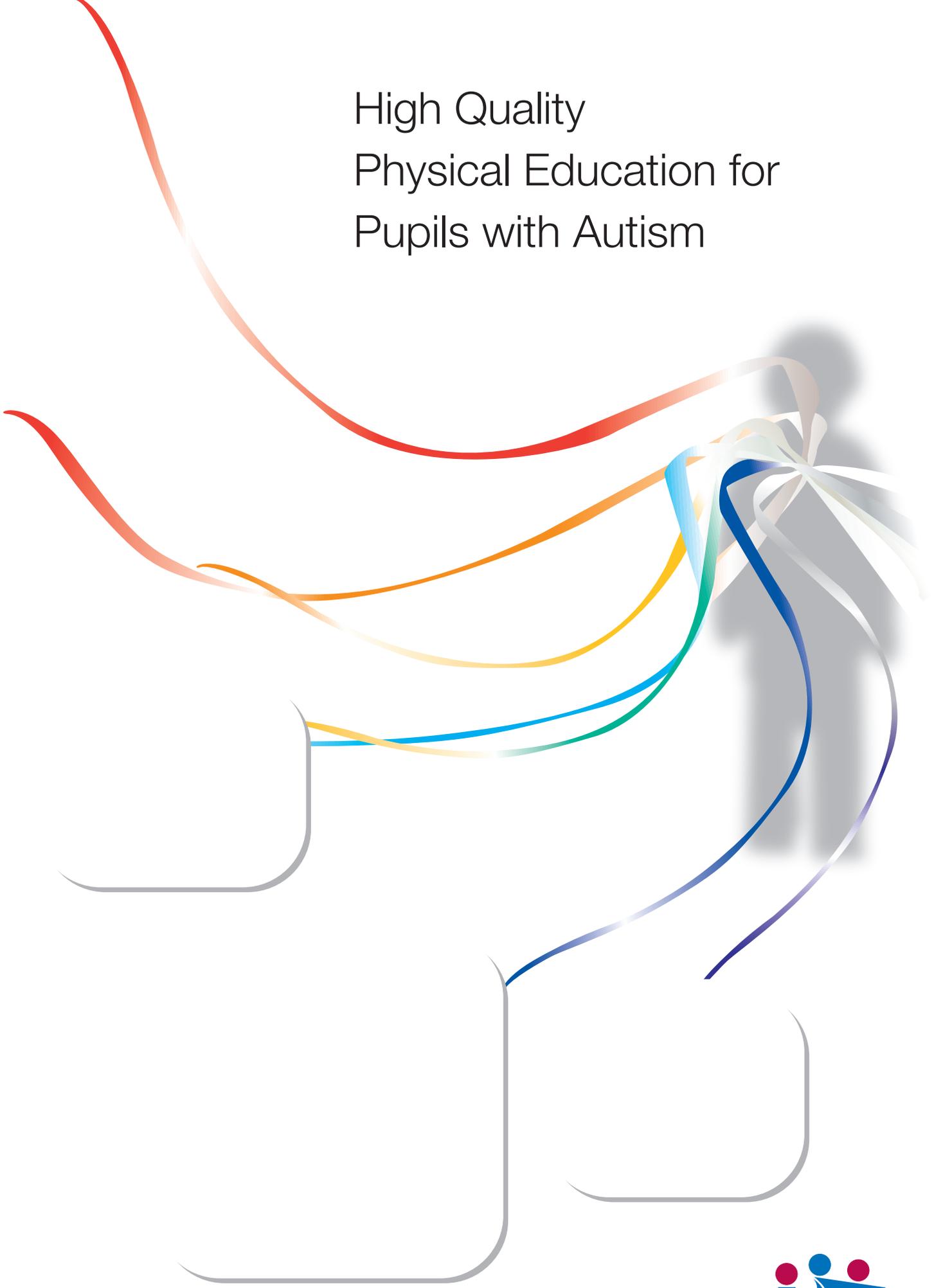


High Quality Physical Education for Pupils with Autism



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High Quality Physical Education for Pupils with Autism

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Section 1

Delivering High Quality PE to Young People
with Autistic Spectrum Disorders (ASD)

Introduction

Autism affects an estimated 600,000 people in the UK of which over 80,000 are of school age. Autism is four times more prevalent in boys than it is in girls and sometimes pupils with autism have additional difficulties which may include hearing, vision loss or poor motor co-ordination which may also affect their educational needs and access to physical education (PE) and school sport.

Asperger's Syndrome is a form of autism and this term is often used to describe higher functioning individuals in the autistic spectrum, however this resource will use the term autistic spectrum disorders (ASD) as a blanket term when referring to these pupils.

The resource (including the DVD) does not seek to replicate other inclusive PE resources however it recognises that for specific groups of pupils generic principles concerning the inclusion of young disabled people in PE programmes do not necessarily apply. For many young people with ASD this is certainly the case.

The resource does explore how young people with autistic spectrum disorders can experience high quality PE and what pedagogical approaches can be developed and adopted by teachers, learning support assistants and other practitioners to increase the quality of their delivery. In developing the resource the approaches outlined have been drawn from good practice that has emerged through both special and mainstream schools and from primary through to further education settings.



“Physical exercise reduces aggression, hyperactivity and stereotypical behaviour in children with autism and there is universal acceptance amongst specialist practitioners that physical activity is a key component when working with young people on the autistic spectrum.”

“After four and half years I had my eyes opened by amazing results in PE that were achieved by a blend of planning, perseverance and creativity.

I experienced whole group enjoyment and engagement which is so often difficult for pupils with autism.”

Martin Hanbury – Head Teacher
Landgate School

The resource does not seek to cover every teaching approach that you will observe in the delivery of high quality PE to ASD pupils, however the approaches outlined in both this resource and the DVD can contribute to a diversity of approaches that if well conceived, planned, delivered, assessed and adjusted can further enhance the access to a high quality PE learning environment.

In utilising the resource it will be important that an effective planning cycle is used to modify, adjust and change strategies to suit the individual pupil in relation to the group, location, resources available and importantly the learning outcome for the pupil at the time.

It is therefore the practitioner's responsibility to recognise which strategy can be employed in their setting and more importantly against individual young people's needs. This will require time, practice and patience often involving other people and the pupils themselves.

Although these concepts may be appropriate in supporting high quality PE for some young people with ASD there is certainly no 'one method suits all'. Young people with an ASD are such a varied and diverse group a degree of flexibility is essential in the interpretation of these key concepts.

Teaching PE to young people with an Autistic Spectrum Disorder

Before considering teaching strategies that can successfully support the delivery of high quality PE for ASD pupils is necessary to have a basic understanding of autism.

There are many excellent reference sources and materials however this resource is based on the generally accepted way of viewing the difficulties experienced by people with ASD through the Triad of Impairment.

This consists of the three wings of:

Social Understanding

Is concerned with how the person relates to a group, and understands group dynamics. For example high functioning ASD pupils will passively accept social contact but more severe cases will often shun or ignore any type of relationship with others. Pupils with ASD can approach other people in an unusual, inappropriate and repetitive way, paying little or no attention to the responses of those they approach. This can lead to them not participating well with others and not understanding others' perceptions of the activity.

Social Communication

Many people with ASD also have a great deal of difficulty communicating through both verbal and non-verbal means. Even if a person with autism has a high level of speech they will use it to talk 'at you' on their own terms, about their own interests. They may be unable to talk about their own thoughts and emotions. They will often not be able to understand abstract concepts, gestures, facial expressions or tone of voice; they may use gestures themselves, which can seem odd or inappropriate.

