

LSIS STEM Special Project

Strategies for Supporting Students with Asperger's Syndrome to Learn Effectively in a Further Education Setting

(This help guide has been specifically written to provide help and guidance to mainstream Science, IT and Maths teachers in a FE setting. However, the document would be a useful tool for anyone who finds they have a learner with Asperger's Syndrome in their classroom)

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What is Asperger's Syndrome?

Asperger's Syndrome (AS) is a condition on the Autism spectrum. It is due to a dysfunction of specific structures and systems in the brain, basically the brain is 'wired' differently. Students with AS experience difficulties with flexibility of thought, social and emotional interaction, language and communication and hypersensitivity. This leads to a high level of anxiety that persists for some or all of the college day.

Flexibility of thought

Difficulty with:

- Coping with changes in routine
- Moving on from one topic to another
- Generalisation of skills and ideas
- Planning and organisation of work
- Answering abstract questions
- Managing unstructured parts of the day

Social and Emotional interaction

Difficulty with:

- Friendships and working cooperatively with their peers
- Understanding the social rules and etiquette of the classroom
- Social niceties (appearing abrupt or rude)

Language and communication

Difficulty understanding:

- Jokes, sarcasm and social use of language
- Literal interpretation
- Body language, facial expression and gesture

Hypersensitivity

Distress caused by:

- Loud or classroom noise
- Bright lights
- Specific smells or textures

Current research estimates that 1 in 250 people have AS, and the ratio of boys to girls with the condition is 4:1.¹ AS students often excel in Science, Maths and IT subjects.

This pack

The aim of this pack is to describe and explain some common issues AS students experience and to suggest strategies that may be successful in helping them to overcome these problems. It is important to remember that each student is an individual; they have different personalities, genetics and backgrounds. They will have had different degrees of intervention over their childhood years and sit at different positions on the AS spectrum.

This pack contains a range of tried and trusted strategies and ideas for improving the outcomes of AS learners in STEM subjects. Different strategies will work better for different students.

Section 1: The first section contains more general strategies:

- Reducing anxiety at the start of the year
- Making lessons AS friendly
- AS students and exams
- AS students and lab work
- AS students and coursework
- AS students and homework
- AS students and group work
- AS students as tutees

Section 2: The second section addresses specific issues the student may experience in your class, such as 'often late to lesson' or 'always having their head down on the desk'. Current thinking on why the behaviour occurs is explained and some strategies are suggested.

Section 3: The final section contains a brief explanation of some valuable tools that are mentioned in the previous section.

- Social Stories™
- Comic strip conversations
- Definitions of some key terms
- Iceberg Analysis
- Information sheet for Lab Technicians
- Start of College Questionnaire
- Behaviour Chart
- References and Websites

Section 1:

General Strategies

- Reducing anxiety at the start of the year
- Making lessons AS friendly
- AS students and exams
- AS students and lab work
- AS students and coursework
- AS students and homework
- AS students and group work
- AS students as tutees

Reducing Anxiety at the start of the year

Strategies:

- Invite the student to visit before the start of college so they can orientate themselves around the campus, see the layout of classrooms, meet the teachers, librarians, technicians and learning support staff in a relatively quiet and student free environment. Providing the student with photos of key staff should also be considered.
- Invite the student to taster lessons before they start full-time college.
- Do not make any changes to the student's timetable once it has been issued, unless essential.
- Laminate the student's timetable as it tends to be referred to for every lesson throughout the year and does not get committed to memory. It also gets lost at the bottom of a disorganised bag.
- Ensure the student knows where the classrooms are and what time lessons start and finish. If the student is open to support, the assistance of an LSA would be useful on the first day.
- Ensure the student is warned in advance of any room or teacher changes.
- Think carefully about any ice breakers you use to help get the class to know each other. AS students will usually find social situations or speaking publically very stressful.
- Consider having a 'reserved' seat for the AS student so they know beforehand exactly where they will be sitting.
- AS student will perform better in a smaller, quieter class.
- Once they have settled in a particular desk, do not to move the AS student unless essential.
- The learning support team may have asked the student to complete a start of year questionnaire to find out where their anxieties lay (example included in the section 3). This provides valuable information for the teacher and can act as a good starting point to make the AS student feel more comfortable in class. On the basis of the questionnaire the teacher might agree a set of classroom rules with the student.

