promotional literature should also make it clear that people with disabilities are welcome and can be included in the activities being provided. It is also a good idea to use positive images of people with disabilities participating in the activity. Information should also be available in accessible formats on request as explained in detail in the complementary 'Toolkit to Success: Creating Accessible Websites and Publications', available from Venture Outdoors www.outdoorrecreationni.com.



Section 1 - Planning

1.4 Facility and outdoor access

Physical access to outdoor recreation centres and locations in the outdoors where an activity is being provided is crucially important, particularly for wheelchair users and other people with physical disabilities.

Detailed guidance on developing accessible facilities and recommended standards of physical access are provided in the publication 'Access to sports facilities for people with disabilities: Design & Management Guidelines' (2010) produced by DSNI and Sport Northern Ireland. The Guidelines are available from the DSNI website: www.dsni.co.uk.

However, when the activity is being provided at an outdoor location, if possible, activity providers should choose a country park or outdoor location that will have some of the following basic levels of physical access:

- Accessible car parking spaces
- Accessible WCs and changing rooms/showers within easy reach
- Accessible drop-off points close to where the activity is taking place which will minimise the distance a person must travel to participate in the actual activity
- Accessible route to the location of activity
- Wide, level pathways with walking surface materials that do not become soft or slippery when wet
- Rest areas, particularly on longer walking routes
- Clear signage, using symbols to convey information wherever possible

However, please note that even when the activity is being provided at a remote outdoor location without accessible facilities, many people with disabilities may still be able to access the location either independently or with the aid of a friend, buddy or carer. Indeed even wheelchair users or other people with restricted mobility may be able to access remote locations using motorised buggies, specialist wheelchairs designed for 'off road' use, or by simply attaching ropes to a wheelchair user's chair.



Section 1 - Planning



Aiding a person with disabilities using ropes

1.5 Pricing policy

Outdoor activity providers should consider if their pricing policy is discouraging people with disabilities from taking part. As most people with disabilities tend to be on benefits/low incomes, they may find it difficult to afford activity fees or club membership fees. Rather than charging reduced fees for participants with a disability, it is recommended that outdoor activity providers should have a waged/unwaged pricing policy. If this is not possible they should consider alternative pricing policies or initiatives which encourage participation by people with disabilities. For example, by giving disabled participants the opportunity to bring along a buddy or friend at no additional cost.

1.6 Training & coach education

Although most outdoor activity instructors and coaches will have the activity specific skills to include people with disabilities in their particular activity, they may lack some hands on experience of how to work with people with disabilities.

To help overcome this issue, activity providers should encourage instructors to attend outdoor activity specific Disability Inclusion Training, which is increasingly available in Northern Ireland. In addition, all instructors should also complete their Governing Body's disability specific coaching module or course. If the Governing Body does not currently have such a course, activity providers should write to their Governing Body encouraging them to develop one.

Section 1 - Planning



1.7 Language guidelines

It is important for all service providers to understand that some words and phrases traditionally used to describe people with disabilities are no longer acceptable, as they may cause offence to individual people with disabilities.

Because acceptance of the language used in society differs between individuals and cultures, as well as changing over time, there are no hard and fast rules. However, the following guidance has been prepared based on what is currently found most acceptable by people with disabilities in Northern Ireland:

- Do not use medical labels to describe people with disabilities - (e.g. 'spastic' or 'epileptic'). Medical labels are often misleading and tend to reinforce stereotypes of people with disabilities as 'sick' or dependent. Most people with disabilities find being described in terms of a medical condition as dehumanising. Instead put people first, not their disability (e.g. 'a person with epilepsy' or 'a person with cerebral palsy')
- Use language and words which emphasise abilities not limitations - (e.g. say 'wheelchair user' rather than 'wheelchair bound'). Remember that a wheelchair can represent personal freedom for its user
- Do not use emotional or sensational language to describe people with disabilities - (e.g. 'afflicted', 'crippled', 'suffers from' etc)
- Remember the vast majority of people with disabilities have the ability to lead active lifestyles and contribute fully to society

A list of words and phrases commonly used to describe people with disabilities in the past, but which are now regarded as 'unacceptable', together with preferred alternatives is available from the Venture Outdoors website www.outdoorrecreationni.com

Section 1 - Planning



1.8 Etiquette guidelines

Many people with disabilities have had negative experiences, where they have been treated differently to non disabled people by service providers, often in an inappropriate or patronising way. To avoid this and to ensure that people with disabilities have a positive experience, activity providers should apply the following etiquette guidelines:

- Treat people with disabilities as adults - make appropriate contact with disabled people according to the situation, if they are children treat them as you would treat other young people
- Do not be over familiar - only address a person by their first name if you are doing the same to others present
- Talk directly to people with disabilities - relax and talk directly to the disabled person. Do not assume anyone accompanying this person is a 'carer'
- Do not be embarrassed about using everyday expressions - such as 'see you later' or 'going for a walk' in the company of disabled people; most disabled people also use these phrases
- Do offer assistance to people with disabilities - but only if they appear to need help and always wait until your offer of help is accepted
- Do not be over-protective - people with disabilities are not fragile, so try not to underestimate what an individual disabled person can do - ask them

Section 2 - Climbing

Climbing for people with disabilities by Graeme Hill

Graeme Hill is a Disability Sports Officer for the Borough of Rochdale Leisure and Cultural Trust. He has worked in the disability sector for 11 years specialising in sports and physical activity provision for people with disabilities and is currently disability advisor for the British Mountaineering Council and Mountain Leader Training England.