Imagination (flexibility of thinking)

People with ASD often experience difficulty with activities involving imagination; this is characterised by a rigidity and inflexibility, which may cause problems during activities such as playing with another child or concepts such as empathy. They often focus on trivial or inappropriate objects around them, and may show an obsession for objects or certain rituals and routines, or they may appear unaware of danger.



In addition to these three areas there are likely to be sensory issues that will impact on young people with ASD. Pupils may also find it harder to make and sustain friendships with others, hence there is a danger that they may become a prime target for bullying or rejection from some of their peers.

Changing teaching approaches and employing intervention strategies therefore needs to go hand in hand with peer awareness to ensure the full integration of autistic pupils in PE and sport.

"Professionals must be supported in developing their knowledge and understanding of autism in order to enable them to address the needs of pupils with ASD."

Martin Hanbury – Educating pupils with ASD

In King Egberts mainstream school in Sheffield there is a unit with 32 young people with ASD. All classes in year 7 are taught about ASD and young people are actively encouraged in PSHE to look out for their peers in an understanding and supportive way, partnering anyone who may not have a partner or making allowances in group situations. Staff feel that results have been very positive as young people learn about differing communication issues with them and have learnt to 'let things go' that could potentially lead to conflict situations.

In terms of PE and sport the following key issues may therefore inhibit autistic pupils fully accessing the learning environment:

Environment. Difficulties in defining space leading to unpredictable movement within the space (this includes changing rooms as well as the teaching and learning space)

Communication. Interpretation of verbal messages and increased length of time to process instructions. Lack of understanding of abstract concepts

Gross motor difficulties. Imitation may be difficult when completing complex tasks

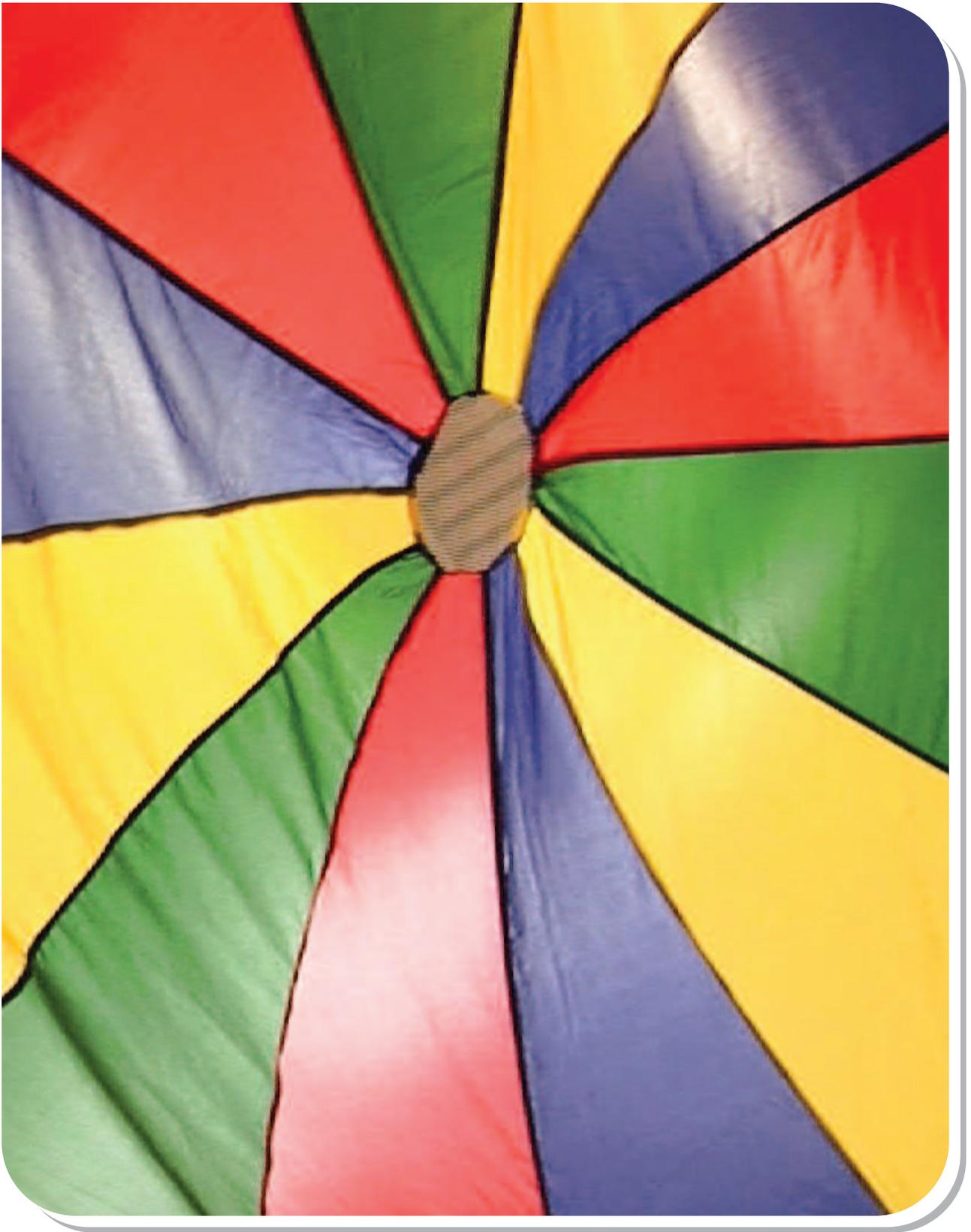
Sensory issues. Noise, touch, smell, light may affect the pupils ability to process information and affect behaviour

Social difficulties. Co-operation, turn taking, sharing, negotiation, understanding rules

Speed of skill acquisition. Increased time required for the processing and retention of skills and information

Difficulties with Generalisation. Different activities may require skill to be re-learnt as skill transfer and application may be limited

The following sections consider strategies against these areas, how they relate to autistic young people, and strategies that can be employed in a PE and sport context to overcome them.



Section 2

Sensory Issues

Sensory Issues

In any learning environment people rely on their senses to both understand the environment that they are in and respond and/or function successfully within it. In addition to social understanding, social communication and imagination as described in the Triad of Impairment, there are likely to be sensory issues that will impact on young people with ASD.

This may include the inability to process and interpret information received through their senses with the results being that they:

- become unusually upset by bright lights or loud or unexpected noises
- react negatively to being touched or moved unexpectedly
- have difficulty controlling, orchestrating and using their muscles effectively.

The way young people with ASD therefore experience PE or any body movements can be different. They can have difficulties with interpreting the signals from all their senses in relation to their bodies and/or they can find it impossible to screen out signals resulting in sensory overload which can often lead to fear and then pupils exhibiting perceived challenging, bad, aggressive or rude behaviour.

To try and help young autistic people improve the 'reading' of sensory information schools can include aspects of sensory integration therapy into their PE lessons so providing a structured way to meet the children's sensory needs as well as providing them with a motivating group lesson.

Sensory integration is based on the fact that there are five generally accepted senses that we become aware of at an early age: hearing, vision, touch, smell and taste. However, there are other equally important sensory systems that are essential for normal functioning which includes the proprioceptive and vestibular systems.

Proprioception: refers to the brain's ability to know where our body is in space. The brain gathers information from a wide range of senses and then processes this information in order to compare it with a virtual body map, or body schema, stored in our memory.

The close interrelationship between the vestibular system and the ears and eyes is the reason why it is possible to retrain this system by influencing it through the auditory and visual senses, using sound and light, and through movement in both a vertical and horizontal direction and through spinning. Developing a sensory circuit or activities in the curriculum to develop proprioception and vestibular development is therefore a key strategy to support pupils with autism access the PE curriculum.



