Department for Transport

Delivering Inclusive Cycle Training: A Good Practice Guide for Disability Cycle Training

January 2011

The section on National Standard outcomes only was updated in April 2013 to take account of new outcomes arising from the National Standard review.

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DPTAC

Adult using a handcycle trike

Adult using a handcycle trike

Upright trike

One to one on road training

Adult on a dual mode trike

Girl on upright trike

Images provided by Wheels for Wellbeing, except for top right (copyright: Ed Miller) and bottom left (image provided by Greenspeed)

Executive summary

The National Standard for Cycle Training has been devised to give children and adults the skills and confidence they need to ride their cycles safely and well on today's roads. With the continuing integration of disabled children into mainstream education, and with the ongoing promotion of cycling amongst both children and adults, cycling instructors are increasingly encountering trainees with a range of disabilities during their work in delivering the National Standard. **This Guide aims to ensure that cycle training for both children and adults is inclusive, by equipping instructors, and in particular new instructors, with the knowledge, confidence and potential strategies they might need to deliver effective cycle training to disabled people.**

The Guide also challenges the attitudes regarding what individuals with different disabilities can achieve through National Standard cycle training that is properly adapted to their needs. The case studies and anecdotes provided throughout this Guide illustrate how individuals can achieve their full potential when provided with the right equipment, training and support.

The Guide relates to the delivery of cycle training to children and adults within a range of learning environments, including:

- A disabled individual who may receive training on a one-to-one basis.
- A whole group of disabled people with varying needs receiving training. This situation may be encountered when delivering training in a SEN school or at one of the training centres that provide access to many different types of cycles.
- One or two disabled individuals who are being trained within a wider group of non-disabled people. This situation may be encountered when delivering training to pupils in a mainstream school.

The Guide identifies the challenges faced by instructors, and potential solutions, when delivering cycle training to individuals with a range of disabilities including physical impairments, sensory impairments, learning disabilities, mental health illness and developmental disorders.

Delivery of effective training

The Guide provides information based on a number of suggested steps for delivery of effective cycle training:

Do the groundwork

Instructors should ensure they have a good understanding of delivering cycle training to disabled people, and should carefully prepare the delivery of training sessions based on that knowledge.

Understand the needs of trainees

Knowing who will be in a training session, and understanding what specific or additional needs they have, will be crucial to helping instructors provide a safe, controlled, effective and enjoyable cycle session.

Delivering training: One-to-one or in a group?

The decision of whether to teach a disabled person on a one-to-one basis or in a group is critical as it can determine how effective the training is for the individual and the rest of the group.

Plan the session

Consideration should be given to the teaching methods that are likely to be most effective based on what is meaningful for trainees and what they are most likely to respond to.

Communication techniques

Effective communication will be key to the success of any training session. It is important that the methods for communicating (both verbal and non-verbal) reflect the needs of the trainees and that appropriate equipment is used to support them where appropriate.

Types of cycles available

Some people will require a cycle that is designed specifically to meet their needs. There is an extensive range of cycles on the market, encompassing bicycles, trikes and quads in various forms. The Guide provides an overview of some of the cycles available.

Achieving National Standard outcomes

National Standard outcomes are all about achieving and demonstrating a particular competency. However, it is not prescriptive about how the trainee gets to that point. The Guide provides advice on teaching the outcomes in ways that relate specifically to individuals and their own needs – acknowledging that while many disabled people will be able to achieve the same outcomes as non-disabled people, there will be others who will not be able to ride independently on the road – or achieve many of the National Standard Level 1 outcomes.

Rewarding trainees

Rewarding trainees is very important to maintain interest and motivation during the training session, and to encourage people to continue cycling once the training course has finished.

Funding and resources

Signposting is provided for potential sources of funding.

The abilities of an individual with a particular impairment, and the way in which they have adapted to and coped with their condition, will be unique to them. Consequently, the strategies that will be appropriate in delivering cycle training will also be specific to that person and therefore it is not possible to provide generic, clear-cut advice on how to train every individual. Instead, the Guide provides some ideas for consideration and the means to identify what training methods and techniques might be appropriate for any specific situation.

We hope that this Guide gives you the confidence to ask the right questions to ensure that cycle training delivery relates to people's needs and enables **all** trainees to maximise their potential.

1. Introduction

1.1 The National Standard for Cycle Training has been devised to give children and adults the skills and confidence to ride their cycles safely and well on today's roads. It was designed by leading experts in the fields of road safety and cycling, on similar principles to lessons for motorcycle riders and car drivers. The National Standard is composed of a series of outcomes divided into three levels – basic control skills (Level 1), basic on-road skills (Level 2) and advanced on-road skills (Level 3). The outcomes are covered sequentially as trainees progress through each level.

The need for this Guide

1.2 With the continuing integration of disabled children into mainstream education and with the ongoing promotion of cycling amongst both children and adults, cycling instructors are increasingly encountering trainees with a range of disabilities as part of their work in delivering the National Standard.

1.3 The principal aim of this Guide is therefore to make cycle training for both children and adults, more inclusive by equipping instructors and in particular new instructors, with the knowledge, confidence and potential strategies they might need to deliver effective cycle training to disabled people. More specifically, the Guide aims to:

- Challenge the attitudes regarding what individuals with different disabilities can achieve through National Standard cycle training that is properly adapted to their needs. The case studies and anecdotes provided throughout this Guide illustrate how individuals can achieve their full potential when provided with the right equipment, training and support.
- Provide an overview of the techniques that can be used to overcome the challenges and barriers that might be encountered when delivering training.
- Share best practice experiences: a wide range of individuals and organisations have already been involved in delivering cycle training to disabled people, both in a group situation and through one-to-one tuition. This Guide brings together some of the lessons learnt from their experiences, highlighting what has worked well in different situations.

- Provide an overview of which National Standard outcomes might be appropriate/achievable for disabled people and how these outcomes have been adapted or more broadly interpreted to accommodate different situations. It should be noted, however, that the National Standard outcomes may not be appropriate in many situations; this is explored further in Section 9.
- Raise awareness of the issues and challenges faced when training disabled people.

Cycle instructor:

"… Individuals with Special Educational Needs (SEN) need to be set the same challenge or expectations of cycling ability as non-disabled trainees – and all 3 Levels of the National Standard should be offered, as many pupils would surprise you. Outcomes are difficult to achieve but the results can be amazing and surprising …. In our experience SEN individuals value the training they receive much more than non-disabled trainees as the training is making a big difference to their life, making the session very rewarding. This can be compared with training an adult (complete beginner) to ride for the first time."

Teacher's feedback on cycle training delivered in a secondary school:

"I expected you to get two or three [SEN] students riding, but you have blown us away by succeeding in getting six out of eight riding. Then you went on to get five of the six riding on the road. Truly amazing."

Who is this Guide for?

1.4 This Guide is primarily aimed at instructors who are qualified to provide National Standard instruction but have not yet delivered training to disabled people. However, there will also be others who may find this Guide useful, including:

- Instructor Training Organisations (ITOs);
- local authorities e.g. cycling officers, road safety officers;
- disability organisations;
- schools and centres – including head teachers and teachers;
- parents, carers and support workers/supporters;
- physiotherapists;
- occupational therapists;
- providers/manufacturers of cycles and equipment to support training of disabled people;
- potential funders.

Terminology used in this Guide

1.5 The generic term 'disabled people' is the main term used throughout this Guide to describe the circumstances of individuals who require some degree of adaptation, in this instance to cycle training, in order to achieve their maximum potential. The disability might be physical, cognitive, sensory, emotional, developmental, behavioural or some combination of these. There are a variety of other terms that may be used, many of which are deemed acceptable in today's society but which may be viewed by some as inaccurate descriptions. Terms include: people with disabilities, people with impairments,[1] people with specific needs, people with additional needs, people with special needs etc.

Top tip: Identifying terminology to use

Instructors should be encouraged to talk openly to trainees and their parents or carers about the terminology they themselves use to describe their condition or impairments. Instructors should then adopt this terminology when training the individual.

Understanding terminologies

1.6 'Models of disability'[2] exist that attempt to provide a framework for understanding the way in which people with impairments experience disability. There are two main models that have influenced modern thinking:

- The **medical** model of disability tends to focus on what a person cannot do and says that they are disabled by their impairment(s). The model considers that the person needs to change and adapt to circumstances if they can, with no suggestion that society needs to change.
- The **social** model of disability focuses on how the environment, social systems and people's attitudes prevent a person from doing something. For example, a person using a wheelchair who cannot access a building because it only has steps is prevented from entering the building by the lack of ramped access, not by their impairment: they are disabled by the environment.

1.7 Using the social model helps identify solutions to the barriers disabled people experience and encourages the removal of these barriers within society, or the reduction of their effects, rather than trying to fix an individual's impairment or health condition. It empowers disabled people and encourages society to be more inclusive. It is the preferred model for disabled people and is the model that this Guide works to.

1 An impairment describes a problem in body function or structure which also includes speech and language difficulties, or more specifically a **physical** impairment, i.e. any disability which limits the physical function of limbs or fine or gross motor ability; or a **sensory** impairment, i.e. no or impaired hearing or vision, or both.

2 Further information on models of disability can be found on the Office for Disability Issues website at www.officefordisability.gov.uk/resources/models-of-disability.php

Top tip: Thinking about possible barriers

When delivering cycle training, it can be helpful to think about the barriers created by equipment, the training environment and teaching methods, rather than the individual's impairment.

Scope of this Guide

1.8 This Guide relates to the delivery of cycle training to children and adults within a range of learning environments, including:

- a disabled individual who may receive training on a one-to-one basis.
- a whole group of disabled people with varying needs, receiving training. This situation may be encountered when delivering training in a SEN school or at one of the training centres that provide access to many different types of cycles.
- one or two disabled individuals who are being trained within a wider group of people without similar needs. This situation may, for example, be encountered when delivering training to pupils in a mainstream school.

1.9 The Guide identifies the challenges faced by instructors, and some of the potential solutions, when delivering cycle training to individuals with a range of disabilities, including physical impairments, sensory impairments, learning disabilities, mental health illness and developmental disorders, e.g. Autistic Spectrum Disorder.

1.10 It should be noted, however, that there are people with many different types of disability or impairment who might receive cycle training. The abilities of an individual with a particular disability and the way in which they have adapted to, and coped with their condition, will be unique to them. **Consequently, the strategies that will be appropriate in delivering cycle training will also be specific to that person and therefore it is not possible to provide generic, clear-cut guidance to advise on how to train every individual. Instead, this Guide provides some *ideas* for you to consider, and the means to identify what training methods and techniques might be appropriate for any specific situation. In particular, we hope that this Guide gives you the confidence to ask the right questions to ensure that training delivery relates to people's needs and enables trainees to maximise their potential.**

1.11 It should also be noted that, while this Guide provides tips based on instructors' experiences, the suggestions are by no means exhaustive. The Guide therefore includes signposting to organisations and other resources where further information and guidance can be found.

Benefits of cycling and cycle training

1.12 Cycling is a convenient form of transport. It is also a low-impact form of exercise that places less stress on a person's joints than other aerobic activities such as running. It can bring significant health benefits, including better cardio-vascular fitness, improved balance and co-ordination, reduced

stress, and greater psychological well-being. Cycling can also have social benefits: cycling with others can provide opportunities for conversation and social interaction, and can also provide a means of accessing leisure, educational and other opportunities. Learning to cycle safely is itself a life skill, helping an individual to develop awareness of themselves and of others around them and can also open up a lifetime of opportunity. Cycling is an enjoyable activity that can be fun for all individuals, regardless of whether or not they are able to achieve National Standard outcomes.

1.13 For some people who may find themselves excluded from activities in other aspects of their lives as a result of their disability or by limits placed on their participation by others, taking part in cycle training can itself bring feelings of inclusion and empowerment as well as other additional benefits. These include:

- better concentration, with trainees feeling more engaged;
- a calmer persona;
- a feeling of independence, with the ability to control and adapt to situations;
- more confidence and a feeling of self-worth;
- better personal and social skills through working together in groups;
- feelings of inclusion, particularly for example, where disabled people feel better integration into society through being able to develop skills alongside their non-disabled counterparts;
- for amputees with fitted limbs, cycling can be a way of demonstrating that they are still able to complete tasks that allow them to get about freely and participate in physical activities in the same manner that they did previously. This in itself can enhance feelings of well-being and aid long-term psychological recovery.

1.14 In some cases, cycle training will involve a retraining exercise. For example, the trainee may have previously ridden a two-wheeled bike, but their condition, e.g. Parkinson's Disease, may mean that they now need to retrain on a trike, or an elderly person may need to learn how to ride an electric bike or trike.

Cycle instructor:

"All trainees felt that they had really achieved. Some of them only learnt very simple things and others completed Level 2 but all finished the course with a great sense of achievement."….. "Watching a trainee leading our group … you can see their confidence go through the roof. The rest of the group are always supportive and really encouraging, which adds to the achievement."

Cycle instructor:

"Working with adults with mental health issues, we struggled to motivate them to come out but once they had they were much more alert – even the next day."

Cycle instructor:

"Groups of youngsters with learning difficulties are very supportive of each other. When a member of a group rides their bike for 20 feet unaided for the first time, the whole group will cheer and clap them. This positive experience encourages and empowers those with very severe physical difficulties to achieve and is also very satisfying and rewarding for the instructors."

School teacher:

"A number of boys [in the secondary school] with SEN, including learning difficulties, autistic spectrum disorders, and problems with physical co-ordination, have been trained to ride on the road. As they mastered the skill of riding, their sense of achievement visibly increased their confidence and self esteem. Many of the teachers commented on this when invited to feed back on any observed changes in the way in which the boys participated in their classroom lessons. A clear picture emerged of the students, who were now much more positively involved in their learning … 'Typically my student would lack focus and be difficult to engage in the classroom activity. Now he has learnt to cycle, he has finally experienced some success. This has clearly boosted his confidence and self esteem. He is now a changed student, willing to try and put his view across. This [cycle] training has helped him find his voice.'"

Ensuring fair treatment when delivering cycle training

1.15 Many people with disabilities already cycle but may, nonetheless, benefit from cycle training, while disabled people who do not currently cycle may welcome the opportunity to learn.

1.16 Instructors may wish to be aware of the Equality Act 2010 when delivering cycle training, and some of the key points of relevance are set out in this section.

1.17 Disabled people who access services (including cycle training) are protected from discrimination by the Equality Act 2010 ('the Act') on the basis that disability is one of the stated 'protected characteristics' defined in the Act.[3] The Act says that, as a matter of good practice, everyone

3 The Equality Act 2010 is replacing the Disability Discrimination Act. The first wave of implementation of the Act was on 1 October 2010.

accessing an organisation's services should be treated fairly, regardless of their age, gender, race, sexual orientation, disability, gender reassignment, religion or belief, and care should be taken to guard against making assumptions about the characteristics of individuals.

1.18 Disabled people must not be treated less favourably than others because they are disabled. Under the Act, businesses/organisations have a requirement to make "reasonable adjustments" to help disabled people access their goods, facilities and services. In addition, the Act defines different types of discrimination – including indirect discrimination, which can occur when a rule or policy applies to everyone but disproportionately disadvantages a person with a particular protected characteristic, i.e. a disability. The Act also clarifies the requirements for making reasonable adjustments and the point at which the duty to make reasonable adjustments is triggered. To view The Equality Act 2010 in full visit www.equalities.gov.uk.

1.19 The implications of the Act for providers of cycle training are that:

- **Instructors need to make reasonable adjustments to the training services that they provide to meet the needs of disabled people.**
- Training organisations, instructors and e.g. schools at which training is delivered need to look at their rules/policies to ensure that they do not indirectly discriminate.
- Instructors need to ensure that they do not have pre-conceived views/assumptions about an individual's ability to carry out a task and achieve outcomes.