Making lessons AS friendly

Strategies:

- Tell the students at the beginning of each lesson what is going to be covered in that lesson and approximately how long will be spent on each topic area. It is important they understand what the lesson is going to 'look like' from start to finish.
- Be very explicit with the instruction you give to an AS student. Often what seems obvious to neurotypicals is not to them. Spell out exactly what needs to be done.
- Ensure homework has a hand in date on the front of it. Print homework assignments on different coloured paper making them harder to lose.
- Send important information home by post rather than giving it to the student to take home
- Maintain a quiet, uncluttered and well organised classroom. Poster displays around whiteboards or smartboards can be particularly distracting for AS students.
- Use the student's name before addressing them as often they will not realise the instruction or question is directed at them.
- Warn AS students in advance if there is going to be a change to the usual classroom or class teacher. Unless essential, do not ask them to change seats in the classroom.
- Give AS student warnings that they will soon be asked to finish what they are doing and be moving on to the next topic.
- Print work books and handouts for each topic on a different colour paper. Ensure all handouts are hole-punched and keep a supply of treasury tags handy.
- Give instructions in the order they need to be carried out. It is best not to explain the next task before the first task is completed as this can cause confusion. Set a time limit for each task.
- Give a clear physical demonstration of what the student needs to do. AS students are predominantly visual learners, so this is the best way of conveying what is required of them. If this is not appropriate, more complex tasks are best presented in both a verbal and written format.
- Keep classroom noise to a minimum or allow AS students to work in a separate quiet room if they are showing signs of anxiety.

- Allow the AS student to sit on their own at the back of the room if that is their preference. Forcing them to sit next to a peer can make them very uncomfortable and anxious.
- Issue AS students with handouts at the start of the lesson so they can annotate with extra notes rather than having to write everything down. AS is often accompanied with dyspraxia which affects the fine and gross motor skills and this means handwriting can be large and frequently untidy. Also AS students may find it difficult to concentrate on verbal (teacher talking), visual (looking at the smartboard) and taking notes at the same time
- Consider asking the student if they would benefit from using a Dictaphone in class. Due to weak executive function (for definition see section 3), AS students can easily lose focus. Recording the lesson would allow them to listen again at their leisure.
- Use mini whiteboards in the classroom as an alternative to 'hands-up'. These can be a real benefit to AS students as they can write big and hold up answers rather than having to answer verbally to the teacher.
- Break longer more complex tasks down into smaller chunks.
- Be explicit with any feedback you give. 'Needs more detail' is of no help to an AS student.
- Do not to use metaphors, idioms, figures of speech or sarcasm as these can confuse AS students who tend to take language very literally. They are also very poor at reading messages conveyed through body language or tone of voice. Be explicit.
- Keep copies of essential coursework and experiment results as AS students can be highly disorganised.
- Be aware that AS students can become frustrated and angry very quickly. Common causes can include:
 - A teacher or another student breaking a 'rule'
 - Dealing with questions where there is more than one correct answer. E.g. Is light a particle or a wave? Answer: it can be either
 - Not understanding how to do a question or calculation
 - Being told what they learnt at GCSE is not correct. Building on theories at A level often means that GCSE simplifications are seen as lies
 - Noisy classrooms
- Note that AS students can unintentionally come across as quite rude. They have a strong allegiance to the truth and many never tell lies, not even white ones to be polite. They also lack the social niceties of typical students as they don't naturally pick up the social norms.
- Do not be offended if the AS student finds it difficult to make eye contact with you. This is a trait of their condition rather than insolence or rudeness on their part.