The outcome is that we know where, for instance, our limbs are without looking at them when running or throwing a ball. To do this it uses all the senses in the body that relate to external cues (through sight, hearing, smell) and internal cues (touch, stretch receptors in muscles)

Vestibular system: The vestibular system (also known as the balance mechanism) is the unifying system in our brain that modifies and coordinates information received from other systems. It can be critical to the processing of information as directly or indirectly it influences nearly everything that we do as well as having an important influence on our behaviour.

- Under-sensitivity of the vestibular system often results in 'clumsiness', excessive stumbling and falling over and bumping into things, but also in the need to move all the time. Autistic pupils can therefore be very good at active sports but find it very hard to stand still, be quiet or concentrate on tasks and activities which require focus and static positions.
- Over-sensitivity of the vestibular system will result in an over-cautious approach to any movement, avoidance of new PE experiences requiring a focus more on static and basic movement patterns.

When to deliver a sensory circuit

What is a sensory circuit?

A sensory circuit can include any series of activities or tasks that support the pupil through a physical and sensory medium. Sensory circuits can therefore be small 5-10 minutes batches of activities or alternatively a focused and sustained series of activities that can be incorporated into the PE curriculum and schemes of work or individual lesson plans.

Where are sensory circuits delivered?

The most commonly used delivery mechanisms are:

- When young people come into school to stabilise and create routine which can be delivered through class teachers
- An alternative to unstructured play time during breakfast clubs, break-time activities, and school sport opportunities
- Part of the PE curriculum time either as an inclusive opportunity so benefiting all pupils and/or dedicated way through a separate activity
- As the basis for learning in another curriculum subject (e.g. literacy, numeracy, science, ICT)
- As an enrichment activity as part of a wider focused support strategy for cohorts of pupils with ASD such as booster sessions and/or even as activities that parents/carers can undertake at home with the pupils.

Activities in the PE curriculum that have strong links to developing either the proprioceptive and/or vestibular system:

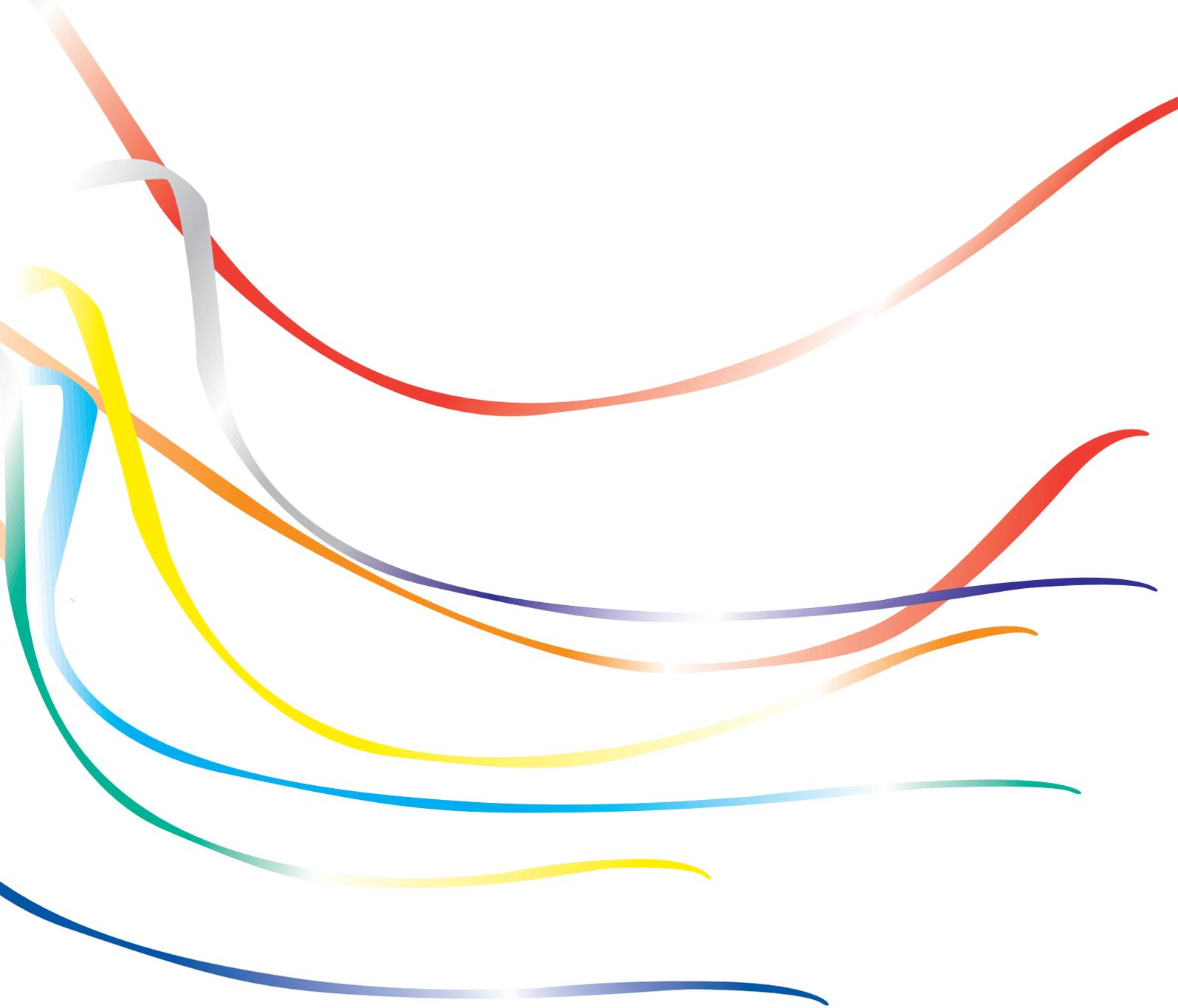
There are activities within the curriculum that lend themselves to developing a greater focus on proprioceptive and/or vestibular systems. These include:

- Gymnastics
- Dance
- Athletics.

Activities that can develop the proprioceptive and vestibular system include:

- Rocking in a chair
- Gross motor movements – star jumps / knee lifts etc
- Jumping onto a crash mat
- Deep pressure massage (where appropriate to the pupil).
- Swinging on a swing
- Spinning on the spot
- Spinning round on a skate board
- Jumping on a trampoline/trampette.