Making it clear who can participate in cycle training

1.20 Ensuring it is clear who is able to take part in cycle training is important, as this will help to ensure inclusivity and prevent people being excluded from the outset because of, for example, misconceptions of what a person is able to do. Instructors can help increase this awareness of who can participate by ensuring that:

- Any print or web-based promotional materials for cycle training services includes some information on how sessions can, and have been, modified to cater for disabled people. These materials should themselves be accessible, e.g. available in large-print format.
- Schools understand that cycle training sessions can be modified to meet the needs of disabled children. This may be particularly relevant in mainstream schools where there may be small numbers of children with a range of impairments. A discussion with the teacher responsible for the year groups that normally receive cycle training will help to reinforce the message, as will communications with parents.
- An initial interactive presentation in schools to motivate potential trainees to sign up for a course, providing some basic information about cycling, highlighting who can participate and answering any questions they may have, can also help to widen participation.

- People organising training in community settings are made aware of the very wide range of people that can participate in cycle training. This will help ensure that potential participants are not excluded. Community events, e.g. try-out sessions with different types of cycles available, can also help to raise awareness.

Legal aspects

1.21 Instructors should already be aware of the legal aspects of cycling and that the law applies in the same way to all individuals, regardless of any disability. For example, the law in respect of cycling on the pavement or the legal requirements associated with use of cycles on the road as set out in the Highway Code[4] applies equally to 'conventional' bicycles, as to any cycles specifically designed to suit those with impairments (see Section 8).

1.22 Instructors should also check that their CRB (Criminal Records Bureau check) and insurance cover them for training children and vulnerable adults, and that the necessary consents are in place before training begins.

4 Further information on this can be found at: www.direct.gov.uk/en/TravelAndTransport/Highwaycode/Cyclists/index.htm

2. How to deliver inclusive cycle training

Figure 2.1: Trainee enjoying cycling
Image provided by Wheels for Wellbeing

With the right approach and the right equipment and support, most people are able to participate in, and benefit from, cycle training.

Disabled person who completed cycle training:

"I am proud of my disability, but when I'm on my trike, I have no disability."

Suggested steps to maximise inclusivity

2.1 A suggested approach to maximising inclusivity and ensuring that the needs of any disabled trainees are met is shown below:

Do the groundwork (Section 3)

- Make the right people aware of who can participate in cycle training (Section 1.20).
- Instructors should have good knowledge of issues, challenges and potential solutions for training people with specific needs (Section 3 and throughout this Guide).

A request for cycle training is made by e.g. a school, a training centre or an individual.

Understand the needs of trainees (Section 4):

- Understand make-up of the group (Section 4.1).
- Undertake one-to-one assessment if appropriate (Section 4.4).
- Consider implications (Sections 4.8, 5 and 6).

Establish whether one-to-one or group training is appropriate (Section 5).

Plan the session (Section 6):

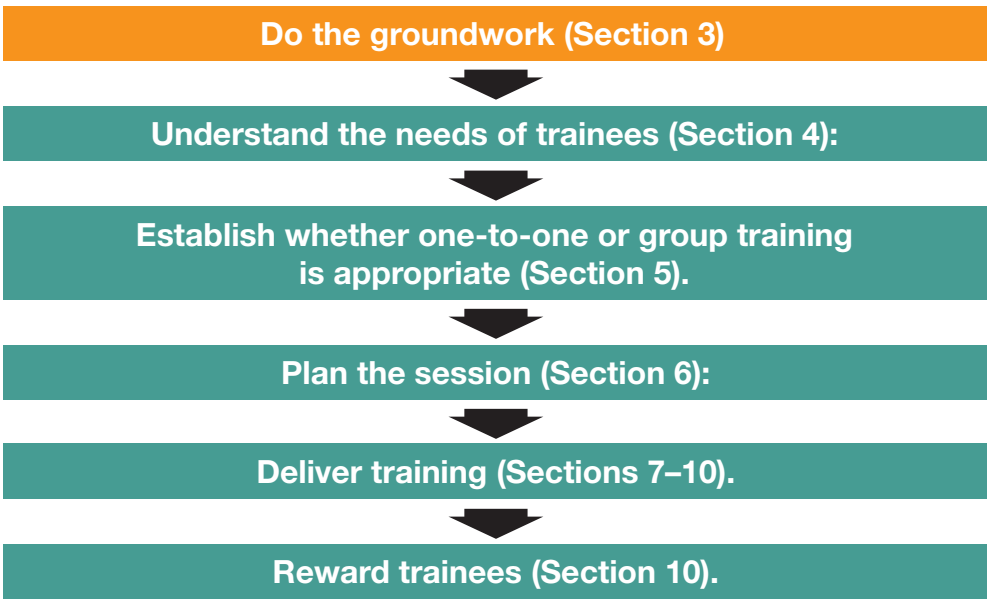
- Consider communication techniques and resources/materials to be prepared in advance of training (Sections 6 and 7).
- Understand how National Standard outcomes might be achieved (Section 9).
- Establish what bikes/equipment might be required (Section 8).

Deliver training (Sections 7–10).

Reward trainees (Section 10).

2.2 The key steps in the process are discussed in the following sections of this Guide.

3. Be prepared: Do the groundwork



3.1 Preparation is key to the delivery of effective cycle training:

- Instructors themselves need to be well prepared with a good understanding of delivering cycle training to disabled children and adults, the challenges they may face and, importantly, the potential solutions they could adopt to overcome them. This will help minimise the chance of any 'surprises'. That said, even with the best preparation instructors are likely to encounter the unexpected!
- When instructors provide cycle training, it is essential they carefully prepare delivery of the individual training sessions and identify at the outset whether there are likely to be disabled people in the training group. If there are, then it is important that appropriate techniques and communication methods are established in advance to ensure effective training (see Sections 4 to 6).

Top tips: Dos and don'ts when delivering cycle training

There are a number of key points to bear in mind when delivering cycle training:

3.2 **Do not** make assumptions about:

- how a person will behave;
- how they should be taught; or
- what they will or will not be able to do or achieve. "A requirement on the instructor is always to expect to be amazed by what can be achieved – because it's always amazing when a result comes out of the blue. It might take quite a while for something to be assimilated into action, but once learned it may well stay there." (Cycling consultant)

3.3 **Do** find out from an individual what works for them – everyone will have 'quirks' to their learning and their own preferred way of learning, and an instructor cannot know, or be expected to know, what this is likely to be unless it is discussed with them first. An instructor should have the confidence at the outset to:

- Ask the person (and where appropriate, their parent, carer, school staff member etc.) what their needs/requirements are; how they think they will learn best; and what they would like to achieve.
- Feed back to them, to ensure the instructor has interpreted what the trainee has said correctly.
- Most importantly, agree, record and implement what they have asked for.

3.4 By adopting this approach, the instructor will be able to respond to a person's individual requirements and therefore deliver training in the most appropriate way. Generally, people will be happy to have this initial conversation, as it demonstrates that they are being treated as an individual.

3.5 **Do** try and understand the basics about different impairments and how this can effect learning and behaviour. Appendix A provides an overview of some of the more common conditions that an instructor may encounter.

3.6 **Do** expect that providing training to disabled people can be (although is not always) different from delivering training to those with no additional needs. The way instructors communicate, the content and structure of the session and the length of the training session may all need to be modified according to the needs and requirements of the trainees. The amount of preparation time may also need to be increased accordingly.

3.7 **Do** ensure you have the confidence and understanding to deliver effective training. Instructors may find it helpful to attend disability awareness training, which can help with some of the practicalities of working with people with different types of impairment. You could contact your local disability organisation for details of what is available locally – your local council should be able to put you in touch with it. There may also be value in seeking out mentoring opportunities from others with more experience in this field to help develop knowledge and skills. It may also be worth referring to Disability Etiquette Guidelines produced by some organisations.

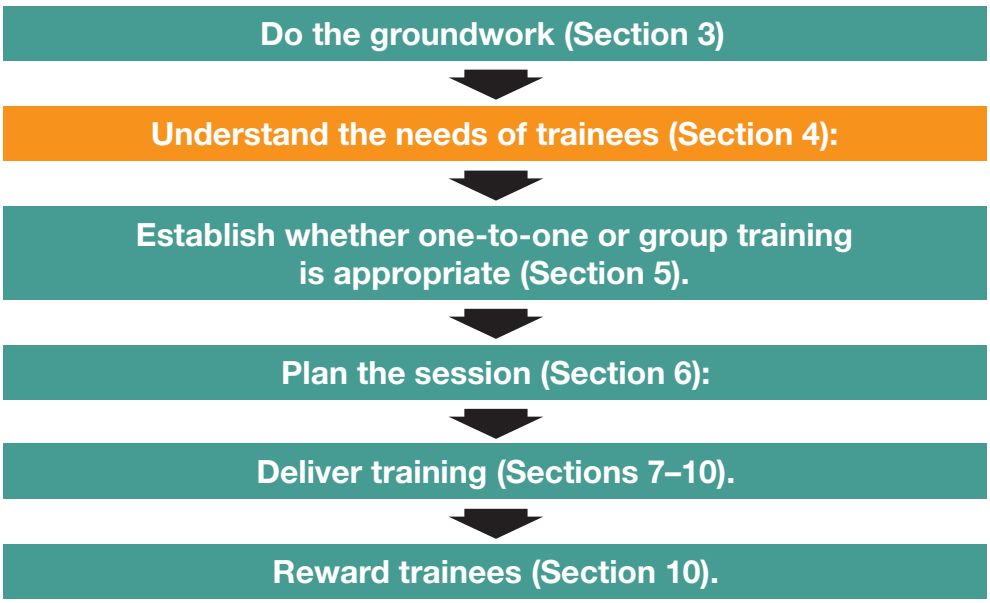
3.8 **Do** discuss the particular aspirations and goals of the individual undertaking cycle training while keeping an open-mind. This will make it clear what the individual wants to achieve, highlight where there might be challenges to overcome, and also help to manage everyone's expectations. It might be helpful to go through each of the National Standard outcomes with the individual to better and more consistently provide natural direction on what the individual wants and can achieve, as well as highlighting where reasonable adjustments need to be explored.

3.9 **Do** try and see things from the trainee's perspective – seeing things from the user's perspective is always key in any training, but heightened in the disability arena.

3.10 **Do** adapt training accordingly, depending on how the session is progressing. Responsiveness is an integral part of meeting the needs of any group and is a crucial quality when teaching disabled people. Instructors should have alternative strategies and activities planned for when training sessions might not go according to plan.

3.11 **Do** have a contingency plan in case of bad weather – a session may need to be adapted or even cancelled in severe weather and, for example, some SEN trainees may need preparing for this, as a cancelled session can be a major disappointment and may cause subsequent behavioural issues.

4. Be prepared: Understand the needs of trainees



Top tip: Thinking ahead

Knowing who will be in a training session and understanding what specific or additional needs they have will be crucial to helping instructors provide a safe, controlled, effective and enjoyable cycle session. It will also enable instructors to:

- limit, as far as is possible, any surprises on the day of training;
- decide whether the disabled children/adults can be taught as part of the wider group, or if it would be more appropriate to teach them in a different setting or on a one-to-one basis;
- plan what modifications need to be made to a session (such as length, structure, teaching methods) to accommodate that person;
- arrange to have the right type of equipment available on the day.

Understand the make-up of the group

4.1 Following agreement that training will be delivered in a school, training centre or community setting, it is important that the instructor identifies not only how many people are to be trained during the sessions, but also whether there is anyone in the group with an impairment – and if so, what their needs broadly are. This could be done through an initial telephone conversation with the key contact at the place of training.

4.2 Where it is established that a disabled person(s) **will** be involved in training, a face-to-face discussion should be arranged, to take place prior to the first training day. It might be helpful to provide a prepared form for the individual (or their parent, carer or teacher) to complete about the potential barriers to cycle training relevant to the individual (see Appendix B). However, in the case of a child where a teacher is asked to complete the form, this can sometimes be of limited value, as a trainee's ability can vary from day to day and a teacher may have limited knowledge of a pupil's **physical** capability. In these circumstances, it can therefore be useful to get the input of other individuals involved in the individual's education/welfare, e.g. the SEN co-ordinator, a trainee's support worker/teaching assistant, or physiotherapist, to better understand their likely needs and potentially also to get their involvement in a more detailed one-to-one assessment if required.

4.3 The trainee should be involved in the discussion too, if appropriate. Sometimes the expected outcome of the training should also be discussed to minimise the chance that any of those involved have unrealistic expectations. Often cycling instructors are better at assessing the person's ability to participate in cycle training, as sometimes teachers/carers can make assumptions about whether the person can ride a cycle and may exclude people based on that.

Undertake a one-to-one assessment

4.4 In some circumstances it will also be important to undertake a detailed one-to-one assessment with the trainee to discuss their impairment, again with the involvement of their parent, carer or support worker as appropriate. This could form part of the face-to-face meeting discussed above.

4.5 The one-to-one assessment will be most effective if it is both a verbal and a visual assessment. It is important that this assessment is not 'impairment-led', as this could lead to assumptions being made about the individual. For example, it is not necessarily important to know what the person's impairment is, but to understand what their individual needs and requirements are, e.g. the type of cycle they need, what teaching approach they will best respond to, the most effective way of communicating with them. Appendix C indicates the types of questions that it could be useful to ask and understand as part of the one-to-one assessment.

4.6 The one-to-one assessment could also involve understanding the trainee's baseline of physical capability. This might be relevant for individuals who have an impairment that might affect muscle strength, or to assess the co-ordination abilities of individuals with dyspraxia, for example. Part of the pre training assessment session, can involve the physical testing of hand–eye

co-ordination, muscle strength and basic balance for each student. This can provide an indication of readiness and capacities for the active aspects of the training course.

4.7 Instructors could also use the one-to-one assessment to find out if the trainee's primary carer/parent can cycle and, if not, then the instructor could consider arranging for them to be trained at the same session, where appropriate. This can act as positive reinforcement that cycling is important and inject a healthy element of 'competition' and fun, which can aid training for both. That said, some instructors have encountered situations where the attitudes of the parent/carer were exhibited by the child, e.g. a parent was afraid of falling off and this prevented the child from trying themselves; in this case teaching the parent and child separately would have been preferable. Careful consideration therefore needs to be given to this decision.

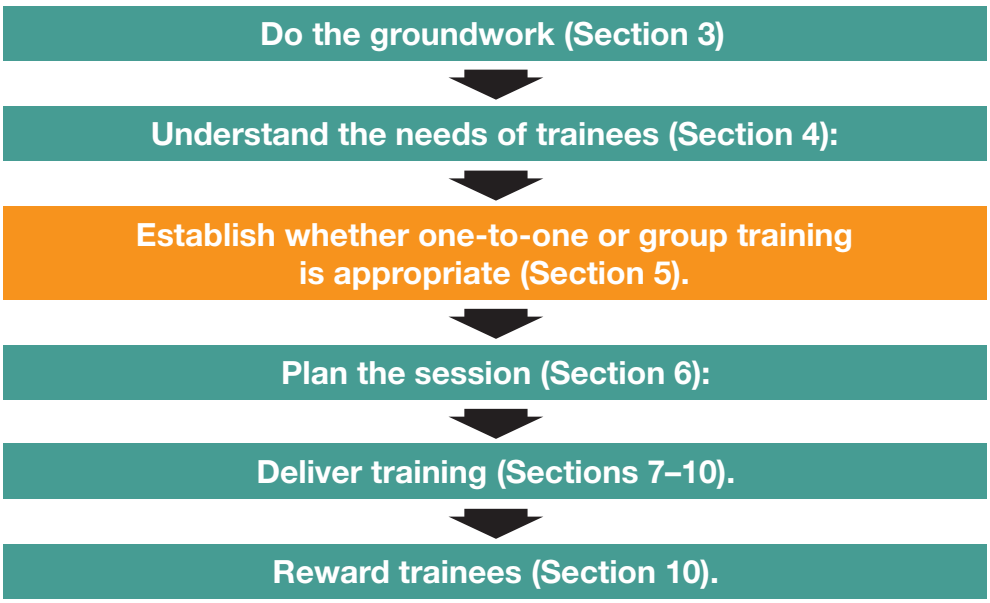
Consider the implications

4.8 Having gained a comprehensive understanding of the needs of the individual, it is important for the instructor to consider the implications for training and, in particular, whether the individual can be taught as part of a wider group. This is explored in Section 5, and further implications to be considered are discussed in Section 6.