Although, at first, climbing may appear to be an activity that is inaccessible to people having disabilities, with the right equipment and training, the activity can, in fact, be enjoyed by people with a range of disabilities. Inclusion guidelines for each of the main climbing environments are provided below.

Climbing outdoors

Before taking a group on an outdoor climbing experience, outdoor activity providers should consider carrying out a site visit to look at things such as:

- Access to the foot and top of the crag
- Type of climbing that the crag offers
- Distance from main road/ accessible transport options
- Shelter from the elements

Climbing indoors

It is important to assess the style of the climbs. Depending on the ability of the participants, a good tip is to check for slab climbs and climbs with lots of big holds. Many walls offer low grade climbs which are still difficult for people with disabilities to climb.

It is also important to note that many climbing walls may be in buildings built prior to the Disability Discrimination Act and therefore may have limited physical access. So it would be prudent to check the accessibility of walls in advance. Climbers with disabilities can be assisted using the following techniques:



Climbing with side support

This technique involves an assistant attached to their own rope, climbing alongside the climber with the disability. This can be carried out to provide physical assistance to the climber, or simply for reassurance. The side support can assist with placing feet and hands on holds and keeping them in contact with the holds. Physically assisting a person whilst lowering down, essentially involves holding their harness, enabling them to become fully involved.

Section 2 - Climbing

Vertical rope hoists

These are commonly used by people who do not have the physical ability to get themselves up a climbing wall. Rope hoists can be set up in 3 different ways:

- **Fully assisted** - the instructor raises and lowers the person down
- **Partially assisted** - where both the instructor and participant assist in the ascending or descending
- **Unassisted** - where the participant does all the work



The images above show a fully assisted hoist (left) and a partially assisted hoist (right). Please note that in the image on the right a metal bar has been attached to give the ascender better grip.

The hoist is set up using a combination of devices including pulley wheels, harnesses, ascending devices and assisted breaking belay devices. A parapente/kite harness is commonly used because it removes the possibility of pressure points and causing damage to a person's limbs or skin. The ratios of the pulley can be altered depending on the size of the person or how much assistance a person requires when ascending.



Double Pulley



Single Pulley



Handled Ascender



Swivel

Images of equipment used to set up different types of climbing methods

Section 2 - Climbing

Vertical rope hoists are also popular for other activities for example spinning and swinging. For spinning a Petzl Swivel can be attached. All of these activities provide excellent sensory experiences to people with disabilities.

Note: All vertical hoist systems must be made releasable and when the instructor is not in control of ascent and descent, a safety rope must be used.

Wall/rock abseiling

Abseiling is a very popular activity closely linked to rock climbing. People with disabilities can be included in the activity in 3 ways:

1. Contact with the rock

This is the most common form of abseiling but will usually require the participant to have reasonable balance and leg strength. However, people with low balance and leg strength can still abseil in this environment with side support offered, in the same manner as climbing side support, described earlier.

2. Free hanging

This is good for people who have limited mobility. When offering this type of abseiling consider how the person will reach the top and how they will access the abseil.

3. Wheelchair abseiling

This is popular for people who have limited mobility, but is also very useful because people enjoy abseiling in their own personal wheelchair.



Contact with the rock



Free hanging



Wheelchair abseiling

Section 2 - Climbing

Climbing equipment



Helmets: Although unusual, occasionally a person may become anxious about wearing a helmet. If this does happen, assess the activity and the climbing environment within your risk assessment procedures.

Full body harness: Because of the nature of their disability, some people with physical disabilities may have a higher centre of gravity than is normally the case. The full body harness assists in overcoming this issue as the tie in point is higher up.



Parapente harness or kite harness: A harness that provides much more all around support, removing pressure points plus offering a great deal of support for people who cannot support themselves.



Petzl stop: There are a wide range of abseiling devices, which can be used to give the disabled participant as much control as possible during an abseil. A commonly used device is the 'stop' as it is easy to fit to an extension handle. This enables people with very low coordination and strength to control their abseil. Cord can also be attached to the handle to improve grip.

Adhoc adaptations: Pieces of soft material can be used to provide extra padding on a harness or knee pads if a person uses their knees a lot whilst climbing. It is also a good idea to put an anti slip mat in the bottom of a parapente harness/kite harness so that the person does not slip forward.

Section 2 - Climbing



Appropriate experience and qualifications

Many of the systems described, in particular wheelchair abseiling and vertical rope hoists, are technical systems which will require a very experienced person to set up and operate. The minimum qualification recommended is a Single Pitch Award (SPA), ideally a Mountaineering Instructor Award (MIA). These qualifications are provided by a wide range of organisations including Mountaineering Ireland and Tollymore National Outdoor Centre.

Recommended qualifications & training

- **A Single Pitch Award (SPA) and Mountaineering Instructors Award (MIA)**
- **'Climbing For All Disability Awareness Training'** - a nationally accredited 1 day course provided by the Mountain Leader Training Association which can be attended by anybody interested in supporting disabled people to participate in climbing

Please note that information on communication guidelines, specialist equipment, resources and useful organisations is provided in Sections 7 and 8 of this toolkit.