Section 3

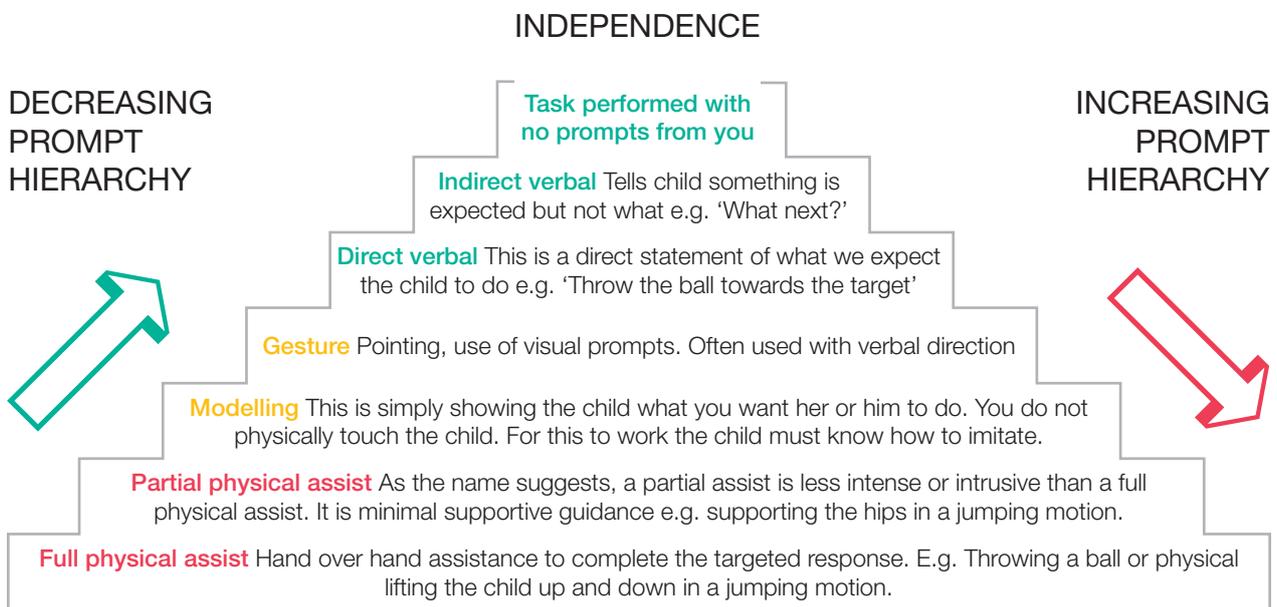
Communication

Communication

Communicating with young people is the key to all effective teaching and learning yet communicating with young people with ASD may require practitioners to learn new skills and methods. For teachers who are not used to working with young people with ASD communication can appear brusque or even rude.

When working with a young person with ASD it is important to recognise what communicative support they need to complete a task. This can be seen as prompt hierarchy (see diagram below) with the more able child having fewer physical prompts with more focus on increasing independence. Most people therefore opt for decreasing prompt hierarchy yet for those in mainstream education increasing prompt hierarchy could be more beneficial.

Regardless of decreasing or increasing hierarchy, the level and type of communication will be subject to other external factors such as location, activity and task therefore what is important is that the hierarchy is used in a continual way assisting the learner at an appropriate level at that time.



Partial physical assist



Gesture



Direct verbal



A young boy in a mainstream primary school found stopping on a verbal cue very difficult. His support worker ran with him and jumped in front of him with a giant stop sign and verbally reinforced the 'stop'. After a couple of lessons he was successfully stopping on his own.

Visual communication

Visual communication can support most young people with autism, ranging from the use of PECS (picture exchange communication system) where young people can make choices through identifying what they want in picture to written words alone. The system can be based on a level that is appropriate to the person communication and literacy skills. The three most common being:

Object reference
(using the actual object)



Symbol with words



words alone



Verbal communication

Verbal communication is different from visual due to the amount of information given and the complexity of the language. Concepts like idioms, non literal language or generalisation can easily be misinterpreted and should be avoided. Verbal communication can be enhanced through gestures and symbols.



The table below is from Martin Hanbury's book – Educating Pupils with Autistic Spectrum Disorders. (A Practical Guide) and refers to some simple rules when communicating in PE and sport with ASD pupils

Supporting Communication: Do

Do...

- ✓ Recognise and value the child's communication strategies.
- ✓ Engage specialist support.
- ✓ Employ visual materials to support understanding.
- ✓ Use concrete, literal and precise language.
- ✓ Say the child's name before any directions or instructions.
- ✓ Be consistent.
- ✓ Allow time for processing.

Supporting Communication: Don't

Don't...

- ✗ Make assumptions based on the child's use of language.
- ✗ Talk too much.
- ✗ Expect the child to know you are talking to him or her.
- ✗ Use a metaphor or idiom without explaining it.
- ✗ Rely on body language and facial expression.
- ✗ Work in isolation.



Section 4

Structure Anchors and routine in PE

Structure – Anchors and routine in PE

Regardless of the type of young person accessing an activity there is always a degree of structure and routine that supports learning. With young people with ASD this requires expanding and further structuring so they not only know exactly what they will do but that there is also a high degree of consistency not only in Physical Education but also across the school.

School PE and sport becoming whole school routines

In terms of the whole school this could be around basing the day on periods of activity that form a framework to the day and also supporting those young people who are 'high energy' to release some of the tension that they experience being still within a lesson. An example of this from a special school is:

- Morning activity session: 30 minutes of activity in the playground including running, jumping, rollerblading
- Morning active assembly – no chairs in the hall and people access the assembly in a practical way
- Breaktime – 15 minutes of highly structured playground activities
- Lunchtime – 30 minutes activity clubs including trampolining, roller blading and cycling.
- Afternoon session – one lesson is taught in a practical way using the sports hall or teaching spaces around the school
- 15 minutes of end of day activities.



Routines within PE and sport learning environments

Giving young people with ASD a high degree of consistent structure allows them to orientate themselves to the space, and task thus assisting them to focus on the activity. An example of this level of structure in PE regarding getting changed and ready for the lesson would include:

- Young people line up outside the changing room door in a designated place
- Young person has a consistent and designated place to change which is marked through an object of reference/name/picture of either themselves and/or an object that interests them
- They have the same people next to them in the changing rooms when they are getting changed
- They have a designated area to place clothes and items such as bags and books
- They sit down in the changing rooms when changed until it is time to go into the lesson
- They line up outside the designated teaching space (hall, gym, pool, outdoor area) prior to entering that space
- Once they enter that space they sit on a designated bench (i.e. the benches can be colour coded and in the same location to assist this). Again the same people are also on the bench
- This process is fully reversed back into the changing rooms.

This level of structure gives young people consistent anchors to help them orientate through the school day and can lead to young people being able to cope with more and more high energy group activities as they grow in confidence and develop higher level skills.

Example of a Social Story

What I do when I have PE

At school we sometimes have PE

When I have PE on my timetable I collect my PE bag and walk to the changing room.

The changing room is sometimes noisy.

That's OK it means that the children are excited and are talking loudly.

The children take off their school clothes and put on their PE kit.

I take off my school clothes and put on my PE kit.

When we go into the hall or gym I sit on the bench.

The teacher will tell me what to do in the lesson.

I can run, and play and learn new things.

PE is great fun.

I like it when I know what to do when I have PE

Resource

Writing and Developing Social Stories: Practical Interventions in Autism

by Caroline Smith (Author)

These strategies may not work for all young people with ASD, and it may be that a long term learning outcome is that the person can become independent in getting changed for PE over a period of time. It may therefore be appropriate to consider a phased approach to this (or any task). Some or all of the following strategies may be appropriate:

- The young person gets changed somewhere else accompanied with support staff who can provide additional routines and structure in a more secure location regarding noise, light etc
- The young person has a phased introduction to the lesson e.g. joining the lesson for the last 10 minutes and increasing the time within PE and/or a particular point in the lesson accessing a dedicated activity during the rest of the lesson
- The young person leaves the lesson just before the end to allow for additional time and a more secure location to get changed.



To give additional security social stories can be used with young people with ASD to ensure and reinforce access into high quality PE with minimal anxiety. The following is an example of a social story that can support the young person's understanding of the lesson structure.

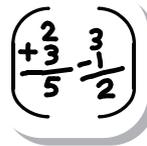
Using visual prompts to support structure in PE and sport

“Pupils with autism are ‘visual thinkers’ and even those with high IQs need visual support.”

(Grandin, 1992, Joliffe, Landsdown, and Robinson, 1992)

The TEACCH strip is a method of visually explaining to young people the order and timings of a day’s events, lessons and or actual activities. It is used routinely in specialist settings for young people with autism and often in special schools. However, it could support both young people with ASD and other pupils requiring supportive communication in mainstream schools. An example of the TEACCH strip for a morning timetable could be:

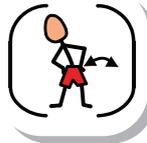
Finish previous lesson



Get changed



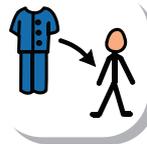
PE



Line up



Get Changed



Playtime



Lunch



It may be that a support worker can present the day’s activities and individual lesson content to a young person with autism in a mainstream school to try and help them make sense of their environment.