AS students and Exams

- Practice exam style questions. AS students may need extensive practice at certain types of exam questions that they find difficult to understand. They may struggle with:
 - Questions with a lot of information, only some of which is relevant to the question
 - Complex questions requiring the students to perform several sequential tasks
 - Any implicit or slightly ambiguous wording in the question
- Be aware of possible rigidity issues. AS students make sense of the world by applying rigid routines. For some students this means they will only answer the exam questions in the order they are given on the exam paper. If they are finding a particular question difficult they may not be able to move beyond it. The student will need practice at doing this beforehand or if the exam board allows they may be entitled to a prompter in the exam.
- Practice with the scribe. If the student has very slow and/or poor handwriting they may be entitled to a scribe. It is important they do practice papers with the scribe beforehand, particularly in maths papers where the student will need to describe mathematical symbols and be explicit about the answer layout.
- Revision planning is essential. AS students can be poor at planning and organising themselves and will need help in planning their revision. A revision timetable is essential and it is important that parents are made aware of the level of home revision expected. Ideally the timetable should state specifically the topics to be revised in each session. Some students may benefit from attending college during study leave where they can revise in a quiet room away from the distractions at home.
- Have a range of revision materials available. For students who find it difficult to revise from class notes, past exam papers, published revision guides and online revision sites such as My Maths or Best Choice can be effective.
- Make AS students aware of what is and isn't included in any formulae booklet. Provide your students with a list of any equations or formulae they will need to recall from memory.
- Take your AS student to the college exam assessment centre at the start of term. AS students will need to be assessed to determine what exam arrangements are required. They may be entitled to:
 - Extra time
 - Separate room
 - Reader and/or scribe
 - Prompter
 - Rest breaks
 - Permitted to listen to music
 - Transcription of their paper
 - Oral Language Modification

AS students and Lab work

- Assess the need for practical assistance. Students with AS often have an associated diagnosis of dyspraxia. This can affect gross motor skills resulting in clumsiness and/or fine motor skills making precise work difficult. Students affected may require the help of an LSA during practical lessons, they may also be entitled to help from a practical assistant during for practical exams and coursework.
- Be aware of hypersensitivity issues. AS students often experience hypersensitivity in one or more of the senses. This may mean they are unable to tolerate bright lights, certain smells or textures, or have a strong aversion to certain types of noise. Give AS students advance warning of loud chemistry 'explosions' or any reactions that are likely to give off strong smells. For some students even the low hum of an electric motor can be intolerable. Be aware of the possibility of hypersensitivity and allow the student to leave the lab if they find it too difficult to tolerate. The use of ear defenders or less obvious ipod headphones may be a solution.
- Look out for obsessive behaviours especially around hand cleaning. AS students may be reluctant to take part in experiments that involve getting their hands wet or dirty. Also they can be 'excessively anxious' about getting chemicals on their hands and over react to harmless and inconsequential spillages.
- Think carefully about pair work. A high level of anxiety and bad experiences at secondary school, often means that AS students are hesitant about performing practical tasks with their peers. A successful outcome is more likely if: the working partner is carefully selected by the teacher, written as well as verbal instructions are given and the teacher helps by assigning roles to each of the students.
- Ensure instructions given to AS students are very explicit. Do not to use metaphors, idioms, figures of speech or sarcasm as these can confuse AS students who tend to take language very literally. They are also very poor at reading messages conveyed through body language or tone of voice.
- Ask specific open questions when checking the student is making satisfactory progress. 'Are you OK?' is usually met with 'Yes' even if they aren't. Some AS students find it very hard to ask for help when they are stuck because they find it hard to articulate exactly what the problem is.
- Be explicit with your comments when giving feedback on the student's work. 'Needs more information' does not help AS students who can't infer what you are looking for.
- Make your lab technicians aware of the students in your class who have AS. It would be useful if they had a basic understanding of the condition and kept an eye on them in lab sessions. A lab technician information sheet has been included in this pack.