Section 3 - Canoeing

Canoeing for people with disabilities by John Crosbie

John is an experienced practitioner of including people with disabilities in the outdoors. He is currently Head of Outward Bound's Ullswater Centre and was previously Head of the Lake District Calvert Trust for 15 years.

Canoeing is a very inclusive activity in which everyone, including people with disabilities, can participate. Indeed canoeing is an ideal activity in which wheelchair users and other people with lower limb impairments can participate. However, by using the right equipment and by making some simple adaptations, a much wider range of people with disabilities can also be included in the activity.

Type of canoe

Within "paddlesport" there is a range of disciplines and craft with differing characteristics. If people with disabilities are to be included in the sport, then this must be taken into account when providers purchase craft. Attributes that should be considered include:

- Stability
- Ease of entry
- Tracking characteristics i.e. the canoe's tendency to glide in a straight line
- Manoeuvrability

Functional inclusion guidelines for canoeing

The following adaptations and other equipment selections have been prepared using a 'functional' approach to disability, i.e. solutions are based on what an individual disabled participant can or cannot functionally do, rather than being based on a particular disability or condition. The two most important 'functional' issues to consider when including people with disabilities in the activity, balance and upper limb function are dealt with first:



Participants with limited balance

People with poor balance are likely to require:

A stable craft: This may be achieved by its design, through using outriggers or by rafting 2 craft together, as illustrated in the photograph left.

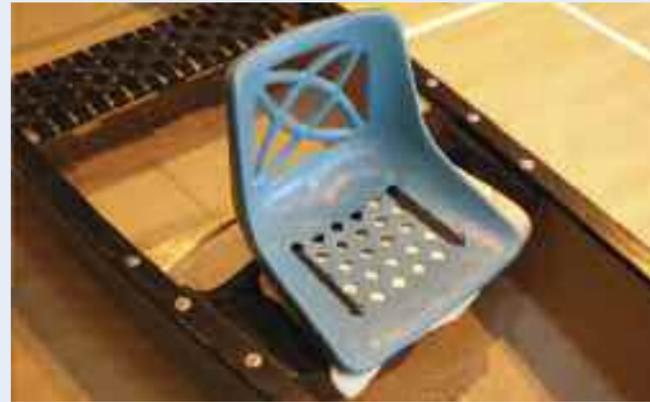
Section 3 - Canoeing

Supportive seating

Some craft provide seats with good back or lateral support. Alternatively, craft can be adapted so that they provide higher levels of support. An example of improved back support using a chair (with legs removed) fixed to the canoe seat is illustrated in the picture below right. If a participant has very limited balance they may even sit between the main seats in the bottom of the boat, supported by buoyancy aids. However, in this case it is likely that the person will gain more of an experience as they are likely only to be able to make a limited contribution to the propulsion of the canoe.



Craft with back support



Back support using a chair

Participants with limited grip

The effects of limited grip can be minimised by providing the participant with paddles with small diameter shafts, and/or with shaft materials which have better grip. Adaptive gloves can also be bought or made that improve grip. Grip may also be improved through the use of a cycle inner tube, zip tied onto the shaft or through the use of crepe bandages. However attachment of hands to the shaft may inhibit exiting the boat in event of capsize or swimming.



Paddle with small diameter shaft



Example of adaptive glove

Section 3 - Canoeing

Participants with reduced upper limb function

Participants who have reduced upper limb function may be assisted by the following:

- **Junior paddles** are light weight and have small surface area blades
- **Single arm reciprocating paddle supports** can be bought or built. An inexpensive alternative would be to attach the paddle to the buoyancy aid and use floats on the side of the boat to help balance the boat, as illustrated in the photograph on the right



Participants with reduced lower limb function

Transferring power to the boat can be aided by preventing movement within the boat by using alternative "foot" rests. Compensatory weights can also improve balance in the boat.



Participants with learning disabilities

Using non-feathered blades, different blade colours (at each end) and blade face colours, may assist in paddling, using the paddle the "right way round" or in giving directions as to the stroke needed (paddle with the white end rather than paddle on the left).

Participants who are blind or partially sighted

Tandem boats may be used but independent paddling can be achieved if systems of non-visual direction referencing (sun, wind, and noise) are used. Oval shafts will aid paddle alignment.



Transferring

Although many people with disabilities will be able to access canoes in the same way as non disabled people, some will require additional support and equipment. This can involve the use of slide boards, conducting transfers on the shore, or by using slings or hoists. Providers should always ask the individual if they can provide a solution to the transfer required. Lifting and manual handling should not be undertaken unless staff are appropriately trained to do so.