An example of using visual prompts in PE lesson



In developing TEACCH strips for lessons it is important that the:

- activities are broken down into smaller steps
- the sequence is logical and linear remembering that young people with ASD tend not to be able to transfer and apply skills learnt
- the starting point in teaching skills and activities may also be different although demonstrations and repetitions are similar.

The following is an example for throwing and catching a ball:



Throwing a ball

Catching a ball

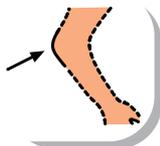
Turn hand



Hands ready



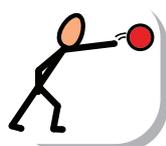
Elbows pointing out



Look at ball



Throw



Catch



Some young people with ASD may require physical prompting before they are able to achieve the skill, whilst other students may need an additional symbol 'same to same' to understand what is expected of them following initial success.



Consistent and planned lesson formats

The whole school planning of consistent PE lessons can be invaluable in supporting young people with ASD. It should ensure consistency in PE as they move through the school, classes and teaching staff and ideally be linked to transition planning through the SENCO. Again whilst the approach can ensure the successful inclusion of young people with ASD it can also help to address the different needs within any one class.

Below is an example of a consistent lesson structure that could be adopted in a special school where there are numbers of young people with autism.

Sit on bench	Giving young people something to hold while they watch may help concentration
Warm up, free play (individual or group)	(whole group)
Relay	(whole group)
Sit on bench	Giving young people something to hold while they watch may help concentration
Main activity in 75% of space	For young people who are involved, enjoying activities and progressing towards their learning goals
Alternative activity in 25% space	For individual young people who aren't benefiting from the activity where additional differentiation is required to reach learning goals
Incentive activity	All group enjoy e.g. parachute
Circle cool down	Whole group
Finish and sit on bench	Pupils then line up at the door ready to leave to the changing area

Practical and consistent teaching strategies in the classroom (to be checked and changed in the final resource)

The planning of a lesson format provides a structure throughout the lesson, however where and how the lesson is taught can assist provide both structure and consistency. Some practical strategies include:

- Use coloured throw down spots for where you want the young person to start so that they can orientate themselves to the room
- Use visual and verbal communication together (e.g. count down from 10 before saying stop)
- Establish a good sensory area that is free from bright light and shadows
- Use smaller teaching spaces for dedicated sessions to provide a better sense of security
- Focus on activities that engage and provide less complex tasks and concepts
- Consider having a designated space that can act as a withdrawal room/area so that pupils can withdraw themselves to and/or access
- Ensure excess equipment and distractions are removed from the teaching space
- Use appropriate rewards to support and confirm good traits and characteristics.



Section 5

Practical strategies and activities

Creating options for the delivery of PE – The Inclusion Spectrum

The Inclusion Spectrum may give deliverers a framework for balancing delivery styles when young people have very different needs within the same class. Hence, an open style game could be tailored to the young people with ASD to promote open access to an activity with their peers, or a parallel session could be provided as a specific activity for a group of ASD pupils to work in the same location but on a differently structured task that supports their learning.



The Inclusion Spectrum in relation to young people with an ASD

Open	An open activity for a class with a young person with an ASD may be more highly structured. E.g. A moving game may be played with young people on the spot. E.g. The bean game with everybody in their own space
Modified	A skill may be broken down specifically for a young person or in a modified game zones or safe spaces may be built.
Parallel	In a parallel setting one of the games may include indirect competition or clearer special concepts
Separate	A young person with an ASD may need a higher percentage of the separate option, with more individual activities.

Considerations related to warm-ups

The beginning of any lesson is crucial for setting the right tone and ensuring the young people want to take part. Typically there are three 'types' of warm-ups each with benefits and challenges for including young people with ASD:

Free play

Free play is where young people are encouraged to independently explore the environment with different props. For example hoops and the large square skate boards, trampoline, rugby and footballs. This style of warm-up is used before the main whole class warm-up and tends to last for approximately 5-10 minutes and has 3 main purposes and benefits for young people with ASD:

- To provide enjoyment for all children with their own particular interests. This will lead to a positive association with PE
- To give opportunities to explore the environment which will help with the difficulty some students have with transitions from one environment to another.
- To provide the opportunity for the more active students to burn off energy before the start of the lesson.



Individual warm-up

Individual warm-ups are where young people individually walk, run, jump and stretch. This can be used as a form of modelling where they are encouraged to watch each other and learn from each other. It can assist in the setting up of safe behaviour with clear boundaries in PE and provide a high degree of visual prompts for young people with ASD.

Group game

Group games are where young people are comfortable moving around at the same time as their peer's games like traffic lights or Captain's Coming can be very effective in primary settings. If instructions are clear, concise and repeated with a minimal set of rules and a clearly defined space then young people with ASD can access the environment and also develop a sense of social interaction.



Breaking down tasks and activities using STEP

It is generally accepted that the majority of young people with learning disabilities, including young people with ASD, benefit from breaking down tasks into 'bite size chunks' or stepping stones.

The STEP concept of changing space, task, equipment or people can assist teachers in achieving this end although the size of the steps and the speed in which we move through the steps varies dramatically.

STEP stands for:	
	How can I change...
Space	where the activity is happening?
Task	what is happening?
Equipment	what is being used?
People	who is involved?

Example of STEP applied to Hockey

Aspect	Easier	Harder
Space	<ul style="list-style-type: none"> Use a specified area in which some players can take time to control the ball. 	<ul style="list-style-type: none"> Use a smaller area to play the game.
Task	<ul style="list-style-type: none"> Play without an opponent. Use a static feed on practices. 	<ul style="list-style-type: none"> Play with defenders. Use a roll feed on practices.
Equipment	<ul style="list-style-type: none"> Use a slower, larger ball. 	<ul style="list-style-type: none"> Use a faster, smaller ball.
People	<ul style="list-style-type: none"> Give some teams have an extra player. 	<ul style="list-style-type: none"> Use a player to act as a goalkeeper in particular practices.

The notion of breaking down skills is not new for PE teachers however even some of the best open type games and activities can be challenging. Many simple 'open' style games that have a low level of physical skill and are universally played with all age and ability ranges may be completely inappropriate and intimidating. For example domes and dishes (or cups and saucers) is where two opposing teams try to turn over marker cones (one from a dome to a dish and the other from a dish into a dome) within a given time. This game though simple in the physical skill required involves many different concepts to comprehend:

- Random movements
- High speed movements
- Differing tasks
- People moving in close proximity
- Random use of space
- Notion of team work
- Competition etc.