AS student and Coursework

- Provide structure and planning guidance. AS students have difficulty determining what is relevant information and what is redundant. This makes extracting summary information from text difficult. They also lack the ability to decipher an overall pattern or create a mental framework on which to hang pieces of information. This makes the planning and organisation of a large piece of coursework very challenging. The following strategies may be useful:
 - Provide as much structuring to the coursework as the exam board will allow
 - The student may need to consider forfeiting some 'worked independently' marks to get extra help with planning and structuring
 - Break tasks down into smaller more manageable chunks
 - Provide the student with a detailed timetable of what needs to be completed by when
 - Introduce the student to mind mapping software such as 'Inspirations'
 - Be as explicit as possible with all instructions
 - Ensure the student has access to the mark scheme and fully understands where the marks are allocated
 - Keep the coursework subject as simple as possible playing to their strengths wherever possible. Often AS students are good at maths so steer them towards a project which will allow them to pick up marks for using some complex maths equations
 - Give constructive and explicit feedback....'needs more detail' is of little help to an AS student
- Be aware that searching for information on the internet can cause AS students intense frustration. They find it difficult to accept that different sites may hold apparently conflicting facts and get frustrated when the search engine doesn't turn up the information they are seeking. If the student is likely to find this type of research stressful it may be advisable to select a topic that doesn't require extensive background research. Alternatively, your college skills centre or library may offer 1:1 tuition on using the internet successfully.
- No alternative strategy. AS students are known to have less flexibility of thought than typical students. This means that they often don't have an alternative strategy when something doesn't go according to plan. It is important to recognise that this can happen and to check on the student's progress on a regular basis.
- Time management can be an issue. AS students also have a compulsion for completion which may cause time management issues. It's not uncommon for the student to become too engrossed in one area of the coursework, not leaving sufficient time to complete the full assignment. In addition it is very easy for an AS student to go 'off topic' without realising it. Again, it is important to keep a close eye on the student's progress.

AS students and Homework

AS students are notorious for not completing homework assignments. There are several possible explanations for this:

- Exhaustion from a day at college. AS students experience high levels of anxiety throughout the college day. They also have to learn the social curriculum as well as the academic one which leaves no downtime during the day. Many AS students also have poor sleep patterns leaving them permanently tired.
- A rigid cognitive profile draws a very clear line between college time when they are expected to work on academic tasks and home time when they are free to choose their own activities. If the student does not have an established (and usually timetabled) homework routine already in place from secondary school, it can be difficult to introduce.
- Some able AS students find the concept of homework illogical especially if they don't feel they need the consolidation. Unlike typical students they feel no pressure to conform or 'please the teacher'.
- Poor organisation and planning skills means that homework is regularly forgotten about or lost in the student's over-stuffed and disorganised bag.

Strategies:

- Ensure the student writes all homework into their homework planner or electronic diary
- Print homework on different coloured paper and ensure it is placed in a section at the front of the student's file
- Ensure a hand-in date is written on the homework assignment.
- Send your student to study support sessions to help them improve their planning and organisation skills
- Get parents involved by asking them to timetable homework study periods at home.
- Timetable 'free periods' on the student's timetable as 'homework time' or 'study period'. This can be very effective especially if the student is assigned a quiet room to work in and has someone (such as an LSA) they can go to if they experience problems.
- Ensure the homework task is unambiguous. Highlight important information and add any comments that might help make it more explicit.
- If all else fails, seriously ask whether the homework is necessary for this student.

AS students and Group work

Their lack of social skills and inability to read the social cues of others can make AS student very anxious about participating in group or pair work. They may not engage with other group members and not be willing to take any active part in the group. Alternatively, the AS student may take over the group entirely, not listen to the opinions of others, thereby alienating other group members. AS students lack Theory of Mind, which means they can't see things from another person's perspective. This means they can lack the key skills of negotiation and compromise.