Section 3 - Canoeing

Personal flotation devices (PFD), buoyancy aids or lifejackets

Each design of PFD has attributes that can be used to various advantages. To ensure the safety and comfort of participants with disabilities the following points should be noted:

- Consider the use of 'zip up' life jackets as they may avoid "over the head" contortions and the fear of confinement caused when putting these on
- The safety of those with poor swimming ability or low water confidence may be addressed through the use of PFDs with inherent buoyancy supplemented by air-inflation
- A gas-inflated jacket may make sitting in seats more comfortable and paddling easier for some. It is essential to consider how these are activated (manual pull cord, wetting or hydrostatic) and the implications of the differences of these for the individual must be understood
- People with uncontrolled epilepsy should wear a buoyancy aid with a manually inflated gas jacket worn over the top, so that it can be activated manually in the event of a seizure. Consider who will activate the gas jacket and where will they be located

Recommended qualifications & training

The canoeing qualifications required to lead groups in paddlesport are:

- **UK Coaching Certificate Level 1 Coach Award** - this is predominately an assistant coach award aimed at those intending to introduce novices to canoeing and kayaking
- **UK Coaching Certificate Level 2 Coach Award** - this is the second step on the coaching ladder and focuses on the skills needed to deliver a programme of 6 progressive sessions to paddlers in their first 3 years of paddling
- **Foundation, Safety and Rescue Training**
- **White Water Safety and Rescue Training**
- **Disability Awareness Training for Paddlesport** - this training can be obtained from the British Canoe Union (BCU) through their Disability Awareness Foundation and Intermediate modules or through the Lake District Calvert Trust Disability Awareness Training for Outdoor Instructor courses

Please note that information on communication guidelines, specialist equipment, resources and useful organisations is provided in Sections 7 and 8 of this toolkit.

Section 4 - Orienteering

Orienteering for people with disabilities by Helen Baxter and John Ford

Helen Baxter is currently part of the development team for NI Orienteering and has 30 years experience participating and organising orienteering events. Helen and the team have experience in delivering orienteering to groups of all abilities and are keen to support groups with disabilities who would like to try orienteering or Trail O.

John Ford is currently a Senior Instructor at the Lake District Calvert Trust in Cumbria. John has worked with people with disabilities for many years. He now advises national governing bodies and delivers disability awareness training across the UK.

Orienteering can be made accessible to a full range of people with disabilities using either **Permanent Orienteering Courses** (POC) or through an orienteering discipline called **Trail O** which has been developed to be inclusive of wheelchairs users and people with limited mobility.

Permanent orienteering courses are graded by colour with 'White' and 'Yellow' being the easiest levels where all markers are located on path junctions or easily accessible from the path. These courses are suitable for participants with limited mobility or learning disabilities. The POC's in local parks offer the best introduction to the sport for people with disabilities.

When using POCs, the markers are already in place so all that is required is the map. Maps are available to purchase from your local orienteering club or alternatively, can be found on the Northern Ireland Orienteering website at www.niorienteering.org.uk

POC markers vary but are generally posts with an orienteering marker plus a number and letter code. Before sending participants out to orienteer, they should be introduced to basic map symbols, colours involved and the skill of setting the map. Participants use the number to confirm they are in the correct place and note the letter as proof of their visit.

Note: You should always check the markers before use as some may have been moved.

Eco-trails use orienteering on an environmental trail, which allow children and teenagers to find out more about their local, natural and built environment and have fun at the same time.

www.ecotrailsni.com also has free downloadable maps.

Section 4 - Orienteering

Trail O requires some setting up but completely eliminates the element of speed over the ground, relying instead on the mental challenge and map interpretation. This type of orienteering is suitable for wheelchair users and those with limited mobility, as all decisions are made from wheelchair accessible viewing points. However, it can also be used as competition for both disabled and non disabled people.



Depending on the level of difficulty, up to 5 control markers are hung at each site, all of which can be seen from a wheelchair navigable path or area, as is illustrated in the photograph on the left.



The control in the foreground is the punch used to determine which is the correct control.



The map on the left only shows one circle for each control even though there will be up to 5 markers at each site. Only one will correspond exactly with the control description and control circle position. Markers are identified alphabetically from left to right. Once the correct marker is chosen the competitor uses an orienteering punch to mark the correct box on a special control card.

Section 4 - Orienteering



Specialist equipment for Trail O is limited to something to secure the map while allowing the participant to rotate it to Magnetic North. A similar piece of equipment is used in MTBO (Mountain Bike Orienteering) as shown here. However a different bracket may be needed.

This equipment is available from www.compasspoint-online.co.uk

Orienteering for people with learning disabilities

Traditional orienteering and Trail O may not be an ideal introduction to orienteering for many people with learning disabilities, as it may be very challenging for them. Here are a few simple adaptations you can make to Trail O to help people with learning disabilities engage with the activity:

- **Use oblique angle pictorial maps** - these do not usually have the level of detail of ordinary maps but are generally much easier to interpret
- **Photo orienteering** - participants can follow a series of photographs which lead them around a trail - when they find the photograph on the sheet they could answer a question or find a punch using clues
- **Using alternative control markers** - pictures of animals, trees or people can be placed at each control point - collecting stickers or rubber and ink stamps may be more interesting for many people
- **Use cameras** - if you have cameras available, participants can take photographs at different control points along the way and use them for reviewing at the end of the activity
- **Star courses** - participants navigate to a single point, return to the start with their answer and then are given another marker to find. These courses give participants freedom and independence, whilst allowing the instructor to check on their understanding and skill level. By starting with closer control points and increasing the distance people are going, you can help them develop their confidence and proficiency

All of the above ideas can be adapted for participants with whom you are working. It is important for people to understand the aims of the activity and know that the activity is achievable and engaging.