If an ASD pupil is to be successfully included in this type of activity then each of these complex tasks will need breaking down further. The final version of domes and dishes that may be at the right level for an individual or group of young people with ASD may not resemble the traditional games and could involve one or more of these stepping stones:

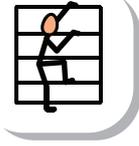
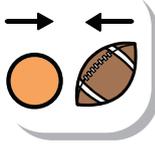
- Introduction to skill of turning markers via PECS and TEACCH strip
- Individually turning markers with visual prompts
- Turning marker over at the end of a relay style activity
- One team turning all markers over and sitting down followed by the opposing team turning them back
- As above with added elements of time – as quickly as possible
- In teams, one person from each team turns a marker over one at a time
- 2 people against each other etc

A young person in King Egberts School was very anxious about the physical contact in rugby and the fact it took place on a different site. The PE teacher worked with him on the contact element. They used a tackle bag and a clothed model of a person lessening his anxiety in a safe environment. The ASD support unit practised the route to the new venue and observed a lesson before he successfully

Activity ideas and the national curriculum

	Dance	Athletics	Gymnastics
STEP principles and how it can support pupils with ASD			
Developing spaces to support learning	The use of smaller spaces through parallel activities within a wider group can ensure repetition of skills	Individual athletic events allow access to specific activities that can be performed in defined areas	Can be delivered in a clearly defined space and small area so ensuring high personal sense of security
Breaking down tasks and activities to ensure small steps	Taught routines using an external focus – scarves , balloons, feathers supports access to the activity	Tasks can be broken down into fundamental activities of agility, balance and co-ordination ensuring easy sequencing. Some activities are static in nature	Individual routines lend themselves to easy sequencing fundamental movement skills of agility, balance, and co-ordination form basis of the activity
Equipment that can support delivery	Music can aid delivery as it provides an external focus	Range of equipment and or basic movements allows easy sequencing	Trampolining provides an opportunity to further develop vestibular and proprioception
Developing social interaction and people	Can be individual, with a partner or interaction as a group.	Relays – passing a baton may provide a modified way also impacts on social interaction and team dynamics	Taught and repeated routines can be built up over time and can be individual or with a group promoting social interaction

Practical strategies and activities

	Swimming	OAA	Games
STEP principles and how it can support ASD pupils			
Developing spaces to support learning	Clearly defined space that can support feeling of security along with the sensory feel from the water	Trails and simple treasure hunts to aid orientation. Walking offers a chance to become familiar with own surroundings	Zoned games and the use of smaller spaces in invasion games can ensure greater inclusion in dynamic games
Breaking down tasks and activities to ensure small steps	Repetitive routines and clearly defined actions can be easily broken down into small steps	Repeated routines in orienteering (use of map and compass) Rowing and static bikes can ensure a focus on a small number of sequences to perform activity	Individual racket sports and adapted games such as Tee ball & Boccia provide more appropriate activities
Equipment that can support delivery	Floatation devices and buoyancy aids can assist access to a learning environment	Using rowing and static bikes can be accessed in small spaces	Using equipment that can isolate a skill (e.g. batting tee) can ensure early success
Developing social interaction and People	Supported movement allows for people to develop full/partial physical assists to enable movement	The development of group and individual challenges can support a range of ASD needs	Working in games with individuals (e.g. tennis) can ensure that the person is more included than team activities

Moving the focus outside the young person

Young people with ASD may find pure movement activities difficult to comprehend or focus on. Having an outside focus may help in encouraging movement exploration.

- Group movement with a parachute may encourage atypical movements and parachute activities can act as an incentive or form part of the structure of each lesson
- Young people can be given an object to distract them from their own movements in gymnastics and dance activities: feathers, balloons, bean bags or scarves
- Music can be used extremely successfully and could act as a way of drawing the focus of the group together to start and finish lessons. The type of music can also assist with calming young people with ASD at the beginning or at the end of lessons
- Using equipment child connects with in PE – where a young person has a particular interest. e.g. If someone loves magnets set up a relay collecting magnets using varied methods and equipment.

“Pupils that cannot express themselves through writing or painting have shown the most amazing results when expressing themselves through dance with music. This success would not have been possible without the use of flags, ribbons and other resources.”

‘One of the biggest barriers to our pupils learning in PE has been the difficulties that a lack of imagination often presents. It has been essential to use a variety of resources to support movement activities and to motivate. This has been essential for enjoyment, progression and expression with all of our pupils.’

Calvin Wallace (2007)



Practical strategies and activities

Using activities that are based on the fundamentals of agility, balance, and co-ordination

Many young people with ASD have poor fundamental movement skills of agility, balance and co-ordination. Therefore sports and activities which lend themselves to focusing on these areas not only support the young people to progress, but also the activity itself can often lend itself to breaking down tasks and activities in a more meaningful way.

Multi skill delivery is an ideal way of improving young people's physical literacy because they are:

- Singular concepts
- Can be very repetitive
- Isolate core skills
- Form the foundation of all movement skills and patterns
- Child centred

Therefore teaching isolated fundamental skills, that form the foundation of physical literacy, are an ideal way of increasing the core skills of young people with autism. Activities which tend to lend themselves to fundamentals tend to be:

- Athletic type activities – running, jumping, throwing
- Swimming activities – propelling themselves in the water through supported access through to formal strokes
- Static but high energy activities – static bikes, rowing machines
- Aesthetic activities (Dance and Gymnastics) – high degree of repetition and movement
- OAA – Simple orienteering activities, walking, following trails or taking part in treasure hunts can contribute to a sense of wellbeing within school and the surrounding environment.



Making sense of team games

The very nature of team games work against young people with ASD due to the number of different facets within the activity such as the multitude of rules, equipment, interaction with their own team and the opposing team, and the activity being played in a single and/or multiple designated space. Combined together in quick succession all of these factors can become overwhelming for a young person with ASD. Finally the concept of winning and losing is a challenging area in itself, and although it may cause conflict and shouldn't necessarily be avoided.

Invasive team games can be especially problematical and some autistic pupils should never be forced into a team game but some can cope with an altered environment developed through a sensitive and carefully thought out approach.

Generally creating more structure to a game can reduce the complexity and therefore increase the likelihood that autistic pupils will be able to be included in a positive way. Reducing the speed and direct competition can also facilitate inclusion. Examples are:

(A) Individual game activities

- Individual type games like tennis, badminton and squash may be easier for many young people with ASD to access. Alternatively consider team games that involve playing individually such as rounders.



(B) Indirect/static style games

- Games can be made more stationary thus removing the interaction with other players. Making the space more confined will also support special awareness and focuses the activity. By removing the movement from a game and using additional supports such as spots that young people don't move from and a visual prompt to indicate whose turn it is to throw or kick the ball can assist positive entry into the game.
- Where there is an element of competition the format of these games makes it indirect and less confrontational. Two such examples are Marbles and Breakthrough.

Marbles

Place a large number of balls on marker cones and place in a long line. Divide group into 2 teams so they are each facing the balls on the markers. Players kick / throw or roll the ball and score if they knock a ball off the marker.



Practical strategies and activities

© Changing the rules of the game to develop more structure:

- Providing a clearer sequence as part of the game will support greater structure for example in a basketball style game team A move and make 6 passes and shoot followed by team B.
- Starting from the basics of the game and then adding single elements can promote greater involvement. For example in rugby a whole team wears tags and can move from one end of a Gym to the other each carrying a ball which they then place onto a set of mats. Defenders can be added in the middle of the Gym and as players have their tags removed they join the defenders.



© Zoning the game to remove direct competition:

- Zoning can ensure that pupils with ASD have their own space to receive, dribble and pass the ball. Zoning also can remove the issue of lots of players invading personal space. Zone Hockey is an example of a zoned game but other invasion games can be as successfully zoned - netball, basketball, football or rugby.
- Zoning enables the ability grouping of players, for example a wing zone can have two players in, one from each side OR a zone can have one player in who has a certain amount of time to receive and pass on the ball.



Team interaction can be changed bringing the game down to a series of one to one challenges:

- In a volleyball type game players have specified numbers and positions that assist them to orientate to the game and it provides a high degree of structure.
- Other examples include using 'paired' activities such as a number invasion game where two teams are given numbers with someone on the opposing team with a similar ability with the same number. The corresponding players from each team can then compete together.