Top tip: Be ready for the unexpected

It is important to remember that there will be instances where instructors will be surprised about who is in their training group, despite their best efforts to establish this beforehand. In these circumstances, the fact that information was not provided in advance should not deter you from trying to reasonably adjust the session to accommodate that person. This Guide and the further information referenced in it should provide you with the knowledge of what to do in these unexpected circumstances.

5. Delivering training: One-to-one or in a group?



5.1 The decision of whether to teach a disabled person on a one-to-one basis or in a group (either a group where all have an impairment or in a mixed group where only some do) is critical, as it can determine how effective the training is for the whole of the group. There are a number of issues to bear in mind including:

- Taking an individual out of an established group, e.g. a class, and teaching them separately, can result in that person feeling excluded and isolated. This is particularly significant for disabled people, who may frequently be left out in other parts of their lives too.
- Some trainees, for example, those with ADHD and hyperactivity, can respond well to being included and accommodated as part of a wider group and to being given specific responsibilities in the group, e.g. being asked to become the instructor's assistant, helping to hand out materials.
- It can sometimes take a considerable amount of time for some disabled individuals to progress, and this may make other members of the group feel as if they are being held back. The usual mainstream strategy is to move at the pace of the least able trainee, but this approach can be frustrating for everyone. The disabled trainee may also feel embarrassed

that they are unable to learn or keep up with the pace set by the rest of the group. However, this is not always the case; children can, for example, be very encouraging of their disabled classmates despite the course having to be longer, and this wider support can make a group situation work very well.

- The ages of the children concerned might make it difficult to teach them alongside their peer group. For example, a child with dyspraxia may only be learning to ride a cycle at aged 12 rather than at age 6 or 7 and may be embarrassed to learn alongside younger children.

5.2 That said, a one-to-one session can sometimes be better for a trainee as they may, for example, concentrate better when there are fewer distractions. A one-to-one session can also make a trainee feel special; it is important to know what works best for the individual.

5.3 The aspirations of the trainee, the parent or carer should also be considered in the one-to-one discussion (see Section 4.2) but may not necessarily reflect what is most appropriate for training delivery. For example, a school or a parent may request one-to-one training when this is unnecessary, or may insist on a child being taught in a group when the more appropriate option is to teach one-to-one. It is important that the parent or carer's views are considered by the instructor, but ultimately the instructor needs to reach a decision based on their knowledge of the trainee and their experience of instructing. Their recommended approach may need to be communicated thoughtfully and carefully to the individuals involved.

Questions to ask yourself

5.4 The decision whether to teach someone with a disability as part of a group or one-to-one will always depend on the specific circumstances of each case. However, there are some useful questions to consider to help inform that decision:

What are you trying to teach?

5.5 To ride for the first time, or to teach different skills? Teaching people to ride is generally best done one-to-one, but teaching different skills can more easily be taught in groups.

Are there any communication issues?

5.6 If so, is it possible to overcome these in a group situation? (See Section 6.)

Do trainees have any behavioural difficulties?

5.7 Having one child with behavioural difficulties in the group might be manageable with additional support, but having several children in the same group with challenging behaviour is likely to become difficult to manage.

Do you have access to the right kind of equipment?

5.8 For example, a child who uses a wheelchair can quite easily be taught alongside their peers who have no additional needs, as long as they have the right type of cycle to use. (See Section 8.)

Is the disability likely to result in more time being required to complete the training?

5.9 A child with learning difficulties who may take more time to reach the same level of achievement as the others in their group, or who needs a high degree of repetition to aid learning, may not be easy to teach in a group. Or they may need additional one-to-one tuition to support group work.

Can additional support be provided where necessary?

5.10 Can the carer or support worker be a part of the training session, ideally on their cycle too? This might enable an individual to be brought into a group situation.

Case study: Training a child with learning difficulties with a parent

Alex is 10 years old and has learning difficulties. Her parents wanted her to take part in National Standard cycle training with the rest of her peers at her mainstream school. To overcome the difficulties of Alex being included with the rest of the class, her mum also attended the training and brought their tandem bike with her.

Alex and her mum were taught together with the rest of the class, with her mum leading the actions while on the tandem, as Alex was unable to take on board all of the instructions. This allowed Alex to enjoy her training because she was with her peers and also allowed her mum to take part so that she could ride safely with Alex after the training.

At the end of the training both Alex and her mum were presented with a joint National Standard Level 2 certificate, something which Alex could not have obtained without her mum's help.

Case study demonstrates: Flexibility of approach to ensure the inclusion of a trainee with a learning disability into a mainstream group; inclusion of a parent/carer to ensure that cycling continues after the training has been completed.

(Case study provided by local authority cycle training co-ordinator)

Case study: Training someone with multiple disabilities as part of a mainstream group

Sadie has cerebral palsy and epilepsy and is taught within a mainstream school. Her cycle training was delivered as part of a mainstream group and, although the course did need to be longer to accommodate her, the other children were very supportive and encouraged her to do well.

One key challenge was that Sadie was not able to control the bike when she removed her hand to signal. To overcome this, the instructor devised a game whereby she had to maintain eye contact with someone else (either the instructor or another trainee) while she was signalling. This helped her to remove the focus from riding with one hand when signalling, allowing her to do so successfully.

Another major challenge was ensuring that her medication for epilepsy could be administered if it was needed. Since the instructors were not allowed to administer the medication (it could only be done by someone with appropriate training), Sadie's mum had to be present at all times. Consequently, her mum took part in the course too, which also had the benefit of giving Sadie more confidence.

Case study demonstrates: positive outcomes of including a disabled trainee into a mainstream group; the value of involving a parent or support worker; the value of simple solutions in overcoming key obstacles.

(Case study provided by local authority cycle training co-ordinator)

Case study: When a child does not want to take part in cycle training with their peers

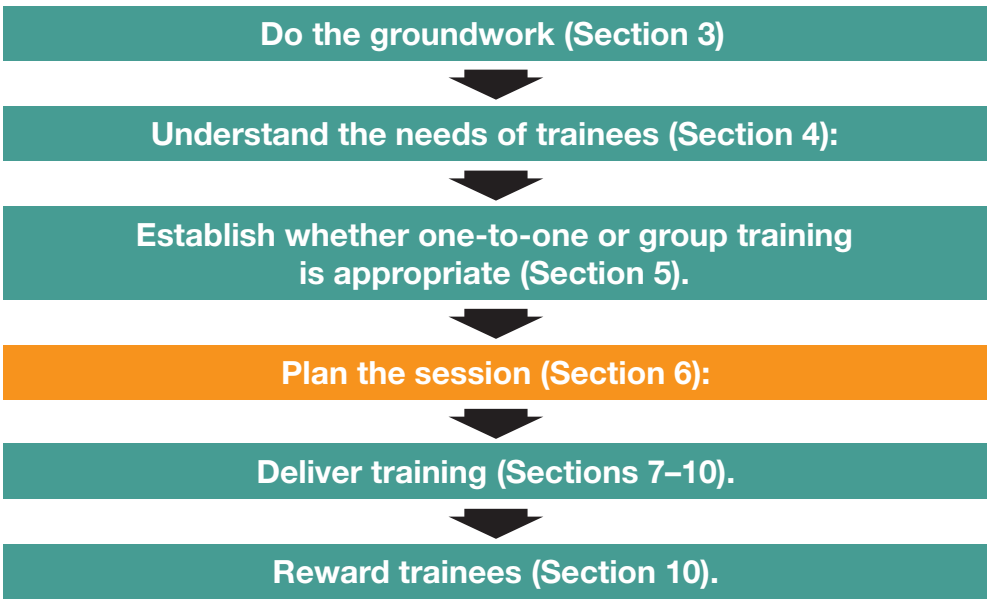
Sam has dyspraxia and associated co-ordination difficulties and did not want to take part in cycle training at school because he was worried that his peers would make fun of him taking more time to progress. His mother arranged for him to have independent training, which he thoroughly enjoyed and went on to pass Level 2 of the National Standard. There were a number of reasons why this approach worked better for him:

- The instructor took him back to basics so that he felt confident handling the bike.
- He was able to have more, longer sessions for National Standard Levels 1 and 2 to ensure that he was comfortable and confident with each step of his training.
- His Level 2 training sessions were held on roads near to where he lived, so that after his training he felt confident riding on the roads independently.
- Having one-to-one training enabled the instructor to see exactly what areas he needed to work on before progressing to other elements.

Case study demonstrates: the value of one-to-one tuition in certain circumstances.

(Case study provided by the mother of the child undergoing training)

6. Plan the session



Teaching methods

6.1 Once there is a good understanding of who will be receiving training it is possible to start planning the session. Consideration should be given to the teaching methods that are likely to be most effective based on what is meaningful for trainees and what they are most likely to respond to. For example, children with severe learning difficulties are likely to respond to clear instructions with defined goals or rewards. The following could also be considered:

- Limitations of the trainees' communication skills and adaptations required – teaching must be made accessible to all involved, possibly by using alternative teaching methods such as role-play and visual information, e.g. trainees with ADHD often respond well to visual or movement-based teaching rather than verbal communication alone. Consider whether any materials or resources need to be prepared in advance, e.g. flash cards or materials with Makaton[5] symbols to help communication.

5 More information on Makaton is provided in Section 7 of this Guide or can be found at www.makaton.org/

- Break down the teaching process into manageable chunks that allow for the information to be properly processed.
- Use new training techniques and create games for the children to play to reach the relevant outcomes.
- Work within the fear boundaries of the individual, which can be considerable at the outset. Time and patience will be essential.
- Be aware of any 'triggers' for an individual's behaviour, e.g. a person with autism may react to a specific colour or object, which may cause them to be distracted and lose concentration/control.
- Establish whether the parent/carer/support worker needs to be involved in the training sessions. For example, a trainee's teaching assistant/support worker could attend the training session to help with communication and reinforce messages later on if, for example, one of the trainees has autism. An instructor will also need to take into account trainees who may be harder to control and supervise on and near roads. For some trainees with SEN, intensive training over a long period of time may be required to ensure that they consistently apply safety rules. Maintaining trainees' attention can be a challenge, and it may be helpful to have someone available to take any bored attendees away once they have had enough.
- Careful consideration should also be given to the length of the session. It is important to allow sufficient time for all trainees to reach the same milestones, but equally an instructor will need to maintain concentration and interest of everyone. This might mean scheduling more breaks into the session than would normally be used. Some SEN trainees also learn better and more quickly if training takes place over consecutive days although this can be difficult in the context of a mainstream school due to timetabling constraints.
- Equipment – What equipment might be needed by the trainee and is the instructor able to access it?
- Cycle helmets – Instructors should give due consideration as to whether there is a particular requirement for a helmet to be worn by a disabled trainee. When training is being delivered in a school, all trainees may in any case need to wear helmets as a requirement of the school, local authority or training provider e.g. for insurance purposes.
- In a mainstream school, if the behaviour/attitudes of other pupils towards trainees' progress in cycling is likely to be an issue (not necessarily those being trained but e.g. pupils observing training during break times), consideration should be given to how this could be addressed.

6.2 It should be noted that modifications required to training delivery may not necessarily be significant or require use of any special equipment but they can help to avoid difficulty and perhaps embarrassment on the day e.g. an instructor could bring along high visibility vests that are the correct size for the trainees attending if one of the trainees has restricted growth.

6.3 Appendix D provides a case study of training delivered to a group of SEN children at a secondary school, including details of the structure of the training delivered and the results and National Standard outcomes achieved.

Pre-training classroom-based sessions

6.4 In certain circumstances instructors may wish to consider including a classroom-based session as an initial part of the training. This can help to reduce the length of the actual training session for those individuals whose attention span might be an issue, or it can benefit those who may require extra preparation time. For example, an instructor might find that individuals with autism are afraid of the cycle and will want to spend some time touching it, understanding what it feels like and what it is made of, before they can get on it.

Top tip: Working with people with mental illness, including depression

People with mental illness/depression can be difficult to motivate and can have a low attention/concentration span. One challenge for the instructor is that repetitive actions, as may be needed with cycle training, can sometimes have a negative effect. In this situation, getting to know the person is very important. The course should be delivered at a slow pace with lots of praise, but delivered in short sessions with a longer overall course length.

Case study: Adapting training to fit the capability of a child

Joshua attends a mainstream school. He has only one arm and wanted to take part in cycle training that his school was running. He rode his bike in his free time and, after an initial assessment, he proved that he was able to ride proficiently as well as having the balance and braking requirements needed to be a safe rider. Joshua was taught in a group with his peers, but his training differed when it came to turning corners:

- Looking for cars and his road positioning were more important than the action of signalling. If the road was clear and he was positioned well, he could turn the corner safely.
- If he found that the roads were busy when he was planning to turn, he was simply instructed to pull over to the side of the road and wait until it was safe to turn.

After his training he successfully passed Level 2 of the National Standard.

The case study demonstrates: Value of adapting training to the capabilities of the trainee; alternative ways of achieving cycle training outcomes.

(Case study provided by local authority cycle training co-ordinator)

Case study: Breaking down the teaching process into smaller steps

Samira is ten and has learning difficulties. She was unable to ride her bike and became very upset when her five-year-old brother began riding. Her mother had tried and failed to teach her to ride. An initial assessment identified that Samira had co-ordination issues and could not even push a bike.

She was taught in a quiet area near her home, with her mother present. The two-hour session was broken down into small, manageable steps and focused on balance and co-ordination skills:

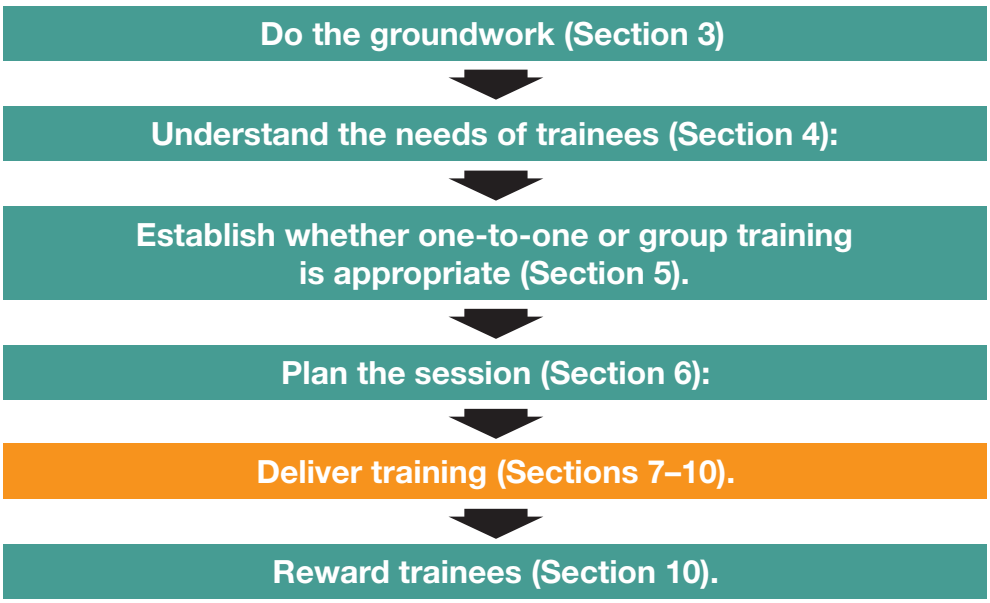
- Initially, training involved pushing the bike and moving forwards and backwards with it. Then Samira practised braking while pushing.
- A game was played involving pushing the bike forward and stopping at the foot of a Shrek head on a pole (visual stimulation as well as fun).
- This was repeated, stopping on a surface mark instead.
- She progressed to pushing the bike in circles, then in a figure of eight.
- Once the circuit was imprinted, Samira was encouraged to sit on the bike and push with her feet.
- This progressed to 'pedal ready' and 'push off', with the instructor holding Samira's sweatshirt.
- The circuit was completed several times with the instructor holding Samira's sweatshirt.

The emphasis was on calm, quiet communication and lots of appropriate positive reinforcement. The training session ended on a positive note with Samira able to push the bike off on her own (but only for a maximum of two metres). Her mother was advised to allow her to play on her own and experiment with the bike. One week later Samira's mother reported that she was now riding on her own and could ride with the family.

Case study demonstrates: Value of initial assessment to help identify the challenge and focus training on addressing it; breaking training down into smaller steps; the value of learning and experimentation away from the formal training session.