Section 4 - Orienteering

Recommended qualifications & training

- NI Orienteering runs **Teaching Orienteering Courses** which can be tailored to include Trail O. These courses provide the latest training information on how to introduce the activity without prior knowledge of orienteering
- **Young Leaders Award** - allows young people aged 14 -19 years old to work as assistant coaches
- **Teaching Orienteering Part 1 & 2** - an adult coaching qualification
- **UKCC Level 1 Orienteering Coach**

Please note that information on communication guidelines, specialist equipment, resources and useful organisations is provided in Sections 7 and 8 of this toolkit.



Section 5 - Archery



Archery for people with disabilities by Aubrey Bingham, Helen George and John Ford

Aubrey Bingham is a Senior Development Officer with DSNI. He has over 20 years experience of disability sport, specialising in community sport and recreation.

Helen George is a Senior Coach with Archery GB and was part of the original Archery Development Team, working with British Blind Sport. Helen is a leader on Paralympic Talent Identification and Development and currently coaches the Archery Paralympic Squad.

John Ford is currently a Senior Instructor at the Lake District Calvert Trust in Cumbria. John has worked with people with disabilities for many years and now advises national governing bodies and delivers disability awareness training across the UK.

Archery is a naturally inclusive activity that people of all abilities can enjoy. It is important to plan ahead to ensure that the activity is set up for people to participate as fully as they are able. As with all activities, the best place to start is discussing with the individual what they want to achieve and what they are able to do. Once established, specialist techniques and adaptive equipment can then be considered.

Bows

Within archery there are many different types of bows, all of which can be used by people with disabilities with the relevant adaptations. The low poundage bow (the most common used by outdoor recreation providers) is often the best starting point. Thought needs to be given to any specialist equipment or adaptations the participant may need to support them partaking in the activity.

Section 5 - Archery

People with reduced arm function

One of the simplest adaptations is the use of a reduced poundage bow to allow a person to draw it more easily.

Archers who find it difficult to grip the bow may use a device which secures the bow to their hand, such as a specialist grip aid, or something simpler such as tying or bandaging the bow to their hand.

Release aids are used by many archers both with and without disabilities, especially those using compound bows. Release aids can greatly improve accuracy when compared to a traditional finger release. They should always attach to the string via a rope or d-loop, but the way the shot is activated varies depending on release aid type.

Release aids attach themselves to the archer's wrist with either a velcro or buckle strap. A release aid holds the string using a mechanical gate or string loop. The bow is drawn using a strap around the arm or wrist and the string is released using a trigger.



Section 5 - Archery



Handmade draw-lock



Another useful piece of adaptive equipment used by people with either reduced arm function or who are unable to draw a bow in the traditional manner, is the draw-lock. A draw-lock holds a bow at full draw until a trigger is activated. Some types of draw-lock allow people to use two hands, and utilise stronger back and leg muscles to draw the bow.

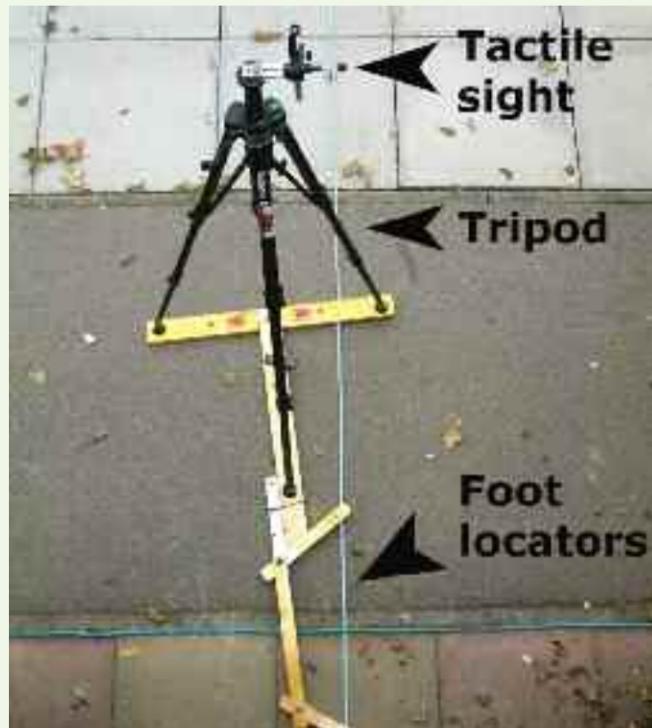
Consideration should be given to the extra weight which may be added to the bow when using a draw-lock; it may also be necessary to use a bow stand. It is possible to make simple trigger mechanisms tailored to the participants to enable them to take part. These can also be paired with a bow stand to create the functional equivalent of a mounted crossbow. People can then have assistance with the parts of the shooting sequence their disability prevents them from doing, whilst being as independent as possible.



Wheelchair users

Archers who use wheelchairs may not require any equipment modifications. Wheelchair archers normally position themselves at a 90° angle to their target. The weight of the bow may affect the ability of some people to sit upright within their chair. To assist with stability and aiming, a person may use the back or arm of their chair for bow arm support, use a bow stand, or wear a waist belt or chest strap to keep them in a stable shooting position.

Section 5 - Archery



Tactile sighting system

People with visual impairments

Many visually impaired people have some residual vision which enables them to use either a standard or adapted bow sight.