The activity can vary in sophistication:

- running or pushing or hopping
- interaction with team members, e.g. high fives as they pass other team members
- No equipment.
- Sport specific tasks
- Obstacle type tasks



Many disability sport or adapted games have proved popular with autistic young people possibly due to the adapted nature of those activities and the fact they have been simplified in different ways.

Some examples of games that may be appropriate are:

- Boccia (an adapted boules type game)
- Tee Ball (an adapted rounders game)
- New Age Curling (an indoor version of curling)
- Table Cricket (table top version of cricket)







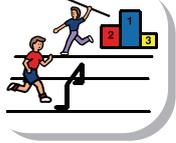
Section 6

Generalising skills

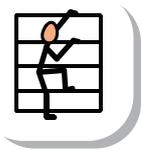
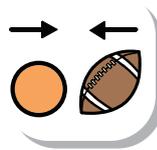
Generalising skills

PE has the potential to enhance much more than young people's physical, personal, creative, emotional and social skills as a basis for learning. Rather it can become a mechanism to support the transference of these skills into new settings and or learning environments.

In an educational context cross curricular planning can be an effective and necessary way to increase transference of basic skills and also enhance subject learning. The grid below gives examples of how PE can support generalising skills:

Subject examples	Dance	Athletics	Gymnastics
			
Science	Heavy and light ways of moving	Materials and properties	Transferring weight foot to foot etc
Geography	Left and right hand gestures	Charts, tally and pictograms of events and who won	Directions and pathways
Maths	Timing and beat awareness	Measuring and distances of throws	Shapes - Straight, curved
Literacy	Exploring describing words – slow, fast, noisy, quiet	Questioning, who? what?	Self evaluation through photo's and videos. E.g. How can we improve? Pointing fingers and toes
PSHE	Recognition of emotions	Working as a team in relay	Working with a partner



Subject examples	Swimming	OAA	Games
			
Science	Floating and sinking	Forces – push, pull	Light and heavy equipment- balls etc.
Geography	North South East West games in pool	Simple map work, reading plans of familiar areas	Colour recognition games
Maths	Number games, collecting objects, floating and underwater	Problem solving – finding biggest, smallest etc.	Scoring and counting
Literacy	Following instructions, one, two, three or four key words	Questioning; whose turn, what happened?	Commenting on what others are doing. Verbs – kick, jump run, throw, catch etc.
PSHE	Dress and undress	Problem solving	Taking responsibility e.g. using a whistle



Increasing a young person's ability to transfer skills from one situation to another can open doors and can prevent an existence with minimal experiences.





Section 7

PE at the heart of the school

P.E. at the heart of the school

Every school has different philosophies and strategies but placing PE and sport at the heart of the school is a common theme across the majority of successful schools that are involving young people with ASD across a variety of subjects. The following are five real illustrations of this approach:

At the Horizon school in Staffordshire children participate in periods of regular physical exercise under the umbrella of the PE curriculum, which includes short periods of jogging throughout the day. This activity enables the children to disperse excess energy and attain the emotional and physical composure and increased self-awareness necessary to access the whole curriculum.

The ebb and flow periods of physical activity throughout the day, and the stimulating and motivating curriculum help children to establish and maintain a daily routine or 'rhythm of life', which include normal patterns of eating and sleeping, without the need for calming medication.

At Cedars Sports College they have an early morning physical circuit where young people go straight into the gym and do a variety of activities: sitting/lying/rolling on giant bouncy balls, lying on and performing pathways on scooter boards, jumping onto crash mats, bouncing on trampettes (with additional throwing/catching), and balancing on stability discs.

Cedars has a growing body of evidence that the activity sessions are having a positive impact on behaviour through self regulation, coordination, speech and language development, students' willingness to engage in classroom activities and their ability to learn.

PE is a core subject of the Landgate curriculum. The school believes that for pupils with autism this subject area provides unique learning opportunities for expression and achievement as well as addressing many of the fundamental factors of Every Child Matters. Therefore the schools IEP policy incorporates PE and each child with have personalised targets for PE during each term.

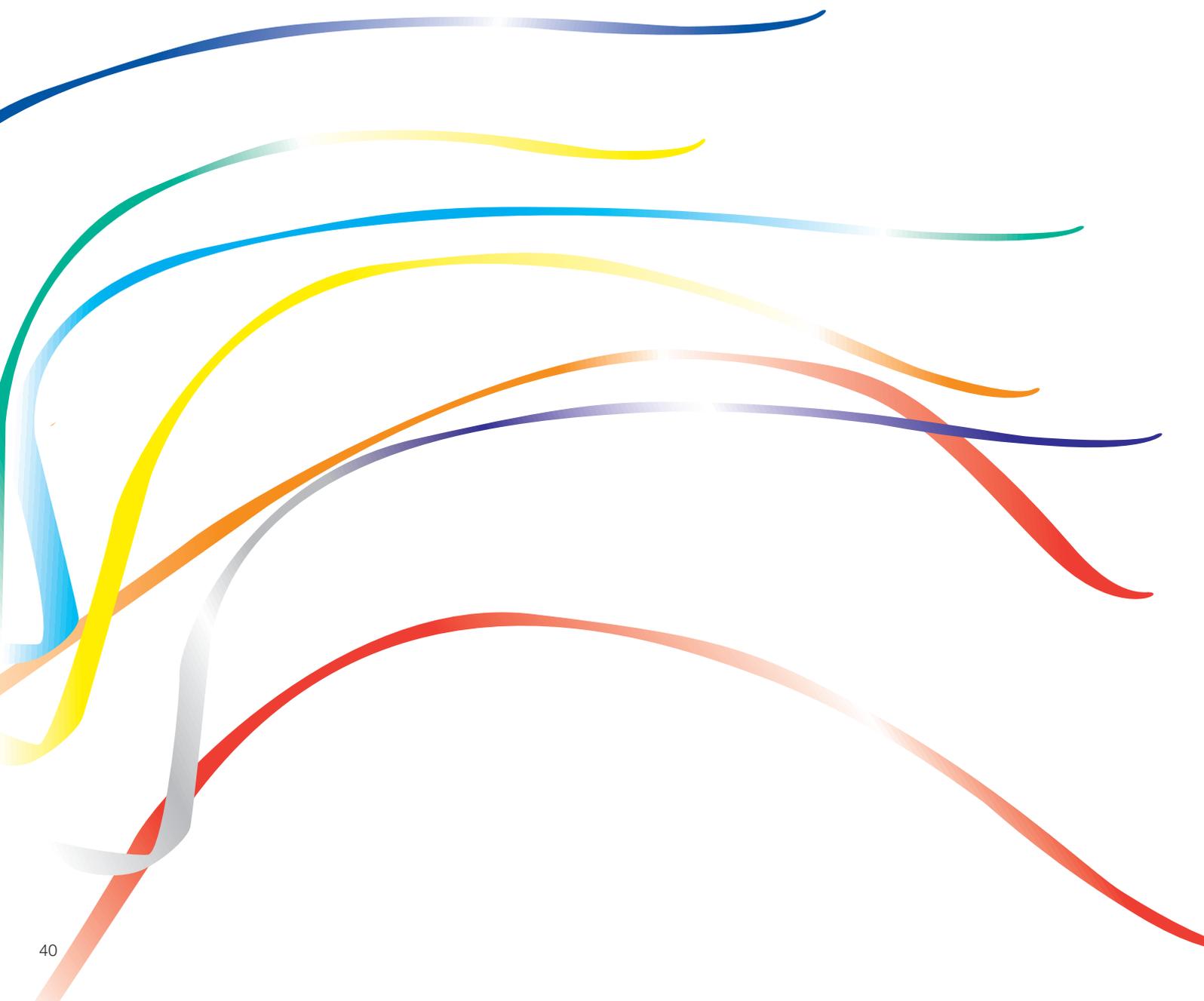
At Woodside School and Sports College particularly successful interventions have been the introduction of video analysis to our KS4 ASD groups. We have found pupils ability levels have increased as they begin to see how their body moves and can relate better to these images.