(Case study provided by local authority cycle training co-ordinator)

7. Delivering training: Communication techniques



Effective communication

7.1 During any training session, it is important for instructors to implement what they have planned. However, instructors should be aware that each session is different and that they will often have to deal with, and react to, situations that they have not anticipated.

7.2 Effective communication will be key to the success of any training session. It is important that the method for communicating reflects the needs of the trainees and uses appropriate equipment to support it where necessary. An instructor should never pretend to have understood what a person has said if they have not – which can be an issue where a trainee has a speech impediment. If an instructor is unsure what a trainee has said, they should repeat back to confirm their understanding.

7.3 Communication by the instructor should be short and to the point to maintain the attention of trainees: “demonstrate, don’t talk”. Instructors should speak to the trainees themselves – not to the person that may be accompanying them (unless trainees have indicated that is what they would prefer), even if the response has to come back from the companion.

7.4 Equally important, is the ability of the trainee to communicate with the instructor, for example to confirm that they have understood instructions or to ask questions. However, there are a number of points to bear in mind:

- Some trainees may be unable to communicate directly with an instructor. For example, people with autism may not be able to talk to the person training them or demonstrate visually that they have understood what has been said. In this situation it is important to get the support of their parent, carer or support worker to help facilitate communication.
- Some trainees may rely on other forms of communication, such as British Sign Language. This means that using an interpreter, possibly the person's support worker, to help facilitate communication between instructor and trainee is key.
- An instructor may ask a trainee to repeat back any instructions to ensure they have understood them correctly.

7.5 Trainees should be offered praise to motivate and encourage them throughout training sessions. People with Autistic Spectrum Disorder tend to respond particularly well to encouragement – so lots of praise is important without being patronising.

Providing feedback to trainees

7.6 While instructors will be providing feedback and coaching throughout the training sessions to all trainees, it is also important to provide feedback at the end of each training session and at the end of the course as a whole.

7.7 Where practical and appropriate, feedback should be given to both the trainee and their parent/carer (this may be done simultaneously). However, providing feedback to both the trainee and the parent/carer may be less feasible in cases where the trainee is part of a mixed disabled/non-disabled group, in comparison with one-to-one training.

7.8 Feedback at the end of the course is likely to be written for all trainees and should capture what has been achieved on the course as well as any areas where the trainee might be less proficient or needs further practice. It is advisable to link the feedback to each of the National Standard outcomes and the competencies associated with each.

7.9 The list below highlights methods that have been used to communicate effectively with people with different types of needs during cycle training. The list is not exhaustive but provides ideas for consideration.

Communication tips for instructors

Trainees with hearing impairments

- Carefully position yourself so that the trainees are able to see you easily and be careful not to turn your head when explaining cycle instructions – this enables trainees to lip read. Do not chew, shout or cover your mouth when speaking as this will prevent lip reading. Ensuring your face is well lit can also help e.g. if outdoors, face the sun.
- Speak clearly; do not shout or speak excessively slowly as this can be patronising and inappropriate in many cases.
- Try to reduce the amount of noise in the training environment.
- Consider developing and agreeing your own simple signing system with the trainee e.g. thumbs up for good, waving to gain attention.
- Use large flash cards with brief written instructions to support verbal instructions.
- Use 'follow the leader' exercises to enable trainees to learn first by copying you and then trying by themselves.
- Use a British Sign Language (BSL) interpreter to support you in the session (if a child, most likely their teaching assistant or support worker).
- Use a special microphone and transmitter.

Trainees with visual impairments

- It is essential that verbal instructions are clear.
- Always tell trainees what you are doing and where you are moving to; do not walk away from trainees without telling them.
- Tandems enable the visually impaired person to communicate effectively with their cycle buddy.

Trainees with autistic spectrum disorders

- Be clear and direct when instructing trainees and ensure your instructions are complete. Trainees on the autistic spectrum tend to learn best when being told clearly what to do, and use of open questions (as is often used in cycle training) may confuse.
- Choose the words you use carefully and be aware that particular words can have particular connotations and meanings that can be taken literally. For example, the word "Stop" can give an impression of negativity or of being bad. An alternative would be to use the term "Brake".

- Ensure that the trainee can see you at all times when instructing i.e. ensure that they ride towards you rather than away from you. Some individuals with autistic spectrum disorders may not continue to respond to your instructions once you move out of their field of vision.
- Place emphasis on positive reinforcement and carefully constructed feedback to inform ways to improve. Focus on face-to-face discussion for feedback and allow trainees to ask questions – written feedback can be misunderstood and create a psychological block for any further learning.
- Use the child's name as part of every sentence – this can help you to gain and maintain the trainee's attention "John, I want you to get on your bike. What we are going to do next John is…"
- Try to make yourself appear physically smaller – Individuals with autism spectrum disorders are very aware of non-verbal communication and may be intimidated by large people who appear frightening. To overcome this try and make yourself physically smaller by lowering your body and your voice.
- Give praise – Children with autistic spectrum disorders respond well to praise and thrive on achievement.
- Use symbols and photographic objects of reference e.g. use a 'wait' symbol to teach a trainee to wait at a junction.
- Work in parallel with support workers or carers who can communicate effectively with the individual during the training session and also once the training finishes.
- The use of sticks, bells and music to attract attention and the trainee's focus for the duration of the session can be helpful.

Trainees with learning difficulties

- Adapt verbal and non verbal communication to the level of the trainee's understanding. Slow down delivery and concentrate on the basics. Trainees learn better when language and instruction is very simple; single or key words backed up with a signing cue often works best.
- Place more emphasis on the quality of your communication rather than the quantity – including reinforcement of verbal commands with hand gestures and visual demonstrations.
- Using pictorial information cards (symbols or photographic) can help trainees who have significant difficulties with reading, to understand an instruction better.
- "Experience shows that people with learning difficulties will often adopt a safety rule as non-negotiable and will consistently apply that for the remainder of their lives e.g. if told to wait at a green man crossing and ONLY cross when the green man is lit, they will consistently apply this when in the community." (Head Teacher)

Trainees with ADHD

- Use one-to-one communication, and remove disruptions or distractions where possible. It can be helpful to position trainees with ADD or ADHD at the front of the class and engage with them individually in discussions about risk, taking care to relate it to their real lives.

Trainees with dyslexia

- Use practical training, role play, diagrams and other visual aids rather than written information. Dyslexic children are likely to find these more memorable and easier to understand than written rules.

7.10 Different types of equipment can also be used to help assist communication, for example microphones and hearing loops, Minicom, text messaging and electronic communication aids.

Other techniques used successfully by cycle instructors include:

"Children with autism can take a long time to know an instructor and be comfortable around them. Something as simple as wearing my funny glasses has had an immediate comforting effect on a child."

"A trainee may want to talk about something completely different when you ask them to try and do something or try and demonstrate. It is good to follow the conversational diversion and engage with their distraction before bringing them back to the point."

"Children with oppositional behaviour will oppose commands. In this instance some instructors may panic if a child says "No". Rationalise why they should carry out the instruction with a demonstration. For example, ask the children to follow you, then run to the other side of the room. When they catch up, run off again. Repeat until the children are breathless and say 'wouldn't all this be easier if we were on bikes?'"

Non-verbal communication methods

7.11 As already indicated in this Guide, in some circumstances an instructor may need to consider employing non-verbal communication methods to communicate with the trainee or to help support verbal communication. There are several communication programmes which employ visual and tactile signs. The most common of these are described below.

Makaton

7.12 Makaton is a teaching approach that uses speech, together with gestures, facial expressions, eye contact, body language (signs) and specially designed symbols (pictures) to help get messages across. Makaton combines signs, symbols, and speech to provide multi-modal communication.

7.13 Makaton is used by people with all sorts of communication difficulties – not just those with learning difficulties but also many with an 'acquired' communication difficulty arising from a stroke or a tracheotomy, for example. It can be used with autistic children and adults. Most Makaton users are people who use it as their main means of communication. Makaton signing is based on British Sign Language (BSL) and so will also be familiar to people who are deaf and use BSL.

7.14 Makaton can be incorporated into cycle training by:

- ensuring that appropriate gestures and body language etc are used in conjunction with speech;
- making use of symbols (pictures) both in the classroom beforehand, and also out in the field (flash cards).

7.15 There is a copyright attached to Makaton resources and symbols; the Makaton Charity uses income from licensing to develop and help the programme to reach a wider range of users. If an instructor wants to incorporate Makaton symbols into their course information/materials, then they can do so, provided that they set up a licence with the charity. For further information see: www.makaton.org/

British Sign Language (BSL) and BSL delivered in a Sign Supported English (SSE) context

7.16 Sign language is used mainly by people who are deaf or have hearing impairments. Sign language is a visual means of communicating using gestures, facial expression, and body language. Within Britain the most common form of sign language is called BSL.

7.17 Many hearing people believe that sign language is a worldwide universal language, but this is not true. There is even significant variation from city to city within Britain – this is known as regional variation and can be thought of as being similar to regional accents and colloquialisms found in spoken languages. Other countries have their own sign language, many of which are completely unrelated to BSL. A BSL interpreter could be used to facilitate communication between the cycle instructor and the trainee.

7.18 BSL can also be delivered in a Sign Supported English (SSE) context. BSL has its own grammatical structure that differs from that used in spoken English. For example, the question 'What is your name?' in BSL would be signed 'name, you, what?'. Delivering BSL in a SSE context means that people sign as they speak, so the order of the signs used is changed to correspond with the spoken words. SSE may be used by people who have learned English as a first language and then learned to sign. This approach can be helpful in schools where children with hearing impairments are learning grammar alongside their signing, and for people who mainly mix with hearing people.

Picture Exchange (PECS)

7.19 This is a communication system designed to initiate communication, particularly for people with Autistic Spectrum Disorders, who may struggle to communicate with others and make sense of their surroundings. It is also

used by people with severe learning difficulties. The basis of the system is the exchange of a picture of a desired object or activity. For example, when the child gives the adult the picture, the adult immediately gives them the thing (or activity) they want. This exchange can take place very quickly, especially when the individual is not physically disabled. The process can be used for very simple requests or in more complex sentences (using pictures and/or words) but is always based on the exchange principle. The process is not necessarily supported by speech, but improved oral speech can occur with PECS.

Tactile signing

7.20 Deafblindness is the condition of little or no useful sight and little or no useful hearing. Deafblind people have an experience quite distinct from people who are only deaf or only blind. Many deafblind people use a guide/communicator as their 'eyes and ears' when they are out together and make use of various technologies to help boost any hearing they may have.

7.21 Tactile signing is a common means of communication used by people with both a sight and hearing impairment. There are several different types of tactile signing, with the preferred form used depending to some extent on the order in which the user lost the two senses. For example, someone who grew up deaf and experienced vision loss later in life is likely to use a sign language (in a visually-modified or tactile form). Others who grew up blind and later became deaf are more likely to use a tactile mode of their spoken/written language. There are several forms of tactile signing:

- The Deafblind Manual Alphabet, also known as finger-spelling. This involves forming letter symbols on the palm of a person's hand. The recipient holds out their left hand, fingers extended, and the giver makes shapes normally with their right hand on the hand of the deafblind person.
- Using Braille on the hand.
- Hands-on signing. This is used by BSL users whose vision no longer allows them to see the signs. They therefore 'feel' sign language by resting their hands on the communicators' hands.

7.22 An interpreter could be used to facilitate communication between the deafblind trainee and the instructor, possibly the individual's own guide/communicator. See www.deafblind.org.uk.

Top tips: Additional techniques

The following techniques have also been used successfully by instructors when delivering training to disabled people:

Helping trainees develop strategies for telling left from right

7.23 Many trainees struggle with this, especially those with dyslexia or learning difficulties. Encourage them to come up with their own ideas for ways of remembering left from right, such as wearing different coloured gloves or shoelaces (for example red representing right); or holding up their forefingers and thumbs at right-angles to see which hand spells 'L'; or fixing a bell to the left handlebar and reminding a trainee that bell has an 'L' in it – just like left. It can also be helpful to use cues e.g. the side you wear your watch/bracelet etc is left/right. Encourage trainees to stop and think about which is which before following an instruction, and to check with someone else if they are not sure.

Marking out a road system in the playground using ropes to teach junction manoeuvres before going out on the road

7.24 This can enable an instructor to reduce the theory time spent on the road where trainees might be more easily distracted by noise etc. That said, playground simulation should be kept to a minimum because it does not accurately reflect conditions on the road.

Repetition and frequent demonstration

7.25 This may be needed to ensure understanding has been achieved e.g. for braking. Gear selection can also be complicated and difficult to understand and even if a rider can change gear it may be performed at inappropriate times or not at all. It is possible that the rider can be encouraged by the instructor calling instructions on a regular basis – or a single gear bike may be more appropriate. Where a condition such as cerebral palsy has affected only one side of the body, turning may be much easier one way than the other, so time and patience to concentrate on the difficult manoeuvre is needed.

Using static exercise bikes

7.26 This can help trainees develop a fluid pedalling action, and engaging the rider in conversation while they are pedalling can prepare them for the multi-tasking aspect of cycling – asking questions such as "What did you do last night? What's your favourite hobby? What kind of things do you want to do once you learn to ride?"

Including parents in the training session

7.27 The aim is to reinforce messages and encourage further cycling after the training has finished. Parents are often amazed to see how their child develops. This makes them more likely to encourage cycling after the training has finished.

Using computer software to help improve cycling techniques

7.28 Ravenscliffe High School and Sports College in Calderdale is exploring the use of specialised video technology to help its students improve their cycling technique. This type of technology is commonly used in professional sport to record an athlete's movements and analyse them to enable them to improve their technique. It is hoped that it can be used to visually demonstrate to trainees how their own body position while cycling differs from a more effective riding position, thereby helping them understand how they can improve their posture and co-ordination.

Using a hand mitt

7.29 A hand mitt that allows hands to be strapped loosely to the handlebars can help people with motor issues on one side of their body.

The addition of mirrors

7.30 Adding mirrors to cycles can help people with limited movement to see behind them.

Providing fingerless gloves

7.31 Providing fingerless gloves for trainees who tend to grip the handlebars with excessive force can help prevent blistered and sore hands.

Case study: Techniques when training children with hearing disabilities

Aiesha is 10 and has a hearing impairment. She was due to participate in National Standard training, but the instructor had doubts that she would be able to successfully take part in group training. However, she did successfully pass her Level 2 training.

- Before training commenced, the instructor went into the school and spoke to Aiesha's teacher about the girl's specific requirements. It transpired that she had a cochlea implant and therefore had good hearing.
- The instructor also gathered information about where the best place to stand would be so that Aiesha could hear as much as possible and also lip read.
- Aiesha's teacher attended the training so that the girl had one-to-one interaction if needed. This was invaluable in one instance when her cochlea implant batteries ran out; her teacher was able to go back to school and obtain new batteries so that training could carry on as normal.
- The instructor used a radio microphone so that Aiesha was able to hear even during on-road training, when there was a lot of background noise. The radio microphone was hands-free for both the instructor and Aiesha and therefore posed no safety issue.

After Aiesha had completed and passed her National Standard Level 2, the instructor noted down that she would benefit from cycling with an adult until she was completely confident in her capabilities of observing what is around her, as well as listening.

Case study demonstrates: Value of identifying the need for additional support at the training session; importance of pre-training information gathering.

(Case study provided by local authority cycle training co-ordinator)

8. Types of cycles available

Choosing a cycle

8.1 Some people will require a cycle that is designed specifically to meet their needs. There is an extensive range of cycles on the market, encompassing bicycles, trikes and quads in various forms. Many of these cycles are foot-pedalled in a similar way to a conventional bike, although hand-propelled cycles are also popular.

8.2 Manufacturers and suppliers will be happy to discuss and provide information about their products, but potential users should also ask suppliers where cycles can be tried out and/or demonstrated. Suppliers of equipment for disabled people often display at commercial exhibitions and at specialist cycle shows. Individually-owned cycles are usually customised to a rider's specific needs after discussion with the supplier.