Strategies:

- Find out at the beginning of term if the student is willing to work with other students
- Actively decide who they should work with rather than opting for a random selection technique
- Assign specific roles within the group, but take care that these roles don't overlap.
- If the student isn't happy working with other students perhaps they would work with an LSA or in a group with an LSA
- If working with others is not an option, be willing to differentiate and set them work they can do on their own.
- If the student is alienating themselves within the class, it is important that they are taught the correct social rules of the classroom. Speak to the student out of the classroom or refer them to your support department who can use techniques such as social stories™ or comic strip conversations.

AS students as tutees

- Keep meeting times consistent. AS students need more organisation and follow-up than typical students. To ensure attendance, hold 1:1s at regular time slots on the same day of the week and ensure it is written on the student's timetable.
- Ask open and probing questions to check on progress.
- Send any important information home by post
- Ensure the student has somewhere 'safe' to go at lunch-time and in their study periods. A quiet tutor base or the library are ideal. Many AS students feel anxious during unstructured 'out of lesson' time and need to be told where to go and what to do during this time.
- Be aware that AS student applying to university will need more help and guidance than typical students both in choosing appropriate course and universities, as well as applying for Disabled Student's Allowance (DSA) and writing personal statements.
- Be aware of mental health issues. Unfortunately AS students can be more prone to mental health issues such as depression. If you have concerns refer them to your college support department or counsellors.

Section 2:

Specific Issues

- Little or no eye contact
- Anti-social habits
- Sitting alone at the back of the classroom
- Pacing the classroom, rocking backwards and forwards or fiddling with things in lesson
- Head on the desk
- Not cooperating fully in class
- Tantrums
- Correcting the teacher or becoming angry because the teacher has made an error.
- Blaming external factors on their inability to solve a problem
- Missing or arriving late to lessons
- Not volunteering to answer questions in class
- Anxious about asking for help
- Slow and not completing all the work set in class
- Regular problems understanding what they need to do
- Work file very disorganised
- Maths calculations poorly laid out
- Insufficient or no working shown
- Difficulty in moving on to the next topic
- Talking over the teacher or other students in class
- Asking for too much help and attention in class

Specific issues

Behaviour: Little or no eye contact

Origin: In general, AS students do not feel comfortable making eye contact. Some will have been taught strategies to overcome this and as a result may hold eye contact for too long.

Strategies: Accept this is an issue for the student and don't insist they look at you when you are speaking to them.

Behaviour: Anti-social habits (e.g. nose picking, burping, poor hygiene)

Origin: Usually a result of poor self awareness or a lack of awareness of the social rules of what is polite in public. The student is unable to understand that others will find the behaviour offensive as the AS condition makes it difficult for the student to look at their behaviour from another's point of view.

Be aware that some unusual behaviours such as repetitive throat clearing, head nodding, facial grimacing or sniffing may be due to a motor tic associated with the AS condition. This is out of the control of the student.

Strategies: Speak to the student in private. Be matter of fact, concrete and directive about the issue and what action needs to be taken.

If the behaviour is likely to lead to bullying and further social exclusion, speak to a member of the learning support team or parents who can use **social stories™** to teach the student acceptable behaviour.

Behaviour: Sitting alone at the back of the classroom

Origin: AS students often prefer their own space. They may be hypersensitive to touch and anxious not be in close proximity to another individual.

Strategies: Unless there is a health and safety risk, leave the student where they are happy sitting. As the year progresses and the student becomes more comfortable, the teacher may be able to encourage them to another location closer to their peers. Try to avoid getting too close to a student when speaking to them as they can find it intimidating.

Behaviour: Pacing the classroom, rocking backwards and forwards or fiddling with things in lesson.

Origin: These types of behaviours are often comforting to the AS student and a way of reducing stress and anxiety. Also there will be a lack of awareness of the expected behaviour in the classroom as AS students do not intuitively pick up and learn social cues from others.