For archers who are unable to see the target, a tactile sighting system may be used. A tactile sight is a combination of two individual devices; a foot locator and a 'sight-head' (ball or object) mounted upon a tripod. The archer can position themselves in the same place using the foot locator and then touch the sight-head with the back of the hand as a reference point. This allows them to accurately replicate a good shot and adjust their aim when needed.

Usually a sighted person, referred to as a spotter, reports the strike of the archer's arrows. Often a clock face analogy is used, for example '12 o'clock red'. The spotter is not needed to coach the archer; rather they only need to report where the arrows strike so that the archer can adjust their aim as necessary.

Other adaptive equipment

For people with poor balance, simply supporting them in either a standing or seated position may be all that is needed to participate. Two simple adaptations to consider are foot blocks and a perching stool as shown overleaf.



Tactile sight

Section 5 - Archery



Perching stool

Deaf/hearing impaired

When coaching someone who is deaf or hearing impaired, it is important to consider how you will communicate important range commands, especially the command to '**stop shooting**'. It may be that visual signals such as flags could be used; or possibly another person standing next to the archer who is able to get their attention if you are trying to communicate with them.

People with learning disabilities

When working with people with learning disabilities, it may be useful to use different commands to a standard session to aid their understanding. It may be difficult for some people to learn the complete sequence of loading, aiming and shooting. Breaking this down into simple

steps will bring greater success; possibly assisting with part of the sequence at first. It can also be useful for someone to use an adapted bow or crossbow which is simpler to shoot. This may then enable people to progress to a standard bow later, or may be the best way for a person to continue to participate and succeed in later sessions.

Recommended training

- The Lake District Calvert Trust, based in Cumbria, England can provide disability awareness training in adventurous outdoor activities - www.calvert-trust.org.uk
- **GNAS level 1** archery qualification - all archery teachers need to have this qualification
- **Grand National Archery Society (GNAS) Level 1 Coach**
- **Grand National Archery Society (GNAS) Level 2 Coach**

Section 6 - Cycling

Cycling for people with disabilities by Aubrey Bingham, Marian Lamb, and Hermine Briffa.

Aubrey Bingham is a Senior Development Officer with DSNi Ireland with over 20 years experience of disability sport, specialising in community sport and recreation.

Marian Lamb is Secretary and Club Development Officer for Cycling Ulster and was involved in establishing the first hand cycling club in Ireland, she is currently responsible for promoting paracycling.

Hermine Briffa Development Officer from Cycling Projects, has 20 years of experience in delivering cycling to groups with disabilities and delivering 'Wheels For All' cycling training courses.

The benefits of cycling are the same for everyone, regardless of physical ability or condition - it is fun, healthy and enables people to get around effectively and sustainably. With adaptations to bicycles and riding techniques, cycling can be enjoyed by a wide range of people with disabilities. Bicycles can be adapted or made for people with a range of physical disabilities, from the now reasonably common tricycles, recumbent bicycles and hand cycles (for those without the use of their legs), through to completely bespoke systems which meet the specific needs of an individual.



Tandem cycling

Tandem riding is the most flexible and adaptable form of cycling for blind and partially sighted people. Cyclists with visual impairments can ride tandems on both road and track, with a sighted pilot. Tandem cycling is exciting, fun and a great way for two (or more) people of different abilities to go cycling together.

Section 6 - Cycling

Tricycles

Tricycles can be propelled in two ways i.e. either by legs or hands. Hand cycling is aimed at the wheelchair user and those unable to ride a standard bike or tricycle.

The advantage of a tricycle is that it does not require balancing and is simply steered, which becomes important when cycling slowly or when stopping. On a tricycle on a steep hill, participants can travel slowly without wobbling and rest simply by holding the brakes. So, anyone who has balance problems or who has difficulty starting, stopping or mounting and dismounting a bicycle, may find a tricycle will suit them.

The disadvantage of a tricycle is that the extra wheel and supporting framework adds a little weight and drag compared to a bicycle of identical quality. Further, since tricycles are manufactured in smaller quantities, they are far more expensive, although price differences become less significant at the top end of the market, where bicycles are bespoke.

There are two types of tricycle:

- **Upright tricycle:** There are various different types including those which attach to a standard rigid framed wheelchair (attaches either to front of the frame or to a fitting below the wheelchair) and converts it instantly into a tricycle; or an 'upright single hand cycle' which is a separate tricycle the rider transfers into.
- **Recumbent tricycle:** This is a low slung tricycle which has a low centre of gravity which helps improved balance and is easily controlled. There are both recreational and competition versions.



Upright single hand tricycle



Recumbrant tricycle



Recumbrant tricycle

Section 6 - Cycling

There are a number of advantages and disadvantages to consider when choosing a tricycle for each rider:

Front vs rear drive

A tricycle may have two steered wheels at the front and one drive wheel behind, or vice versa. The advantage of two drive wheels behind is that it can provide more power to allow the rider to take time on steep hills. However the two wheels behind are 'out of sight and out of mind' meaning it will take time for the rider to adapt to cornering near obstacles. This can also pose a different problem for experienced cyclists who can continue to unnecessarily steer into the lean.

Recumbent vs upright

A recumbent tricycle is lower to the ground and therefore offers a comfortable and enjoyable cycle with superb stability, however some riders may feel vulnerable in this position. The upright's higher platform will alleviate this fear; however this higher position increases the potential to tip over. A traditional upright tricycle maybe upset on an uneven surface, camber or crossfall or by turning sharply.