8.3 When selecting the right equipment, the user should also consider:

- Transport: Does the cycle need to be transported in a car? Some cycles fold or dismantle for easy transport and sometimes wheels are detachable.
- Storage: at the home or final destination.
- Useful life: if the cycle needs to 'grow' with the user.
- Spares/servicing: Is it easy to obtain spares and replacement parts?

8.4 A summary of the types of cycles available for purchase, and in many cases for hire, is provided below.[6] It should be noted that the list is by no means exhaustive but is intended to give an indication of the type of models available; and that there are many different manufacturers producing models similar to those below.

8.5 Some cycles also come with the option of electric-assist, or conversion kits are available. These are helpful for those with limited strength to extend their cycling range or to keep up with more able riding companions or for people riding tandem with a less-able companion.

6 This list has been informed by Velovision.com, *British Cycling Coaching Handbook: Coaching riders with a Disability Level 2* and *Wheels for All* guidance.

Low step-through bikes

8.6 There is now a range of low/ultra-low step-through bikes (Figure 8.1) available on the market. Bikes with a low step-through frame may suit people who have good balance and are able to pedal but who have limited mobility which causes difficulty getting on and off the bike.

Figure 8.1: Low step-through frame bike
Copyright: Gelert Ltd

'Standard' tandems

8.7 Tandems are available that accommodate a range of abilities and riders; it is possible to buy models of various frame sizes suitable for adult-child and adult-adult combinations, or for both combinations combined.

8.8 'Standard' tandems are ideal for anyone who is not able to safely control a bike themselves for whatever reason, but who is still able to pedal. They are, for example, well suited to the visually impaired and for people with learning or balance/co-ordination difficulties.

8.9 Tandems are available in a range of models including: a) those that place the 'steerer' in the conventional front seat; and b) those that place the steerer in the back seat, with an unrestricted view of the front rider, offering additional benefits for supervision and safety. Models are also available whereby the front-seated rider can sit in an upright or semi-recumbent position (Figure 8.2).

Figure 8.2: Tandem with recumbent front seated rider
Copyright: Hase Bikes Ltd

Top tips: Cycle training with a blind trainee

One approach to teaching a blind trainee is for the instructor to sit on the front of a tandem with the trainee at the back.

The instructor is responsible for manoeuvring the cycle, road positioning etc. Constant communication is needed between the instructor and trainee – the instructor must describe every manoeuvre, indicate to the trainee when to signal and also describe the surroundings in as much detail as possible, including surrounding vehicles, road layout etc. In effect the instructor needs to provide a mental picture for the trainee at all times. The trainee carries out actions such as signalling.

When teaching blind people to cycle the aim is usually to increase their confidence and to provide them with an understanding of what the capabilities of the person guiding the cycle need to be. This means that the trainee can then ask someone else to ride a tandem with them and continue cycling themselves.

Semi-recumbent cycles (also known as 'crank forward' cycles)

8.10 A semi-recumbent is half-way between an upright and a truly recumbent cycle. Semi-recumbents have smaller wheels and a larger wheelbase than that of an upright, and are available both with and without back supports

8.11 Semi-recumbents can be good for people who find conventional cycles uncomfortable. The lower seat height allows people to reach the ground with both feet while still sitting, offering greater stability. The upright riding position keeps the neck straight and reduces pressure on the wrists. It can take a little while to get used to the light steering/balance of these cycles.

Trikes for one person

8.12 The three-wheeled design of trikes offers greater stability than a conventional cycle; they do not require fine control of balance; and they allow the rider to travel as slowly as they want to. However, it is advisable that instructors who are training people on a trike, are themselves familiar

with riding them too as cambers, cornering and rough surfaces can be difficult. Often, someone who has never ridden a bicycle can manage a trike more easily than someone who is converting from a bike to a trike, as the balance required can be very different.

8.13 There are a range of different trikes available offering a good choice in seating and hand control positions.

8.14 The simple upright trike (Figure 8.3) is a popular option, especially at centres designed specifically for teaching cycling to disabled people. They can also be useful and practical for non-disabled people, particularly as they have capacity between the rear wheels for carrying bulky items.

Figure 8.3: Upright trike with two rear wheels and one front wheel *Copyright: Pashley Cycles*

8.15 As well as the conventional upright trikes with two rear wheels, they are also available with one rear and two front wheels (Figure 8.4). The stability of upright cycles with two wheels at the rear can be limited when cornering at higher speeds; two wheels at the front enables greater stability and arguably, easier handling. They can also be useful for people who may have difficulty assessing width.

8.16 Semi-recumbent trikes combine the comfort of a no-strain riding position with the stability of three wheels.

8.17 Recumbent trikes (Figure 8.5) with a full seat supporting the rider are available, again with either two wheels at the front or back. They can suit riders that have strength as well as balance problems.

8.18 Folding recumbent trikes (Figures 8.6 and 8.7): recumbent trikes can be bulky but there are models available that fit into the boot of a car.

Figure 8.4: Upright trike with one rear wheel and two front wheels *Copyright: Van Raam*

Figure 8.5: Recumbent trike
Copyright: Greenspeedrecumbents.com

Figure 8.6: Folding recumbent trike – folded
Copyright: www.ice.org.uk

Figure 8.7: Folding recumbent trike – unfolded
Copyright: www.ice.org.uk

Trikes for two people allowing both riders to pedal

8.19 There are a variety of options available for tandem trikes to suit a range of needs. For example, the following models allow BOTH riders to pedal:

- trikes with **both riders upright,** sitting one behind the other (Figure 8.8);
- trikes with a **both riders recumbent,** sitting one behind the other (Figure 8.9);
- trikes with **both riders upright,** sitting next to each other. Sitting side by side enables easy conversation and can be reassuring for both riders although the width of the trikes can put some people off using them on the road. The cycle is commonly controlled (i.e. steering, braking and gears) by one of the riders called the 'pilot'. The other rider is able to pedal too, sometimes independently of the other person. There are

several different types of side-by-side cycles catering for a wide variety of needs. They can have three or four wheels, and there are upright, semi-recumbent (Figure 8.10). and recumbent models;

- trikes with **both riders recumbent,** sitting next to each other; some models have hand cranks on one side (and a footrest) and foot cranks on the other side, while others feature low step-through frames.

Figure 8.8: Tandem trike with both riders upright
Copyright: Van Raam

Figure 8.9: Tandem trike with both riders recumbent
Copyright: Greenspeedrecumbents.com

Figure 8.10: Side by side semi-recumbent trike
Copyright: PF Mobility

Trikes for two people where only one rider pedals

8.20 Cycling can offer great benefits for mental stimulation of the rider and for sharing the cycling experience, even when a person is unable to pedal. It is important to remember however, that the non-pedalling rider will feel colder than the pedalling rider and should therefore dress accordingly.

8.21 These trikes may often be fitted with electric-assist systems – and powerful brakes are essential. There are a range of tandem cycles with one person pedalling:

- Wheelchair tandems have a detachable wheelchair front, and a bicycle rear end (Figure 8.11). A variation is also available with the wheelchair to the side of the pedalling rider.
- Wheelchair tandems are also available whereby passengers use their own wheelchairs on a roll-on/roll-off mechanism, with a rider pedalling from the rear seat (Figure 8.12). The main advantage of this type of cycle is that there is no need to transfer the user from their wheelchair onto the cycle, which means they can continue to benefit from any special adaptations or adjustments they have made to their wheelchair, while they are cycling with a companion. These are however heavier and bulkier than a dedicated wheelchair tandem as in Figure 8.11.

Figure 8.11: Wheelchair tandem (with detachable wheelchair) *Copyright: Da Vinci*

Figure 8.12: Wheelchair tandem with roll on/roll off mechanism *Copyright: Van Raam*

Handcycles

8.22 Handcycles are trikes propelled by hand, usually in a two-hands-together forward motion. To brake the simplest handcycles, the pedalling is reversed. Handcyling can be useful for people with no or limited use of their lower limbs, and with balance or co-ordination problems. They can also be useful where someone can physically pedal a bicycle, but where hand strength is weak and therefore the back pedal braking of a handcycle is helpful. They can also be a useful confidence builder for people with learning difficulties, cerebral palsy, Down's syndrome etc.

8.23 Fixed frame (complete) handcycles (Figure 8.13) come in a variety of sizes and specifications including recumbent styles. Some are designed to split into two with quick-release wheels for easy transport.

8.24 Wheelchair add-ons (Figure 8.14) attach to a wheelchair and convert it to a handcycle. The rider can then travel faster, further and over rough terrain. The handcycle is quickly removable at the end of the journey thus enabling the wheelchair to be used as normal.

8.25 Tandem handcycles are also available (Figure 8.15).

Figure 8.13: Fixed frame (complete) handcycle
Copyright: Varna

Figure 8.14: Handcycle with wheelchair add-on
Copyright: Team Hybrid Ltd

Figure 8.15: Tandem handcycle
Copyright: Varna

Quads

8.26 Quad cycles have four wheels and are extremely stable and easy to control (Figure 8.16). The saddle or supported seat can be of a similar height to a bicycle or closer to the ground.

Figure 8.16: Quad cycle
Copyright: © 4wieler.nl

Cost – buying or renting?

8.27 It should be noted that cycles can be expensive, which may preclude ownership by an individual. Instead, it may be more appropriate for riders to attend try-out centres or to look into renting a cycle.

Adaptations to cycles

8.28 Some people with an impairment may be able to use more conventional cycles, sometimes with adaptations – or indeed, in some cases adaptations may be required to the cycles discussed in this section. Adaptations could include:

- Modified or extended handlebar grips.
- Rotating gear change that is integral with the hand grip.
- Stabilisers to help with balance (available for child and adult bikes).
- Brake levers operated by one hand, enabling one-armed riders to brake safely. Some riders with this adaption may find recumbent cycles more comfortable as this does not place all of the person's weight on one arm.
- Simple adjustments to the gap between a brake lever and the handlebars, might make a considerable difference to someone with small hands or difficulty in hand movement.
- The use of special gloves that fit over a hand and handlebar for people with limited grip. This helps to keep the hand on the handlebar and so provide support for the person's trunk.
- Special cranks that fit to one side of the cycle to enable riders to pedal even when they can only pedal with one leg, or when they have limited movement in one or both limbs.
- Toe clips, foot plates and ankle foot orthoses (AFOs) to keep a rider's foot in position. AFOs are useful if the rider has difficulty in maintaining a 90 degree angle between the foot and lower leg. Some trainees e.g. those with cerebral palsy may use foot straps but find that pedalling may not be well co-ordinated and smooth due to the nature of their leg movements. Low, easy gear work can help to get a smoother action.
- Pedal spacers to provide extra clearance for feet and ankles where this is needed.
- Adapting a cycle so that it is not possible to 'freewheel'; instead the pedals go round whenever the cycle is moving (often referred to as 'fixed wheel'). This ensures that the pedal moves smoothly at all times.
- Saddles and seats – the correct saddle and support will enable a rider to cycle more easily. A pommel at the front of a saddle can stop a rider sliding forward.
- Hip and thoracic supports.
- Altering the cycle to establish a more upright riding position; a taller stem or a wider seat may be all that is needed. A more upright position can help reduce back pain and strain on the wrists and hands.

Top tips: Other approaches

The following practical approaches to using appropriate cycles have also been used successfully in delivering training to those with specific needs:

Adjust cycle fit

8.29 For people with dyspraxia, lowering the saddle can improve balance (and therefore confidence).

Adopt a graded approach to cycling

8.30 This can work for some people – for example start with a quad cycle, then progress to a trike then to a two wheeler in order to gain fitness and confidence.

Use balance bikes (pedal-free cycles)

8.31 Getting the trainee to scoot along gives them more confidence with regards to co-ordination. Games and fun activities can be used to improve balancing skills and cycle control.

A bicycle with the rear wheel substituted with a graduated stabilising support

8.32 This allows trainees to concentrate on learning the appropriate steering responses and turning skills with the assurance that a turn would not cause them to fall. As with balance bikes, this means that physical support from an instructor is not required; some people do not like having their personal space invaded and feel intimidated by instructors getting too close.

Use a steering pole, hooked on to the back of a trike or quad

8.33 This is useful for a trainee who has yet to learn to stop or steer properly and consistently, and who could steer into someone/something.

8.34 Any adaptations should, however, be undertaken by people with the appropriate expertise to ensure that they are correctly suited to the needs of the person. Instructors should work alongside a qualified person if they are at all unsure of what is appropriate. Similarly, for individuals considering purchasing or renting a cycle, it is important that the cycle is set up correctly for them by using a supplier/manufacturer with the necessary knowledge and expertise. Instructors may want to consider developing links with providers and hirers of specialist cycles, in a partnership-based approach to ensure they have the necessary cycles available for training delivery.

Top tip: Improving your knowledge of cycles

Instructors may feel more confident when delivering training if they increase their knowledge and awareness of the range of cycles available. There are a wide range of cycles that are designed to help disabled people and numerous adaptations that can be made. Instructors could arrange to have a go on different types of cycles to familiarise themselves with the models available and how they work. They can do this by visiting an organisation which sells or hires out cycles suitable for a wide range of needs – a web-based search by 'adapted cycle hire' or similar can help to identify locations where cycles can be hired.

Case studies: Recognising the real needs of trainees

Nathan has autism and his parents said he was far too large for his trike. He had owned his trike since the age of seven and he was now a teenager. However, despite several hours of careful assessment and building a new trike to meet his expected requirements, Nathan was petrified of using it. After several attempts over a period of weeks, it was clear that this was not going to change and his instructor asked his parents to let him see Nathan on his old trike. The instructor was astounded at the exuberance, speed and agility that he had on his tiny trike! In the end, the instructor spoke to the manufacturer and put Nathan's parents in touch with them. The manufacturers made an exception and modified the frame of the old trike and extended it to fit Nathan.

Case study demonstrates: the flexibility and responsiveness required by the instructor to identify and meet needs; the importance of sometimes going beyond the usual remit of the cycle instructor.

(Case study provided by a cycling instructor)

Ken had had a stroke and was many times more concerned about how he looked on a trike, than its suitability for cycling. The key issue in this instance was one of self-image and of a relatively fit individual coming to terms with a newly acquired disability. Instructors will need to deal with this type of situation in a sympathetic way that maintains a person's self-image, while at the same time ensuring the use of appropriate equipment that is safe and suited to the individual's needs.

(Case study provided by a cycling instructor)

Delivering inclusive cycling training requires real attention to detail. Lin had been using a hand-cycle only because she had little control of her feet and was told she could not use a trike. A simple change of a footstop and a strap enabled Lin to use both feet. The instructor needs to have good knowledge of equipment available and where to access advice and information.

(Case study provided by a cycling instructor)

9. Achieving National Standard outcomes

This section of the Guide was revised and updated in April 2013 to take account of the new Level 1, 2 and 3 outcomes arising from the National Standard review.

Issues to consider

9.1 Many disabled people will be able to achieve the same outcomes as non-disabled people, but there will be other trainees who in no way would be able to ride independently on the road – or achieve many of the Level 1 outcomes.

9.2 Therefore, although it is recognised that it is not always the objective for someone undertaking cycle training to be able to ride independently on the road, this section provides advice and guidance on how teaching disabled people relates to National Standard outcomes.

9.3 There are a number of issues to consider in respect of interpreting the outcomes within the context of teaching disabled people:

- **The National Standard outcomes are all about achieving and demonstrating a particular competency – however, it is not intended to be prescriptive about how the trainee gets to that point.** This enables a great deal of flexibility on the part of the instructor to teach the outcomes in ways that relate specifically to individuals and their own needs. There is also some flexibility in outcome demonstration, e.g. someone who cannot comfortably turn their head because of stiffness in their neck muscles might need to adapt what they do in order to see behind them.
- **The objective of the National Standard is to be inclusive, not exclusive.** Central to enabling this is the ability to recognise sub- outcomes or achievements along the way, rather than simply recognising Level 1 or Level 2 in their entirety. This type of approach can be supported by certificates of participation or attendance that recognise which individual outcomes have been achieved.
- **Goal setting therefore becomes important in this context.** Individuals, parents and carers can be extremely disappointed when outcomes are not and cannot be achieved, e.g. where progression onto National Standard Level 2 is not possible. Early discussions to identify

an individual's goals and aspirations, and to highlight what outcomes are likely to be achievable can help to manage expectations. However, it is equally important not to be closed to the idea of people far exceeding the initial expectations of them; the case studies illustrated through this Guide concern people who very often have exceeded what they had been expected to achieve. The instructor will always need to be responsive to changing circumstances.