Strategies: Unless it is presenting a H&S issue or making the student a target for bullying, allow the behaviour to continue as it is likely to make the student feel more relaxed in the classroom. Sometimes encouraging fiddling with an age appropriate, socially acceptable object (such as blu-tak) can make the behaviour less obvious to peers. If it becomes an issue the behaviour can be tackled through the use of **social stories**™.

Behaviour: Head on the desk

Origin: The student may be experiencing sensory overload. This may be due to the student struggling with processing visual and auditory input at the same time or down to the classroom environment being too bright or noisy.

Alternatively, the student may be suffering from extreme tiredness. Having AS can be exhausting and is often accompanied by poor sleep patterns.

Strategies: The student might benefit from advance handouts at the beginning of the lesson or using a dictaphone to record the lesson. Alternatively, an LSA may be able to take notes in class while the student concentrates on listening.

Assess the classroom environment for possible sources of hypersensitivity. The AS student may be hypersensitive to bright lights, particular colours of light, high noise levels, specific sound frequencies or specific smells.

Behaviour: Not cooperating fully in class

Origin: Some AS students are not aware that instructions are being directed at them unless their name is expressly used and the instructions are explicit. The statement 'we are going to be working from chapter 10 today' will not necessarily register as 'I need my text book out and open at chapter 10'.

AS students don't naturally take cues from their peers and may need constant reminders of what they need to do at various points in the lesson.

Strategies: Be explicit with instructions and use the student's name if appropriate.

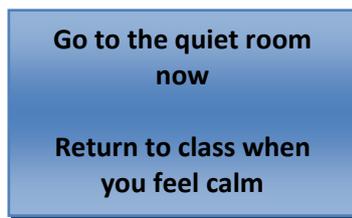
Sometimes **target charts** are useful in teaching students good classroom routines. An example of one that has been successfully used in college is included in the tool section.

Behaviour: Tantrums

Origin: The rapidity and intensity of anger, often in response to a relatively trivial event, can be extreme. Sometimes the student with AS only has two anger settings (2 and 10) rather than the graduated dial of the wider population. When feeling angry the person with AS does not appear to be able to pause and think of alternative strategies to resolve the situation.

Strategies: Once the student is on the crisis curve little is effective at stopping the tantrum in its tracks. Intervention with a visual cue card or short instruction is usually the most effective solution.

Using a calm and assertive voice, instruct the student to 'go to the quiet room now and return to the lesson when you feel calmer' or give them a card with this instruction on it



Visual instructions tend to be more effective than verbal ones as they are easier for the AS student to process in an agitated state. If you do use verbal instructions, don't use preamble, keep the instructions explicit and to the point.

With violent or highly volatile students a specific procedure should be put in place which is adhered to by all staff working with the student. The student should be 'trained' in the procedure so they know exactly what will happen when they have a violent eruption in class.

It is important to understand what triggers these tantrums so that action can be taken to help the student manage their anger and frustration in a more constructive manner. **Iceberg problem analysis** or the use of **comic strip conversations** will help get to the cause of the problem. These tools can be used by an educational psychologist or trained individual in your Support Department.

Self management of anger can be taught to some AS students. They will display a card on their desk to indicate their current state of anxiety (usually a specific colour or number) or use a card as an exit pass if they need to leave the classroom to calm down.

Behaviour: **Correcting the teacher or becoming angry because the teacher has made an error.**

Origin: One reaction that some AS students can develop as a defence mechanism to having AS, is to appear quite arrogant, with very high expectations of themselves and others. They can expect their teachers to have infinite knowledge on a subject and be intolerant of any mistakes they make.

Strategies: AS students are not known for their diplomacy, so don't take it personally and explain teachers can make mistakes as well.

Behaviour: **Blaming external factors on their inability to solve a problem**

Origin: This is often a self-defence mechanism. School and college are about two things: learning and socialising. If one area is deficient, the other takes on more significance and is strongly linked to self esteem¹. This coupled with a weak executive function makes it difficult for them to consider alternative problem-solving strategies. Examples can include a student being convinced their calculator is malfunctioning rather than they have plugged in the calculation incorrectly.