Through creative use of our fitness suite we are able to offer much more than just physical exercise to our pupils. Our ASD pupils are familiar with the equipment and are able to work independently on the machines, competing against themselves and indirectly against others.

We believe all our pupils should be able to access out of school hours physical activity, so we have begun to tailor our extra curricular programme to ensure it suits all of our pupils, including those with ASD. A notable success has been the introduction of martial arts.

At King Egbert School in Sheffield all young people with an ASD are fully included in all aspects of PE, with a strong emphasis on enjoyment and participation and not on ability levels. In addition young people with an ASD are proactively encouraged to attend out of school hours provision and their PE is supplemented with access to specialist disability sport events and input from outside agencies such as Sheffield Wednesday FC working with discrete groups of young people. This additional input helps to counteract any feelings the young people may have about not being the best when they compare themselves with their peers.







Section 8

General

There is no proven recipe for success in delivering high quality PE to young people with autism and very different approaches have yielded excellent results, but there is little doubt that PE and physical activity can play a very important part in contributing to a positive school experience.

Teaching high quality PE to young people with ASD is a challenge and takes a unique mix of creativity, planning, perseverance, enthusiasm and commitment. When considering how you can improve the level of high quality PE and sport in your school the following are perhaps some of the initial questions you need to consider:

Policy

- Do all young people with ASD experience the same amount of high quality PE as their peers? Does this include 2 hours PE and 3 hours of school and community sport?
 - How does your schools SEN or disability discrimination action plan relate to high quality PE? Does the plan indicate how you can receive the support required in PE from other professionals such as the SENCO or teaching assistants?
 - What small changes could you implement to effect the transition into PE on a daily or weekly basis (e.g. separate place to change or designated place in changing room)?
 - How can you support transition from one year group to another and across Key Stage phases (e.g. Can some uniformity be introduced to all PE lessons through out the school and in feeder schools)?
 - Can other pupils be educated about ASD through PSHE or other mechanisms?
 - Can there be any other additional opportunities for young people with an ASD to access PE and school sport (e.g. early morning circuits or class teachers being supported in delivering cross curricular PE)?
 - How can PE and school sport be used to support learning across the school?
- What support do you have to deliver high quality PE? If you do have teaching assistants supporting inclusion do they have the skills to breakdown activities into fundamental principles?
 - Do you have a series of consistent anchors and routines in your PE lesson that can support a young person with ASD? Can more 'holding activities' be used at certain times during the lesson to add structure (e.g. lying under a parachute)?
 - How do you structure the lesson and use a variety of open, separate, modified parallel and disability sport activities to ensure an appropriate learning environment for both the young person with ASD and their peers?
 - Are there any different activities that can be introduced to achieve the same learning outcomes for the group, but which are more inclusive and engaging for young people with ASD?
 - How can you develop more sensory activities in the PE curriculum and introduce activities that develop proprioception and vestibular development?
 - How can you use a range of additional teaching strategies such as using scarves, feathers or pom poms to encourage movements and the use of music at the beginning or end of lessons?
 - Are there any changes that could be implemented to ensure PE has a positive association at critical times such as warm-ups?
 - Can more visual stimulus be incorporated into a lesson (e.g. Activity cards or TEACCH strips that supports sequencing and communication)?
 - How can you develop a greater range of OSHL and enrichment experiences that support a daily routine based on physical activity
 - Can any external links be made to increase opportunities for young people to access community provision or competition?

High quality delivery of PE and school sport

Use this space to review your PE and school sport delivery

Timescale	Short term	Medium term	Long term
Where are we now?			
What are we going to do?			
How will we know when we have got there?			

Useful reading / contacts

Autism Helpline 0845 070 4004

The National Autistic Society,

Registered office:

393 City Road,

London, EC1V 1NG,

United Kingdom.

Tel: +44(0)20 7833 2299,

Fax: +44 (0)20 7833 9666,

Email: nas@nas.org.uk

The TEACCH Approach to Autism Spectrum Disorders

(Issues in Clinical Child Psychology) (Hardcover)

by Gary B. Mesibov (Author), Victoria Shea (Author), Eric Schopler (Author)

Picture's Worth:

PECS and Other Visual Communication Strategies in Autism

(Topics in Autism) (Paperback)

by Andrew Bondy (Author), Lori Frost (Author)

Children with autism -

Strategies for accessing the curriculum Key Stages 3 and 4

www.sen-northwest.org.uk

Educating Pupils with Autistic Spectrum Disorders.

Martin Hanbury.

Paul Chapman Publishing ISBN 1-4129-0228-2

McGimsey & Favell (1998)

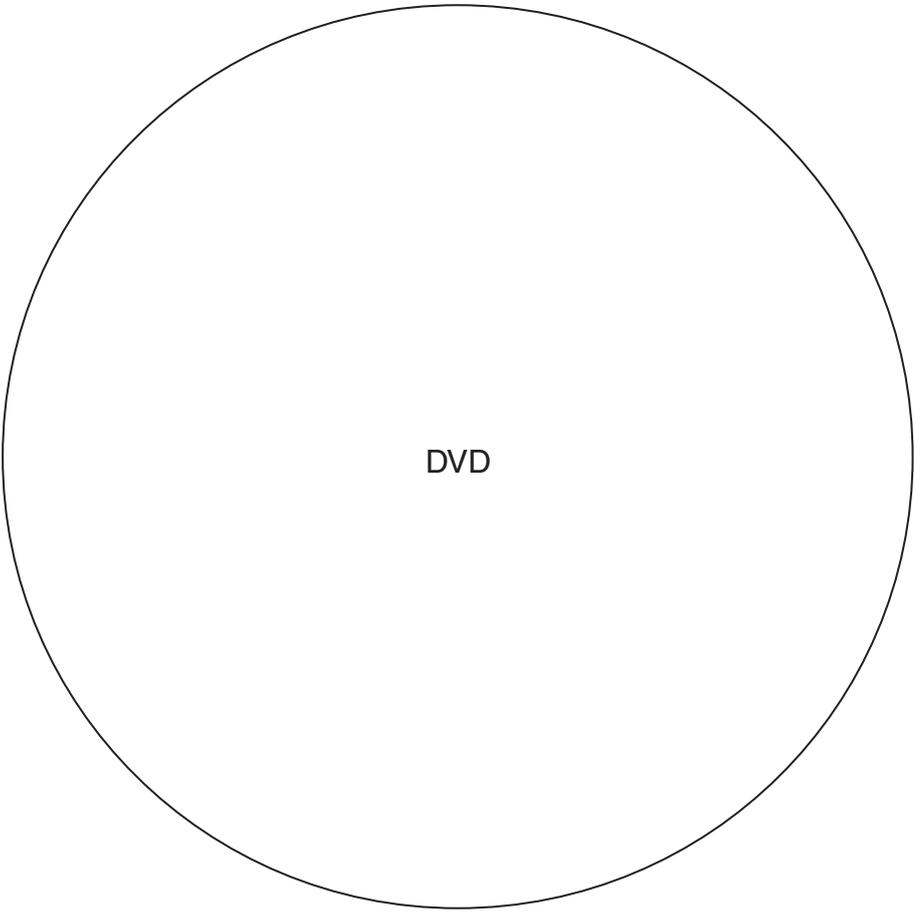
Levinson & Read (1993)

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Registered charity number 1086915

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