Quads

The quad cycle features great stability, thus reducing the chance of tipping. Quads can be good for people who are amputees or people who have reduced flexibility in their knee joints. The quad is easily controlled and has less speed which is good for some groups.



Quad Cycle

Aids and adaptations

A wide range of aids are available and used within disability cycling, as described overleaf. However, it is important to note that cycle manufacturers may supply specific aids which may not be interchangeable.

Section 6 - Cycling



Hand supports

One of a range from Active Hands



Foot and ankle supports

These are often manufacturer specific, but please note that standard toe clips, supplied by any cycle shop, may meet the needs of many people.



Back supports

These are frequently manufacturer specific, unless they fit onto a standard seat post.

Recommended training

- Trail Cycle Leader Award Training - www.ctc.org.uk
- National Standards for Cycle Training, (on road cycling qualification) - Tri Cycle - www.tricycle.org.uk
- Cycle Safety Training (Pedal Right) - www.pedalright.com
- Health on Wheels (Cycling Projects) - www.cycling.org.uk
- Bikeability Disability Module (Cycling Projects) - www.cycling.org.uk

Please note that information on communication guidelines, specialist equipment, resources and useful organisations is provided in Sections 7 and 8 of this toolkit.

Section 7 - Communication

Communicating with people with disabilities

Good communication skills are vital when delivering sessions to people with disabilities. Detailed guidance on effectively communicating with people with disabilities is available from the Venture Outdoors website: www.outdoorrecreationni.com or DSNI's website: www.dsni.co.uk

A summary is provided below:

7.1 General communication guidelines

People with physical disabilities

In general instructors should communicate with people having physical disabilities in the same way as they would with anyone else.

People with learning disabilities

Speak in a manner appropriate to the age of the participant with a learning disability. When giving instructions, use simple straightforward words and language and avoid jargon. If possible use symbols and colours instead. Break skills down into easily learned steps and repeat them often and in a variety of ways. Always demonstrate skills.

People who are deaf or hearing impaired

Remember there are varying degrees of deafness. Some people have no hearing (deaf) but most have some level of hearing (hearing impaired). It is not necessary to have a sign language interpreter present but if a participant has an interpreter with them, take advantage of this opportunity.

People who are blind or partially sighted

Before beginning a session verbally describe the venue or location and explain what is going to happen during the session.

For a more detailed explanation of general communication guidelines, please see the Venture Outdoors website www.outdoorrecreationni.com or DSNI's website www.dsni.co.uk

Section 7 - Communication



7.2 Activity specific communication guidelines

Climbing

- If delivering a climbing session for people who are deaf or hard of hearing provide a demonstration before they begin with particular focus on the lowering down element
- Consider having another member of staff available to assist the climber
- If delivering a climbing session for people who are deaf or hard of hearing and are supporting from the ground, demonstrate where holds are by using your own limbs
- If delivering a climbing session for blind or partially sighted people give clear verbal instructions describing in detail the climbing environment, colours and shapes of the holds
- A good system is "There is a good hold for your right hand at 9 o'clock or a good hold for your left foot at 7 o'clock"
- To prevent confusion only one person should give instructions and background noise should be kept to a minimum

Section 7 - Communication

Canoeing

- Paddle sport has its own collection of hand signals that are used when running rivers, as communication is required over a distance in a noisy environment
- These are not normally used in an introductory or teaching environment, hence the only modifications to this system when working with people with disabilities, is in situations where hand signals cannot be seen by a blind or partially sighted person or if communication needs to be supplemented for a deaf or hard of hearing person
- When delivering a canoeing session for people who are deaf or hard of hearing, it is important to note that participants may not wear their hearing aid when on the water (as few are waterproof) so communication and group control will be more restricted than normal
- Banging on a boat with a paddle will attract someone's attention if they are close by, but there are real difficulties if an individual is further away or the group spreads out. Manage this by working within clear boundaries or in small bays
- It is also important to consider group control and appropriate teaching techniques when working with certain disability groups, especially those who may not respond to voice.
- A few additional hand signals such as 'come here' or 'raft up' can be developed locally. A range of signs have been developed and can be accessed on the British Canoe Union (BCU) website or from the BCU's Signs for Canoeists publication

Archery

- In archery, there are four range commands listed in the Grand National Archery Society (GNAS) safety guidelines which are used in the activity of archery
- It is crucially important that the instructor effectively communicates these commands to participants or to a sign language interpreter if a deaf or hard of hearing person is participating



Section 8 - Useful organisations

Useful Organisations & Resources

This section includes information on useful organisations, publications & DVD's and specialist equipment providers.