Strategies: If explaining the error they have made or suggesting alternative strategies is not effective, then giving the student a written example or mark scheme can be a better strategy. This way they can work through the problem themselves.

Behaviour: **Missing lessons or arriving late to lesson**

Origin: With an AS student lateness or missing lessons is unlikely to be down to laziness, arrogance or a desire to irritate the teacher. It is more likely down to an AS trait or issue which is then resulting in lateness to the lesson. For example, research has shown that lateness can be down to factors such as:

- an overriding fear of entering a classroom full of people
- a series of pre-lesson rituals that take longer than the lesson change over allows.

Strategies: The key is not to jump to conclusions but to get to the root cause so appropriate solutions can be sought. If the student is unable or unwilling to clarify the problem then **Iceberg problem analysis** of the issue can be an effective way of getting to the root cause of the problem.

Issue: **Not volunteering to answer questions in class**

Origin: AS students often experience a high level of anxiety about being the focus of attention in the class. They can be excessively anxious about getting the answer wrong and appearing 'stupid'.

Strategies Make use of individual whiteboards for students to write their answers on, then ask everyone to hold them up for the teacher to see.

Multiple choice questions and voting with smart response handsets or ABCD letters held up in class.

The student can be issued with a coloured card they keep in their lesson file. The student puts the coloured card on the desk to indicate they are happy to answer questions at this point in the lesson and removes it if not.

Issue: Anxious about asking for help

Origin: The student may be anxious at drawing attention to themselves, or know from previous experience that they find it difficult to articulate what they don't understand. AS students often find it difficult to explain their thought processes and this can lead to anger and frustration.

Strategies: A red/amber/green traffic cone system can be used by the AS student or the whole class. Up-turned coloured paper cups are used to indicate if the student has a problem that requires teacher intervention.

RED – I need help and can't progress

AMBER – I need help but it's not urgent

GREEN – I'm fine at the moment



Alternatively, if this is too 'obvious' for the student, a red piece of coloured card placed discretely on a corner of the desk can do the same job.

It is a good idea to ask open questions when checking if the AS student is progressing well with solving a problem, as they will often say everything is fine to a closed question even if it isn't.

If the student has trouble explaining their issue or thought processes, offer them the opportunity to see you after class or at lunchtime. Without the whole class present the student will usually find it less stressful and intimidating to explain their problem.

If your college runs lunchtime 'help sessions' and you feel it would be helpful to the AS student to attend, it is important that the session is added permanently to their college timetable. AS students work best with a structured routine and things that fall outside this routine tend to get forgotten.

Issue: Slow and not completing all the work set in class

Origin Many AS student have problems with their fine motor skills which means their handwriting is large, slow and untidy. Also due to issues with weak central coherence some students are slower at processing or liable to frequent lapses in concentration.

Strategies: If the student is unlikely to complete the full exercise, instruct the student explicitly which questions to attempt – picking a range of easier and harder questions

Timetable the student to attend lunchtime help sessions (if available) where they can complete the rest of the work. It is important these are actually written on the student's timetable otherwise they are unlikely to attend.

If timetabling and class sizes allow, it can be helpful for a particularly slow student to attend the same class again, so they sit through each lesson twice.

If the student's handwriting is very poor they may require the help of an LSA who can scribe answers for them. Also, it may be helpful to print off smartboard notes that have been made by the teacher during the lesson.

Some AS students can concentrate better when wearing headphones (with music or just blocking classroom noise)

Issue: Regular problems understanding what they need to do.

Origin: This issue could be caused by a number of problems:

If the classroom is noisy or has lots of visual distractions the student may 'tune out' of what the teacher is saying, missing important information.

The student may need a few additional seconds of processing time to take in information.

Complex instructions with lots of pre-amble and superfluous information can be very hard for AS students. They are often distracted by irrelevant detail and don't automatically know which are the key points to concentrate on.