9.4 The National Standard courses also contain descriptive text as 'observed demonstration' and 'reasoning'. In some cases this may also need adaptation, as it might not include all potential situations, particularly where people are using adapted cycles or where people have an impairment.

9.5 There may also be an issue around how consistently embedded particular outcomes are for trainees, despite the outcome being demonstrated during the training session itself, i.e. will the trainee still be able to achieve the same outcome all the time when on the road? This issue is not confined to cycle training with disabled people, but might potentially be more of a concern with this group. For example, a trainee with autism who reacts to particular sights or sounds might behave differently in an on-road context at different times, depending on the surrounding circumstances, which might result in a particular competency not consistently being put into practice. In this situation the advice to instructors is consistent with the advised approach when training any individual – it should be left to the instructor's expertise and knowledge to sign off competencies on what they see and what they think.

National Standard outcomes and challenges

9.6 Table 9.1 lists Levels 1, 2 and 3 National Standard outcomes and provides examples of challenges that may exist for disabled people being able to achieve them. It also identifies some potential solutions and points to consider. The examples are not exhaustive but will help to encourage instructors and others to think of ways in which the challenges can effectively be overcome with some creative thinking.

9.7 It should be noted that many trainees will not be able to achieve all Level 1 outcomes, or progress to on-road cycling (Levels 2 and 3). However, they may be able to achieve some Level 2 outcomes with assistance, e.g. a wheelchair user using a wheelchair bike (i.e. where the wheelchair user sits at the front) could achieve Level 2 outcome 5 relating to understanding how and when to signal their intentions to other road users. This would be done by the trainee conveying instructions to the individual pedalling the cycle.

Table 9.1: Achieving National Standard outcomes: Solutions to consider

National Standard outcomes		Potential challenges and some solutions
Level 1	1 Demonstrate understanding of safety equipment and clothing	
	2 Carry out a simple bike check	The central part of this outcome is that the trainee is aware of the need to check that their cycle is roadworthy i.e. that the tyres are pumped up to the correct level, that the brakes stop the cycle etc. but it is not necessary for the trainee to physically do the work themselves e.g. pump up a tyre. A further challenge might be that some instructors may not be familiar with the mechanics of the full range of cycles available (see Section 8). **Scheduling checks before the training session and/or allowing additional time within the training session would be helpful in this instance. Ensuring the instructor knows beforehand what cycles are being used in the session is also useful.**
	3 Get on and off the bike without help	This might be difficult for trainees who have mobility or balance difficulties. **Choosing an appropriate cycle for the trainees' needs is essential (see Section 8). It would also be helpful to ensure that any necessary support is provided, possibly arranging for additional helpers to be available. In the case of a tandem, the cycle buddy can hold the cycle.**
	4 Start off and pedal without help	Trainees with no or impaired vision will (mostly) rely on another person (their cycle buddy) to provide help with starting off. **The use of a tandem cycle will enable this assistance to be provided. Hand cranked cycles are available for trainees who have little or no movement in their legs or poor muscle strength.**
	5 Stop without help	Trainees with impaired use of their fingers and hands may need to use adapted brakes, rather than conventional brakes, to stop the cycle. Checking that trainees can use brakes when teaching outcome 3 (get on and off the bike without help) should be routine for all National Standard Instructors.
	6 Ride along without help for roughly one minute or more	Trainees without sight or with impaired vision may be reliant on their cycle buddy to help them ride.
	7 Make the bike go where they want	Trainees without sight or with impaired vision will be reliant on their tandem cycle buddy to provide instructions of where to steer the cycle.

Table 9.1: Achieving National Standard outcomes: Solutions to consider

National Standard outcomes		Potential challenges and some solutions
Level 1	8 Use gears (where present)	This outcome is all about the trainee knowing what gears are for, what different gears should be used in different circumstances (i.e. on uphills, on the flat etc.), not necessarily that the trainee can physically change gears themselves. **Nevertheless, choosing an appropriate cycle (perhaps one without gears) will be important.**
	9 Stop quickly with control	This can increase the chances of falling off. While this relates to all trainees, it might be more likely for trainees with balance or co-ordination problems. **This outcome should therefore only be taught when appropriate.**
	10 Manoeuvre safely to avoid objects	Some types of cycles may have difficulty negotiating slaloms and set courses and, for example, trikes have a wider turning circle. Manoeuvring at low speeds requires greater balance and so may present a difficulty for trainees with balance or co-ordination problems. **These exercises can be adapted to ensure that these cycles can negotiate the course.**
	11 Look all around, including behind, without loss of control	Looking behind may be difficult for trainees with restricted mobility. **In some cases mirrors can be used, but care needs to be taken to teach about blind spots.**
	12 Control the bike with one hand	Controlling the bike with one hand can be a challenge for trainees with dyspraxia and other co-ordination problems, or for those with weak muscle tone or restricted mobility in their arms.
	13 Share space with pedestrians and other cyclists	Communicating intended actions (either through calling out, or through eye contact and smiling) might be challenging for trainees with communication difficulties.
Level 2 – not compulsory	1 All Level 1 outcomes	
	2 Start an on road journey	The road positioning for some types of cycles may be an issue. **This can be addressed by allowing more space and teaching alternative road positioning throughout Level 2.**
	3 Finish an on road journey	

Table 9.1: Achieving National Standard outcomes: Solutions to consider

National Standard outcomes		Potential challenges and some solutions
Level 2 – not compulsory	4 Be aware of potential hazards	Looking behind for other road users or hazards may be difficult for trainees with restricted mobility and trainees who cannot hear/have restricted hearing will not be able to listen for them. **Visual checks are important for all trainees, but those with hearing impairments may make more checks in some cases. It is also helpful for trainees with hearing impairments to keep the instructor in their sight line if possible. Where mobility is restricted mirrors can be used to be aware of other road users behind, but be careful to teach about blind spots.**
	5 Understand how and when to signal intentions to other road users	Conventional signalling may not be possible for some trainees, for example those without the use of both arms, trainees who have weak muscle tone or who have restricted mobility in their arms. Signalling without wobbling can also be a challenge for trainees with dyspraxia and other co-ordination problems. **It may be possible to find alternatives to conventional signalling, and road positioning may play a critical role in communicating to other road users where conventional signalling cannot be used.**
	6 Understand where to ride on roads being used	The road positioning for some types of cycles may be an issue. **This can be addressed by allowing more space and teaching alternative road positioning throughout Level 2.**
	7 Pass parked or slower moving vehicles	
	8 Pass side roads	
	9 Turn left into a minor road	
	10 Make a U turn	Some types of cycle have larger turning circles. **There is a need to ensure that the road selected for this exercise is wide enough to complete the turn in one movement.**
	11 Turn left into a major road	
	12 Turn right into a major road	Conventional signalling may not be possible for some trainees, for example those without the use of both arms, trainees who have weak muscle tone or who have restricted mobility in their arms. Signalling without wobbling can also be a challenge for riders with dyspraxia and other co-ordination problems. **It may be possible to find alternatives to conventional signalling, and road positioning may play a critical role in communicating to other road users where conventional signalling cannot be used.**

Table 9.1: Achieving National Standard outcomes: Solutions to consider

National Standard outcomes		Potential challenges and some solutions
Level 2 – not compulsory	13 Turn right from a major to minor road	Conventional signalling may not be possible for some trainees, for example those without the use of both arms, trainees who have weak muscle tone or who have restricted mobility in their arms. Signalling without wobbling can also be a challenge for riders with dyspraxia and other co-ordination problems. **It may be possible to find alternatives to conventional signalling, and road positioning may play a critical role in communicating to other road users where conventional signalling cannot be used.**
	14 Demonstrate decision-making and understanding of safe riding strategy	This might be difficult for trainees with certain learning disabilities or for trainees with communication difficulties who may not be able to articulate their decisions. **Allow more time and check for *practical* demonstration of competency. Use carers or support workers to help facilitate communication.**
	15 Demonstrate a basic understanding of the Highway Code	This might be difficult for trainees with certain learning disabilities or riders with communication difficulties who may not be able to articulate their understanding. **Allow more time and check for *practical* demonstration of competency. Use carers or support workers to help facilitate communication.**
	16 Decide where cycle infrastructure can help a journey and demonstrate correct use	
	17 Go straight from minor road to minor road at a crossroads	
	18 Use mini-roundabouts and single-lane roundabouts	
Level 3 – compulsory	1 All Level 2 outcomes	
	2 Preparing for a journey	Route planning may be difficult for riders with learning difficulties.
	3 Understanding advanced road positioning	The road positioning for some types of cycles may be an issue. Articulating an understanding of road positioning may be difficult for riders with communication difficulties. **This can be addressed by allocating more space and teaching alternative road positioning throughout Level 3. Allow more time and check for *practical* demonstration of competency. Use carers or support workers to help facilitate communication.**

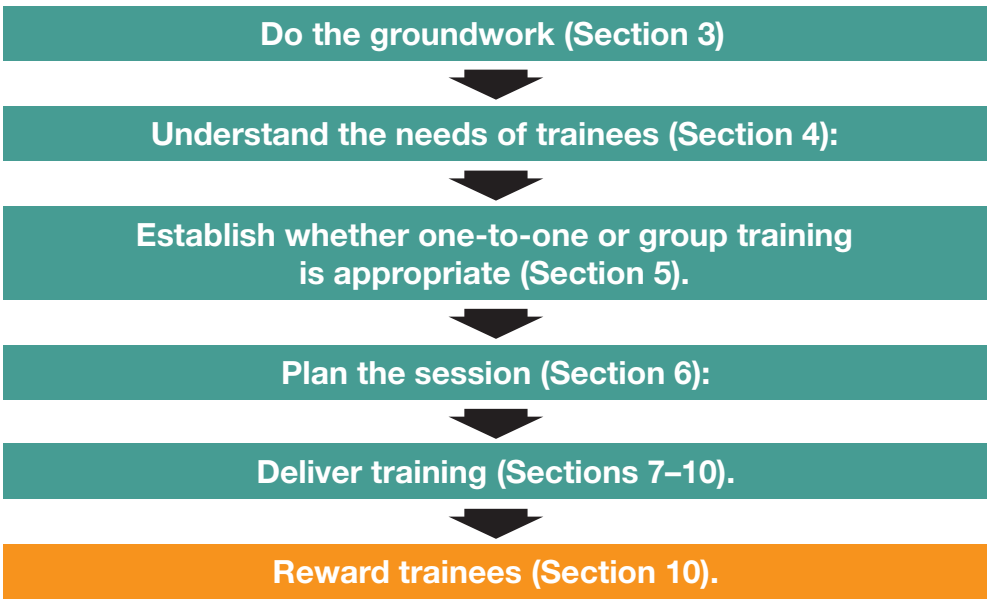
Table 9.1: Achieving National Standard outcomes: Solutions to consider

National Standard outcomes		Potential challenges and some solutions
Level 3 – compulsory	4 Passing queuing traffic	
	5 Hazard perception and strategy to deal with hazards	May be difficult for trainees with learning difficulties.
	6 Understanding driver blind spots, particularly for large vehicles	May be difficult for trainees with learning difficulties.
	7 Reacting to hazardous road surfaces	Articulating their choices/actions may be difficult for trainees with communication difficulties.
	8 How to use roundabouts	Conventional signalling may not be possible for some trainees, for example those without the use of both arms, trainees who have weak muscle tone or who have restricted mobility in their arms. Signalling without wobbling can also be a challenge for trainees with dyspraxia and other co-ordination problems. **It may be possible to find alternatives to conventional signalling, and road positioning may play a critical role in communicating to other road users where conventional signalling cannot be used.**
	9 How to use junctions controlled by traffic lights	Conventional signalling may not be possible for some trainees, for example those without the use of both arms, trainees who have weak muscle tone or who have restricted mobility in their arms. Signalling without wobbling can also be a challenge for trainees with dyspraxia and other co-ordination problems. **It may be possible to find alternatives to conventional signalling, and road positioning may play a critical role in communicating to other road users where conventional signalling cannot be used.**
	10 How to use multi-lane roads	Conventional signalling may not be possible for some trainees, for example those without the use of both arms, trainees who have weak muscle tone or who have restricted mobility in their arms. Signalling without wobbling can also be a challenge for trainees with dyspraxia and other co-ordination problems. **It may be possible to find alternatives to conventional signalling, and road positioning may play a critical role in communicating to other road users where conventional signalling cannot be used.**
	11 How to use both on and off road cycle infrastructure	Some cycles may not fit through width restrictions for off road routes and these are not always marked on cycle maps. Where possible the instructor should use local knowledge to help.
	12 Dealing with vehicles that pull in and stop in front of you	

Table 9.1: Achieving National Standard outcomes: Solutions to consider

National Standard outcomes		Potential challenges and some solutions
Level 3 – compulsory	13 Sharing the road with other cyclists	
	14 Cycling on roads with a speed limit above 30 mph	
	15 Cycling in bus lanes	
	16 Cycling in pairs or groups	
	17 Locking a bike securely	Some trainees may need specific advice on what type of locks can help reduce the possibility of theft of parts of their cycle.

10. Rewarding trainees



10.1 Rewarding trainees is very important. It:

- maintains interest and motivation during the training session;
- encourages individuals to try hard and reach their potential; and
- helps to create positive feelings of achievement around cycling.

10.2 All of these are important to get the most out of training and to encourage people to continue cycling once the training course has finished. Individuals can be rewarded during training itself in the following ways:

- **Praise** given during the training session. Children with autistic spectrum disorders respond particularly well to praise and thrive on achievement. Sometimes this might feel a little excessive but it is likely to be effective.
- **Incentives** during or after the training session, as long as the rewards are based on what is relevant to the trainees. For example, for children with behavioural difficulties, incentives such as being allowed free time to cycle in the playground after the training can work well.

10.3 Following completion of training, something tangible that the trainee can keep is an important part of the overall training experience. Again it will encourage trainees to continue cycling and consider further cycle training to develop their skills. This might take several forms:

- **Individual awards** given by the instructor at the close of the final training session. These might be tailored to the individual trainees and reflect the particular areas where they have achieved or made lots of effort.
- **Certificates of participation or attendance**. Recognising the achievements of trainees is important, even where the full set of outcomes of recognised awards (e.g. Bikeability) may not have been met. The emphasis here will be on recognising the individual outcomes that *have* been achieved and possibly writing these onto the certificate itself.
- **Videos and photos.** Trainees often like to see themselves on film having gained a new skill – maybe accompanied by an appropriate backing sound track.
- **Cycling 'starter kit'**. For example a helmet and/or a bike lock might help to enable the trainee to continue cycling straight away.

11. Funding and resources

Funding for cycle purchase

11.1 Many cycles, particularly those specifically designed for an individual, can be expensive to purchase. However, there are several potential sources for accessing funding to be considered:

Self-directed support/Individualised budget

11.2 Self-directed support is designed to help people take control of their own social care budgets, manage their own support and choose the services that suit them best, using the money they receive from different areas more flexibly. If someone is eligible for Community Care Services then they may have the option of receiving an Individualised Budget from their local authority. This means that if an individual can demonstrate that having a cycle will enable them to live independently and enhance their quality of life (and the local authority agrees with this), then they might be able to use some of their individualised budget to help pay for a cycle.

Charities and other grant-giving organisations

11.3 These could be approached for grants to help pay for a cycle, although there is a need to approach appropriate organisations who either provide support in the particular area where someone lives and/or to people with a particular condition or impairment. Organisations such as the Rotary Club, Sport England, Awards for All, Community for Health and Children in Need might also be worth contacting.

Local businesses

11.4 Some local businesses such as supermarkets, may be willing to provide a contribution towards a cycle if an individual can demonstrate the value and opportunity it would bring them e.g. access to opportunities, health benefits, increased independence.

Cycle to work schemes

11.5 Many organisations now provide a cycle to work scheme,7 which allows members of their staff to loan a cycle and/or safety equipment from their employer to cycle to work. Employers wishing to recover all or part of the cost of loaning the cycle and/or safety equipment from the member of staff would normally do so via salary sacrifice 'loan' payments. Loan periods typically last between 12 to 18 months. At the end of the loan, employers may provide their staff member with the opportunity to buy the cycle and/or safety equipment for its full market value. This can result in a saving on the cost of the cycle and/or safety equipment overall. This is, however, only available to adults who are working.