Useful Organisations

General

- Calvert Trust - www.calvert-trust.org.uk
- Tollymore National Outdoor Centre - www.tollymore.com
- Disability Sports NI - www.dsni.co.uk

Climbing

- Mountaineering Ireland - www.mountaineering.ie
- Mountain Leader Training Association - www.mlta.co.uk
- Mountain Leader Training England - www.mlte.org
- BMC Equity Steering Group - www.thebmc.co.uk
- Adventure For All - www.adventureforall.org.uk

Canoeing

- British Canoe Union (BCU) - www.bcu.org.uk
- Canoe Association Northern Ireland - www.cani.org.uk

Orienteering

- Northern Ireland Orienteering - www.niorienteering.org.uk
- British Orienteering - www.britishorienteering.org.uk
- British Orienteering Trail O - www.trailo.org

Archery

- NI Archery Society (NIAS) - www.nias.co.uk
- Grand National Archery Society (GNAS) - www.archerygb.org
- Kilmore Archery Club NI - www.kilmorearchery.com

Section 8 - Useful organisations

Cycling

- Cycling Projects - www.cycling.org.uk
- Cycling Ulster - www.cyclingulster.com
- Cycle Northern Ireland - www.cycleni.com
- Ulster Hand Cycling - Kathleen Erwin kerwin47@googlemail.com
- RNIB Tandem Cycling - www.rnib.org.uk
- Bike Club Northern Ireland - www.bikeclub.org.uk
- CTC - The UK's national cyclists' organisation - www.britishcycling.org.uk
- Theraplay - www.theraplay.co.uk

Useful Publications & DVD's

General

- Access to sports facilities for people with disabilities: Design & Management Guidelines (2010 Edition) - Disability Sports NI - www.dsni.co.uk
- The Building Regulations (Northern Ireland) 2000 Technical Booklet R Access to and use of buildings. (August 2006)
- BS8300: 2009+A1:2010 Design of buildings and their approaches to meet the needs of disabled people - Code of practice]

Canoeing

- Canoeing for Disabled People by Geoff Smedley
- Canoeing and Kayaking for People with Disabilities by Janet Zeller
- Coaching Disabled Performers - Sports Coach UK
- Moving and Handling People in the Outdoors - Calvert Trust DVD
- British Canoe Union Policy on People with Disabilities - www.bcu.org.uk
- British Canoe Union Competitive Paddling for People with Disabilities - www.bcu.org.uk/oursport/paddleability

Climbing

- MLTE Climbing for All - www.mlte.org
- Rock Climbing Essentials Volume II by Libby Peter - www.mlte.org

Cycling

- Cycling for People with Disabilities and Differing Needs 2002 - Cycling Projects

Section 8 - Useful organisations

- www.cycling.org.uk

Orienteering

- Teaching Orienteering by McNeill, Cory-Wright & Renfrew - www.harveymaps.co.uk
- Start Orienteering series by McNeill & Renfrew - www.harveymaps.co.uk
- Trail Orienteering by Anne Braggins - www.harveymaps.co.uk
- Orienteering - Crowood Sports Guides - www.crowood.com

Specialist Equipment Suppliers

Canoeing

- British Canoe Union website for equipment - www.bcu.org.uk
- Hand grips - www.activehands.co.uk
- Slide boards - www.handyhealthcare.co.uk
- Moving slings - www.promove.uk.com
- Specialist equipment - www.equaladventure.org
- Outrigger canoes & kayaks - www.huki.com
- Active Hands - www.activehands.co.uk

Climbing

- Equal Adventure - www.equaladventure.org
- Active Hands - www.activehands.co.uk

Cycling

- Hand Cycling - www.handcyclinguk.org.uk
- JD Tandems - www.tandems.co.uk
- Tricycle Sales - www.e-bikesdirect.co.uk
- Theraplay - www.theraplay.co.uk
- Active Hands - www.activehands.co.uk

Orienteering

- Harveys - www.harveymaps.co.uk
- Ecotrails - www.ecotrailsni.com



Images in this document were supplied as follows:

- Climbing** - courtesy of Graeme Hill, Lake District Calvert Trust and Belfast Activity Centre
- Canoeing** - courtesy of Lake District Calvert Trust, Active Hands and John Crosbie
- Orienteering** - courtesy of British Orienteering, NI Orienteering and Belfast Activity Centre
- Archery** - courtesy of Archery GB, Lake District Calvert Trust, British Blind Sports and Kilmore Archery Centre
- Cycling** - courtesy of Disability Sports Northern Ireland, Active Hands, Theraplay and Cycling Projects

Disclaimer:

This document is for information only, the views expressed are not intended to take away or diminish the responsibility of the user to comply with current legislation. The guidance is intended to complement requirements of the Disability Discrimination Act, (or current industry guidelines) not to replace or override them.

Whilst every effort has been made to ensure the accuracy of the information and guideline contained herein, Outdoor Recreation NI or DSNI will not be held responsible or liable to any party in respect of any loss, damage, or cost of any nature arising directly or indirectly from reliance placed on this information.

Thank you

Venture Outdoors would like to thank the following organisations and people who were instrumental in helping to produce this toolkit:



Claire Mc Veigh, Nick Liley, Kevin O'Neil, Aubrey Bingham, Graeme Hill, John Crosbie, Helen Baxter, John Ford, Helen George, Marian Lamb and Hermine Briffa





For more information contact the Venture Outdoors - Creating Healthy Communities team:

Outdoor Recreation NI

The Stableyard, Barnett's Demesne, Malone Road, Belfast BT9 5PB

Tel: +44 (0)28 9030 3930 Fax: +44 (0)28 9062 6248

Email: c.overend@outdoor-recreation.com Visit: www.outdoorrecreationni.com

The toolkit is available in PDF format from the Venture Outdoors website www.outdoorrecreationni.com and from Disability Sport NI's website www.dsni.co.uk

This guide is also available in other alternative formats upon request.