11.6 Further information about funding can be found on the Wheels for Wellbeing website at: www.wheelsforwellbeing.org.uk/docs/WfW1GettingFundingForACycle.pdf and on the websites of many specialist suppliers.

Funding for Bikeability

11.7 The Government currently[8] provides funding via local authorities and School Games Organiser Host Schools (SGOHSs) for children in schools (Years 5–9) to undertake National Standard (Bikeability) Level 2 and 3 training (Level 1 training can be included if part of the same Level 2 course).[9] Grants are provided on a block grant basis, based on a maximum contribution of £40 per head for each child trained. There are other rules that are applied to this funding and these are detailed in award letters to local authorities and SGOHSs.

11.8 The grant available is for Bikeability Level 2 training **delivered**, not the numbers of children that actually **pass** Level 2. It is entirely appropriate, therefore, to use the funding to deliver Level 2 training to children who are unlikely to achieve all or indeed many of the Level 2 outcomes.

7 For more information, see the Cycle to Work Scheme Implementation guidance: http://www.dft.gov.uk/pgr/sustainable/cycling/cycletoworkguidance/

8 In October 2010 the Government confirmed that Bikeability would be supported for the remainder of this Parliament

9 Since 2010, the requirement is for this National Standard training to be Bikeability specifically

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13. Further information

Also see Appendix A, which provides contact details for the main disability charities and associations. The main charities will help put enquirers in touch with individual manufacturers, and suppliers of cycles should be able to help.

Bikeability

Promotes Bikeability – Cycling Proficiency for the 21st Century. Provides information and advice to schools, local authorities, parents, Bikeability schemes and cycle instructors.

Email: contactus@bikeability.org.uk

Website: www.bikeability.org.uk/

British Cycling Federation

Information and advice about sports and leisure cycling for people with disabilities.

Email: info@britishcycling.org.uk

Website: www.britishcycling.org.uk

CTC

National organisation for cyclists. Information and advice available to members. Bi-monthly members' magazine available on audiocassette.

Email: cycling@ctc.org.uk

Website: www.ctc.org.uk

Direct.gov

Provides a range of information on disability, transport and travel including the highway code and laws regarding cycling.

Website: www.direct.gov.uk

Get Cycling

Get Cycling promotes cycling for leisure, transport, health and the environment. It produces 'A Practical Guide' which includes information about specialised cycles.

Email: admin@getcycling.org.uk

Website: www.getcycling.org.uk

Handcycling Association UK

Promotes and encourages handcycling for recreational and competitive purposes throughout the UK.

Website: www.handcycling.org.uk

HM Revenue and Customs

Cycles and adaptations do not incur VAT if they designed for the use of disabled people.

Website: www.hmrc.gov.uk

London Cycling Campaign

Campaigning organisation for cyclists in London. Membership includes insurance, shop discounts, magazine and advice. Many UK cities will have a local Cycling Campaign Group.

Email: office@lcc.org.uk

Website: www.lcc.org.uk

London Disability Cycling Forum

The London Disability Cycling Forum is a local network that campaigns and supports disabled people to cycle.

Email: info@wheelsforwellbeing.org.uk

Website: www.ldcf.org.uk

Mobility Roadshow

Annual roadshow including specialist cycles.

Email: choice@gtnet.gov.uk

Website: www.mobilityroadshow.co.uk

National Cycle Network (NCN)

The NCN comprises a network of walking and cycling routes across the UK. It includes a mix of quiet lanes, on-road routes and traffic-free paths.

Email: info@sustrans.org.uk

Website: www.sustrans.org.uk

RADAR

Provides info and advice for disabled people including holidays in Britain and Ireland and leisure, sport and outdoor activities.

Email: radar@radar.org.uk

Website: www.radar.org.uk

Tandem Club

Club with more than 6,000 members across the UK. Significant number of disabled members. Social rides, events, regular newsletter. Advice and info over the telephone from volunteers.

Email: disabilities@tandem-club.org.uk

Website: www.tandem-club.org.uk

The Tricycle Association

A membership organisation that provides social and competitive activities for tricyclists throughout the UK.

Website: www.tricycleassociation.org.uk

Wheels for All

Wheels for All centres provide a range of specialised cycles, giving disabled people the opportunity to cycle. There are over 40 Wheels for All centres around the UK.

Email: ian.tierney@cycling.org.uk

Website: www.cycling.org.uk/wheels_for_all.html

Wheels for Wellbeing

A charity which supports disabled people to cycle in London. Organises cycling sessions in London and also offers cycle hire.

Email: info@wheelsforwellbeing.org.uk

Website: www.wheelsforwellbeing.org.uk

Velo Vision

An online and paper-based magazine that provides specialist cycling advice.

Email: peter@velovision.com

Website: www.velovision.com

14. Glossary of terms

Term	Definition
Ankle Foot Orthoses (AFOs)	Braces, usually made of plastic, which encompass the ankle joint and all or part of the foot, used to control the position and motion of the ankle, compensate for weakness, or correct deformity.
Attention Deficit Hyperactivity Disorder (ADHD), also known as Attention Deficit Disorder (ADD)	A group of behavioural symptoms that include inattentiveness, hyperactivity and impulsiveness.
Arthritis	A term used to describe inflammation within a joint leading to pain.
Asperger syndrome	A type of Autistic Spectrum Disorder often typified by problems in certain areas of language such as understanding humour or figures of speech, and by above-average intelligence.
Autistic Disorder	A type of Autistic Spectrum Disorder, sometimes known as 'classic' autism. People with Autistic Disorder usually have significant problems with language, social interaction and behaviour. Many will also have learning difficulties and below-average intelligence.
Autistic Spectrum Disorder (ASD)	A term for a range of related developmental disorders which have a wide range of symptoms which include problems and difficulties with social interaction, impaired language and communication skills, and unusual patterns of thought and physical behaviour.
Balance bike	A bike which does not have pedals, crankset or a chain. The term is also sometimes used to refer to bikes which have had the pedals removed.
Bike	An abbreviation of 'bicycle; a two-wheeled cycle.

Bikeability	The Award Scheme for cyclists trained to The National Standards for Cycle Training.
Braille	A form of written communication which uses a code based on six dots, arranged in two columns of three dots, presented as raised dots. Braille on the hand refers to the technique of using six spots on the palm to represent the six dots of a braille cell.
British Sign Language (BSL)	The most common form of Sign Language used within Britain. A visual means of communicating using gestures, facial expression, and body language.
Cerebral palsy	A term used to cover a number of different conditions caused by damage to one or more specific areas of the brain which has usually occurred before, during, or soon after birth. This results in problems with movement, posture and co-ordination.
Cognitive disability	Any condition that affects mental processes, covering a wide spectrum of disorders and conditions.
Cycle	A generic term used to refer to a bike, trike or quad.
Deafblindness	The condition of little or no useful sight and little or no useful hearing.
DeafBlind Manual Alphabet (also known as finger-spelling)	A form of tactile signing that involves forming letter symbols on the palm of a person's hand.
Disability Discrimination Act (DDA)	Various pieces of legislation that promote civil rights for disabled people and protect disabled people from discrimination. From 1 October 2010, the majority of the Equality Act 2010 was implemented to replace major parts of the provisions of the DDA.
Disabled person	The term used throughout this Guide to describe the circumstances of individuals who require some degree of adaptation, in this instance to cycle training, in order to achieve their maximum potential.
Discrimination	Unfair treatment of a person or group.
Down's syndrome	A genetic abnormality that affects a baby's normal physical development and causes mild to moderate learning difficulties.
Dyslexia	A specific learning difficulty which mainly affects the development of literacy and language related skills.
Dyspraxia	A motor learning disability, characterised by difficulty in planning smooth, co-ordinated movements. It leads to clumsiness and problems with language, perception and thought.

Epilepsy	A neurological condition, with a tendency to have recurrent seizures.
Equality Act 2010	Provides a new cross-cutting legislative framework to protect the rights of individuals and advance equality of opportunity for all. From October 2010 it started to replace the Disability Discrimination Act (DDA).
Handcycle	A cycle powered by the arms rather than the legs. Most handcycles have three wheels.
Hands-on signing	A form of tactile signing whereby sign language users, whose vision no longer allows them to see the signs, 'feel' sign language by resting their hands on the communicator's hands.
Hyperactivity	Can be described as a physical state in which a person is abnormally and easily excitable or exuberant. Strong emotional reactions, impulsive behaviour, and sometimes a short span of attention are also typical.
Individualised budget/self-directed support	Self directed support is designed to help people take control of their own social care budgets, manage their own support and choose the services that suit them best, using the money they receive from different areas more flexibly. The individual is at the centre of the planning process as they are best placed to understand their own needs. If someone is eligible for Community Care Services then they may have the option of receiving an Individualised Budget from their local authority.
Impairment	A problem in body function or structure.
Indirect discrimination	Where the effect of rules or policies that apply to everyone has an adverse impact disproportionately on one group or other.
Instructor Training Organisation (ITO)	An organisation recognised by the Department for Transport as a provider of high quality National Standard cycle training.
Makaton	A teaching approach which uses speech, together with gestures, facial expressions, eye contact, body language (signs) and specially designed symbols (pictures), to help get messages across.
Mental illness	A psychological or behavioural pattern associated with distress or disability that occurs in an individual.
National Standard for Cycle Training (the National Standard)	Sets out the training and skills essential for making cycle trips in today's road conditions. Aims to promote a nationally agreed uniform syllabus and guidelines for all cycle training in the UK.

	Consists of three levels that progress a cyclist from basic control skills such as starting, stopping, emergency stopping, gears, looking behind and signalling (Level 1), to on-road riding using quiet roads, (Level 2), to riding on busy roads including multi-lane filtering techniques and busy roundabouts (Level 3). Each Level consists of a number of outcomes which the trainee must demonstrate in order to achieve that Level.
Oppositional Defiant Disorder (ODD) or Oppositional behaviour	A chronic condition typically seen in children younger than nine or ten years old, where the child is defiant and disobedient, with a provocative quality to their behaviour.
Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS)	A type of Autistic Spectrum Disorder, also known as 'atypical autism'. Most people with PDD-NOS have milder symptoms than people with autistic disorder, but they do not share the good language skills and above-average intelligence associated with Asperger syndrome.
Pommel	The part of a saddle that rises up at the front, or a knob that is fixed there.
Protected Characteristics	Eight characteristics are defined within the Equalities Act 2010 (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation), and are the grounds upon which discrimination is unlawful.
Quad	An abbreviation of 'quadricycle', a cycle with four wheels.
Recumbent	A cycle that places the rider in a laid-back reclining position. Some recumbent have two wheels, and some three (either with two wheels at the front or two wheels at the rear).
School Games Organiser Host Schools (SGOHSs), formerly School Sport Partnerships (SSPs)	Groups of schools working together to develop Physical Education (PE) and sport opportunities for all young people.
Self-directed support (also see individualised budget)	Designed to help people take control of their own social care budgets, manage their own support and choose the services that suit them best using the money from different areas more flexibly.
Semi-recumbent	A semi-recumbent is halfway between an upright and a truly recumbent bike. Semi-recumbents have smaller wheels and a larger wheelbase than that of an upright, and are available both with and without back supports.

Sensory impairments	An impairment to one of the senses; sight, hearing, smell, touch, taste and spatial awareness. Most commonly refers to impairments of vision and hearing.
SEN (Special Educational Needs)	This term has a legal definition, referring to children who have learning difficulties or disabilities that make it harder for them to learn or access education than most children of the same age.
SEN co-ordinator (SENCO)	A member of staff of a school or early education setting who has responsibility for co-ordinating SEN provision within that school.
Stroke	A stroke occurs when the blood supply to part of the brain is cut off and brain cells are damaged or die. A stroke can cause immediate loss of feeling and weakness, usually on one side of the body, and can also affect speech, vision, memory and emotions.
Support worker	A person who provides assistance in day to day activities to another person who has an impairment or a learning disability.
Tactile signing	A common means of communication used by people with both a sight and hearing impairment which can take several different forms, such as DeafBlind Manual Alphabet, Braille on the hand and hands on signing.
Tandem	A cycle built for two or more people sitting one behind the other. May have two or three wheels.
Teaching assistant (TA)	A generic title for someone that assists a teacher with one or more classes in a school. Some TAs work “one-on-one” with special needs students; these TAs shadow their student and assist with classwork, organisation, and behaviour management.
Thoracic support	Support of the chest area.
Tourette’s syndrome	A condition of the nervous system that causes involuntary movements and sounds.
Tracheotomy	A surgical procedure in which an opening is created in the front of the trachea (windpipe) and a tube inserted through the opening and into the trachea, to enable someone to breathe freely or to remove unwanted fluids produced by the lungs or throat. A tracheotomy is usually temporary, although in some cases it can be permanent.
Trike	An abbreviation of ‘tricycle’; a cycle with three wheels (either two at the front or two at the rear).
Visual impairment	Refers to people with irretrievable sight loss, but some residual sight.

Appendix A: Common conditions and their likely effects on behaviour and learning

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Attention Deficit Hyperactivity Disorder (ADHD), also known as Attention Deficit Disorder (ADD)		
ADHD is a group of behavioural symptoms that include inattentiveness, hyperactivity and impulsiveness – but with no effect on intelligence.	Common symptoms of ADHD include: • **Inattentiveness**, e.g. a short attention span, easily distracted, making careless mistakes, appearing forgetful, inability to listen or carry out tasks, inability to concentrate, constantly changing task/activity. • **Hyperactivity**, e.g. inability to sit still, fidgeting, excessive talking. • **Impulsiveness and tendency to act without thinking**, e.g. inability to take turns, interrupting, breaking rules, little or no sense of danger. Although it is not always the case, people with ADHD may also have other conditions alongside ADHD, including: • Sleep problems; • Epilepsy; • Tourette's syndrome – a condition of the nervous system that causes involuntary movements and sounds; • Learning difficulties such as dyslexia; • Obsessive Compulsive Disorder (OCD); • Depression; • Personality disorders.	**National Attention Deficit Disorder Information and Support Service:** www.addiss.co.uk **Further information:** www.bbc.co.uk/health/physical_health/conditions/attention2.shtml

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Autistic Spectrum Disorder (ASD)		
Autistic Spectrum Disorder (ASD) is a term for a range of related developmental disorders that begin in childhood and persist throughout adulthood, with a wide range of symptoms, which include: • Problems and difficulties with social interaction; • Impaired language and communication skills; • Unusual patterns of thought and physical behaviour. There is a wide variation in autism symptoms, with some people needing a lot of help/support and some a lot less. There are three main types of ASD: • **Autistic disorder**, sometimes known as 'classic autism' – people with autistic disorder usually have significant problems with language, social interaction and behaviour. Many will also have learning difficulties and below-average intelligence.	Children with an ASD may display any of the following: • **Difficulties with social interaction** – being unaware of what is socially appropriate, finding chatting or small talk difficult and not socialising much. People with autism may appear uninterested in others and find it very difficult to develop friendships and relate to others, while those with Asperger syndrome are more likely to enjoy or want to develop social contacts but find mixing very difficult. • **Problems with verbal and non-verbal communication** – those affected may be unable to speak fluently or, more commonly in autism, may be unable to speak at all. There may also be difficulties understanding gestures, body language, facial expressions and tone of voice, making it difficult to judge or understand the reactions of those they are talking to, or to empathise with people's feelings. As a result, they may unintentionally appear insensitive or rude to others. They may also take people's comments very literally and so misunderstand jokes, metaphors or colloquialisms. • **Lack of imagination and creative play** – such as not enjoying or taking part in role-play games. They may also find it difficult to grapple with abstract ideas. There may be overriding obsessions with objects, interests or routines, which tend to interfere further with building social relationships (this is known as stereotyped or repetitive behaviour). • **Forgetful and easily distracted** in the course of everyday activities.	**National Autistic Society:** www.autism.org.uk

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Autistic Spectrum Disorder (ASD) (continued)		
• **Asperger syndrome** – people with Asperger syndrome have milder symptoms than autistic disorder. Their language development is usually unaffected, although they often have problems in certain areas of language, such as understanding humour or figures of speech. They usually have above-average intelligence. • **Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS)**, also known as 'atypical autism' – most people have milder symptoms than people with autistic disorder, but they do not share the good language skills and above-average intelligence associated with Asperger syndrome.		

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Cerebral palsy		
Cerebral Palsy (CP) is a term used to cover a number of different conditions caused by damage to one or more specific areas of the brain, which has usually occurred before, during or soon after birth. This results in problems with movement, posture and co-ordination. Every person with CP is affected in a different way depending on which parts of the brain are not functioning properly; while some people are severely affected, others have only minor disruption.	CP has various characteristics, according to the location and amount of brain damage: • **People with *spastic CP*** (which accounts for 70% of all CP cases) find some **muscles become very stiff and weak**, especially under stress. This can affect their **control of movement** and they often find it difficult to move from one position to another. They may also find it difficult holding and letting go of objects. • **People with *athetoid CP*** (which accounts for 10% of all CP cases) often have **low muscle tone** and have **problems maintaining posture for sitting and walking**. They also tend to make **involuntary movements** of the face, arms and trunk, which can interfere with speaking, feeding, reaching, grasping and other skills requiring co-ordinated movements. • **People with *ataxic CP*** (5–10% of all CP cases) usually have problems with **low muscle tone** and **poor co-ordination of movements**. They tend to look very unsteady and shaky, and their sense of balance and depth-perception may be affected. • **People with *mixed-type CP*** experience a combination of the CP types above – most commonly spastic CP and athetoid CP. CP can also result in associated impairments with vision and hearing, learning disability, epilepsy, speech and language disorders, poor hand–eye co-ordination, seizures or a combination of all of these.	**Scope:** www.scope.org.uk

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Down's syndrome		
Down's syndrome is a genetic abnormality that affects a baby's normal physical development and causes mild to moderate learning difficulties. People with Down's syndrome tend to have characteristic facial features and tend to be shorter than average, with poor muscle tone and short, broad hands. Almost half of people affected have heart defects, some of which can be treated. Other physical problems include cataracts, hearing and sight problems, as well as a susceptibility to infections. Later in life there is also an increased risk of leukaemia and Alzheimer's. Down's syndrome affects around one in 1,000 babies born in the UK – about 750 babies a year – and is the most commonly inherited cause of learning disability.	People with Down's syndrome have varying degrees of learning disability, which may range from moderate to severe. Autistic spectrum disorders are also more common.	**Down's Syndrome Association:** www.downs-syndrome.org.uk **Download Down's Syndrome Association publications at:** www.downs-syndrome.org.uk/resources/publications.html

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Hearing impairments		
There are two main types of hearing loss that can occur as a result of damage to the ear: • Conductive hearing loss, where sounds are unable to pass from the outer to inner ear. The sounds are faint but are not distorted. • Sensor neural hearing loss, where there is distortion to the sound and volume. Sometimes, both types of hearing loss may be present at the same time. This is known as mixed hearing loss.	Hearing impairment can affect people in wide-ranging ways, from mild loss to complete loss. People may also have balance problems as a result of their hearing impairment, because the hearing and balance organs are connected.	**Royal National Institute for Deaf People:** www.rnid.org.uk **Further information:** www.nhs.uk/conditions/hearing-impairment
Dyslexia		
Dyslexia is a specific learning difficulty that mainly affects the development of literacy and language-related skills. The underlying problem is impaired ability to accurately sequence and memorise visual and/or auditory symbols.	Children with dyslexia may experience difficulties reading and writing and following a series of instructions in order. Some dyslexics may also have difficulty maintaining concentration and attention, overlapping with ADHD. Others may have problems with fine and gross motor control, handwriting and with spatial awareness, overlapping with dyspraxia.	**British Dyslexia Association:** www.bdadyslexia.org.uk

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Moderate Learning Difficulties (MLD)		
Children with MLD may appear immature and find it difficult to mix with their regular peer group. They often have an over-reliance on adult help or support and experience great difficulties following the curriculum. They are usually taught in mainstream schools with provision made for additional help and support.	Pupils with moderate learning difficulties have much greater difficulty than their peers in acquiring basic literacy and numeracy skills and in understanding concepts. They may also have associated speech and language delay, low self-esteem, low levels of concentration and under-developed social skills.	**Mencap:** www.mencap.org.uk
Severe Learning Difficulties (SLD)		
Pupils with Severe Learning Difficulties (SLD) have significant intellectual or cognitive impairments. This has a major effect on their ability to participate in the school curriculum without support. They may also have difficulties in mobility and co-ordination, communication and perception and the acquisition of self-help skills. Pupils with SLD will need support in all areas of the curriculum. They may also require teaching of self-help, independence and social skills. Some pupils may use sign and symbols, but most will be able to hold simple conversations.	Children with SLD are likely to find it difficult to understand, learn and remember new skills. They may have additional problems with a number of social tasks, including communication and awareness of health and safety. They may have poor co-ordination and perhaps use symbols or signing such as Makaton to help with communication. Learners with SLD are likely to have extreme difficulty with reading and writing and may also require help with face-to-face communication. They are still likely to be attending a special school or unit, although a growing number will be in mainstream school. When in a mainstream setting, they are likely to be extensively supported, either by a learning support assistant or have additional teacher input.	**Mencap:** www.mencap.org.uk

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Dyspraxia (also sometimes known as Developmental Co-ordination Disorder (DCD), Perceptuo-Motor Dysfunction, and Motor Learning Difficulties)		
Dyspraxia affects movement and co-ordination because brain messages are not properly transmitted to the body. Physical activities are hard to learn and difficult to retain; dyspraxia sufferers are likely to be hesitant and awkward in performance. Dyspraxia affects each person in different ways and in an inconsistent manner: for example, one day they may be able to perform a specific task, the next day they cannot. For the majority of those with the condition, there is no obvious cause. Current research suggests that it is due to an immaturity of neurone development in the brain rather than to brain damage. Dyspraxia is thought to affect up to 10% of the population and up to 2% severely. Males are four times more likely to be affected than females.	Dyspraxia is a motor learning disability, characterised by difficulty in planning smooth, co-ordinated movements. It leads to clumsiness and problems with language, perception and thought. Having dyspraxia does not change how intelligent a person is, but it does affect their learning ability. People with dyspraxia may display any of the following: • **Difficulty processing thoughts, concentrating and learning.** They may find it difficult to focus on more than one thing for more than a few minutes and may not automatically pick up new skills, needing encouragement and repetition to help them learn. • **Problems with movement and co-ordination;** they may fall over and bump into things, making them appear awkward. • **Behavioural issues.** • **Issues with noise and feeling.** • **In extreme cases, speech impediments.** Children with dyspraxia may also have other conditions such as ADHD, dyslexia and autistic spectrum disorder.	**Dyspraxia Foundation:** www.dyspraxiafoundation.org.uk **Download the Dyspraxia Foundation's classroom guidelines at:** www.dyspraxiafoundation.org.uk/services/ed_classroom_guidelines.php

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Profound And Multiple Learning Difficulty (PMLD)		
Pupils with Profound and Multiple Learning Difficulties (PMLD) have complex learning needs. In addition to very severe learning difficulties, pupils have other significant difficulties, such as physical disabilities, sensory impairment or a severe medical condition.	Pupils require a high level of adult support, both for their learning needs and also for their personal care. They are likely to need sensory stimulation and a curriculum broken down into very small steps. Some pupils communicate by gesture, eye pointing or symbols, others by very simple language.	
Visual impairment		
The term 'visual impairment' refers to people with irretrievable sight loss, and this simple definition covers a wide spectrum of different impairments. It does not include those whose sight problems can be corrected by spectacles or contact lenses, although it does include those whose sight might be improved by medical intervention. Visual impairment can relate to total absence of sight, partial loss of sight that is not correctable by glasses/lenses, and limitation of the field of vision. Only about one in five registered blind people can be described as seeing nothing at all: many technically blind people have some useful perception of light and shape. The level of a person's visual impairment may vary according to lighting conditions and from one day to the next. It may be an unchanging condition or it could be one that is gradually deteriorating.	The effects on an individual's ability to undertake tasks will vary widely, depending on the nature of the disability.	**Royal National Institute of Blind People (RNIB):** www.rnib.org.uk

Description of condition	Possible effects on behaviour and learning	Where to go for more advice/information
Locomotor disability		
Locomotor disability means a person's inability to execute distinctive activities associated with moving, both themselves and objects, from place to place as a result of an affliction of either bones, joints, muscles or nerves, e.g. amputations, as well as conditions such as arthritis etc.	The effects on an individual's mobility and ability to undertake tasks will vary widely, depending on the nature of the disability.	
Epilepsy		
Epilepsy is a neurological condition and is a tendency to have recurrent seizures. Epilepsy can affect anyone, at any age; the vast majority of people with epilepsy can take part in the same activities as everyone else, with the help of simple safety measures where appropriate.	Epilepsy may affect an individual's ability to be fully composed. Structured physical activity sessions can contribute towards stabilising epileptic conditions for certain individuals.	**Epilepsy Action** www.epilepsy.org.uk

Appendix B: Identifying potential barriers for cycle training – a form for cycle instructors

The form appears on the following page.

Identifying potential barriers for cycle training

This form should be completed by the individual wishing to undertake cycle training or, if more appropriate, by a parent/carer/teacher on behalf of the trainee.

Your name: .....

Your age (and year group if you are at school): .....

Do you have any specific needs /or are you likely to need any additional support during cycle training?*

☐ Yes ☐ No ☐ Possibly

Please provide further information on your specific needs/additional support needed:

.....

.....

.....

Cycle training is likely to involve the following:

- Instruction which is both verbal and through demonstration
- Instruction which may be within a group situation
- Instruction in different environments (e.g. classroom, playground, park, on-road)
- Practical exercises /manoeuvres on the cycle such as looking around, signalling etc
- Repetition of practical exercises /manoeuvres
- Sessions which last for around 2 hours between breaks
- Continuous cycling for up to 10 minutes without a break

Given the above, do you think you are likely to need any adjustments to how the cycle training is delivered? If so, please state what they are below. If you are not sure, please say so and we can discuss your requirements further:

.....

.....

.....

Is there anyone else we should speak to about your specific requirements:

Name:.....

Contact details: .....

.....

If this form has been completed on behalf of someone else, please specify your name below:

Form completed by: .....

Date:.....

* We are interested in finding out anything which might have implications for how the cycle training is delivered, such as a physical or a learning disability, any behavioural conditions (such as ADHD), communication difficulties (such as with autism), and any other conditions which might affect learning or co-ordination (such as dyslexia or dyspraxia)

Appendix C: Useful questions to ask in the one-to-one assessment

Suggested questions to ask the trainee (and/or the parent/carer/support worker) during the one-to-one pre-training assessment are provided below. This is not intended to be an exhaustive list, but will give an indication of the type of information that will be helpful in planning training delivery.

To help understand how the trainee might experience the physical aspects of cycling and how you can best support them

Could the trainee describe how they feel about:

- getting on/off the cycle;
- sitting on the saddle;
- balancing;
- pushing on the pedals;
- holding on to the handlebars;
- applying the brakes;
- looking behind them etc.?

To help understand the trainee's equipment requirements

- Does the trainee need a 'non-standard' cycle or need adaptations to a cycle?
- Does the trainee have their own cycle?

To help understand communication requirements

- What is the most effective way of communicating with the trainee?
- Does the trainee normally use any non-verbal communication techniques? What are they?
- Is any equipment needed to help communicate with the trainee (e.g. microphone) in the cycle training context? Does the trainee have this equipment?
- Is an interpreter usually needed to communicate with the trainee?
- Does the parent /carer /support worker need to attend the training to aid communication?

- Does the trainee have any particular dislikes (such as being touched, someone standing too close, raised voices etc.)?

To help identify any behavioural-related issues

- What type of teaching approach is the trainee likely to respond best to?
- Are there any specific things /objects /circumstances /noises that the trainee might be distracted by/might trigger an adverse reaction?
- Does the parent/carer/support worker need to attend the training to help ensure good behaviour?
- Does the trainee have a particular friend it would be helpful to include in the cycle training/or a friend it would be useful NOT to include?
- Is the trainee likely to become bored/distracted easily? What is the maximum amount of time they can be expected to concentrate for before a break is needed?

To help identify any 'hooks' to help encourage participation and effort during training

- Has the trainee had any recent achievements (such as certificates, awards etc.)?
- Does the trainee have a birthday /other special date coming up/have they recently had their birthday?
- What does the trainee like doing in their spare time?
- What is the trainee's favourite subject/topic at school?

Appendix D: SEN Cycle Training at Rokeby Secondary School, March 2008

About the training

Cycle training was provided in Rokeby Secondary School to young people identified as having Special Educational Needs such as autism, severe learning difficulty, dyslexia, and speech and language difficulties.

Training initially started with the instructor attending the school to present an interactive classroom session lasting 1.5 hours. The aim of the session was to motivate students to sign up to the course by reinforcing to them that the training would be a supportive way for them to learn how to ride a bike. It also allowed the students a chance to voice their previous difficulties and issues with trying to learn to ride.

The session included a demonstration (basic science of how a bike remains upright), introduction to the adapted bike, and a question and answer session. This proved to be very successful; the Senco Officer reported back a few days later that all the students present at the session were keen and eager for the training to begin.

The training was delivered over a period of 5 days during the Autumn term in February 2008. Eight students (four Year 7, and four Year 10) were chosen by the school to participate in the training.

The training took place both indoors within the school hall, and outdoors using the main school playground. Each student was allocated a daily and regular one-hour session (x5) over the course of a week.

Days 1 and 2

The first part of Day 1 was devoted to pre-assessment testing of three benchmark cycling skills: balance, co-ordination, and muscle strength. This yielded some useful data, some of which enabled the school to successfully apply for additional funding to enable a student to receive on-going basic daily exercises based on the pre-assessment testing.

Working in pairs, on Day 1 and Day 2, the students began their indoor phase of the programme. The students rotated between warm up exercises/pre-conditioning, an exercise bicycle, games to reinforce steering on a conventional bicycle, and riding an adapted bicycle. The adapted bicycle comprised a bicycle

with the rear wheel substituted with a graduated stabilising support, allowing the students to concentrate on learning the appropriate steering responses and turning skills with the assurance that a turn would not cause them to fall.

Using this approach, students were able to learn and receive encouragement from each other, and also remain on tasks for longer periods.

Days 3, 4 and 5

For the remaining three days the training continued outdoors using only conventional bicycles. Students were encouraged to incorporate the skills learned from the previous days. Again working in pairs, the Instructor took care to guide them through the necessary steps to co-ordinate balance, steering and pedalling.

Project outcomes

With Day 3 came some success for five of the students. One student became an independent rider within a half hour of that day's session, two others learned to ride short distances within 45 minutes. The remaining students continued to develop their skills.

The final two day sessions were devoted to continued practice for the remainder of the students who had not yet learned to ride. For the five who did demonstrate independent riding, the Instructor delivered paired instruction based on National Standard Cycle Training, which included: starting and stopping, swerving, observation, signalling and use of gears. All five students achieved either good or very good ratings. Due to the high standard that the students were able to achieve, an extra on-road training session/trip was held to build their basic road safety awareness skills.

There were two students who had taken part, but were not able to ride independently after the 5-day program was completed. It is anticipated that one student will need further adapted equipment because of his physical disability. The other student, with some additional one to one training in a quieter environment after school will most likely learn to cycle now that he has acquired the fundamental skills.

Rewards

After the cycle training was complete students were presented with a trophy and certificate recognising their achievement and progress in relation to the National Cycle Training Standard amidst the congratulations of their peers and teachers.

Before the presentation the lead cycle Instructor gave a short speech. The Instructor conveyed the context for the training to enable fellow students to appreciate the bravery shown by the new riders in being able to admit that they could not ride (not an easy feat in a secondary school). The award ceremony flowed with genuine warm support. Over a dozen students that previously said that they could ride came forward and admitted that they could not.

Source: This case study was provided by Ola Lawal, Real Wheel Cycle Training Academy