The student may not understand the meaning of what you have said. AS students can take verbal communication very literally, and then miss your intended meaning, especially if it was implicit or wrapped up in a figure of speech.

Strategies: Minimise environmental distractions, particularly visual distractions around the whiteboard and smartboard.

Give the student a practical demonstration of what is required or written as well as verbal instructions. Ensure instructions are given in the order the work needs to be done.

Give ample 'pause time' for the student to process the question. Don't feel uncomfortable with short silences or if the student loses eye contact with you. Do not be tempted to rephrase the question immediately as this can be annoying for the student who then has to start the processing function all over again.

For complex questions with lots of steps or information it may help to highlight the important information. It can also help if the task is broken down into smaller more manageable steps.

Ensure all instructions are as explicit as possible. Avoid the use of metaphors, idioms, figures of speech or sarcasm as these can be confusing.

Issue: **Work file very disorganised.**

Origin: This is an issue for many AS students. Poor executive function means they have difficulty in organising and planning work, prioritising what needs to be done first and general time management.

Strategies: The student needs to be actively helped with organising their work, whether this is done by a teacher, LSA or parent. If A4 files are used, ensure any handouts are hole punched otherwise they are unlikely to make it into the file. If this doesn't work, coloured and labelled A4 plastic files can be used, where the student just puts the class work into the right coloured file.

Colour-coded files by subject are a good idea and having different unit workbooks printed on different colour paper can prove effective in improving organisation.

It is a good idea to have a homework file divider at the front of the file where all homework is put.

Often a member of the learning support team/skills centre will help in keeping the student on track with their work organisation.

Issue: **Maths calculations poorly laid out**

Origin: The student may have poor fine motor skills affecting the size and readability of their handwriting.

Poor organisational skills may mean a good layout is not obvious to them. There may be large sections of crossing out.

It may not be obvious to the student which steps in the calculation they are expected to show.

Strategies: Give the student worked paper examples showing how different types of questions should be laid out.

If their handwriting is very poor they may require an LSA to scribe for them in class and in exams.

Issue: **Insufficient or no working shown**

Origin: The student may not see the point in showing all the steps in their working, especially if it doesn't explicitly ask for this in the question.

AS brains are 'wired' differently so they may not see 'steps' in the calculation that seem obvious to typical students.

It is possible that some exceptional student can look at a question and 'see' the answer without going through any steps at all.

Strategies: Where marks are awarded for showing the working, the student will need to be taught what steps need to be shown. Example answers and exam board mark schemes may prove useful.

Issue: **Difficulty in moving on to the next topic.**

Origin: Many AS students have a compulsion for completion and can get agitated if they are asked to move onto something new if they haven't completed the work they are on.

Strategies: Inform students at the start of the class what you intend to cover in that lesson and how much time will be spent on each topic.

Give AS student warnings that task time for that particular question is coming to an end shortly and they need to be prepared to listen to the next part of the lesson.

If the student is not likely to complete the exercise in the allotted time, ask them to complete a more limited range of questions.

Issue: **Talking over the teacher or other students in the class.**

Origin: AS students are not intuitively aware of the social rules of the classroom and can sometimes appear rude by talking over the teacher or other students. They may talk for 'too long' and not pick up the teachers body language or implicit comments to 'stop talking now'.

Many AS students have a particular topic area that they are very knowledgeable about and like to talk about given half an opportunity. It can be difficult to stop them once they are in full flow.

Strategies: Be polite, but firm and explicit with the student when asking them to stop a particular action.

Speak to them away from their peers explaining what normal classroom etiquette is, e.g. raising your hand to ask a question.

If the problem persists ask your Learning support department to tackle the issue with a **social story™** or **comic strip conversation**

Issue: **Student asks for too much help and attention in class**

Origin: The student may be highly anxious and concerned about getting things wrong. Often the student does not realise the rules of the classroom in terms of how much teacher attention they can expect in a lesson.

Strategies: Give the student written as well as verbal instructions

Use the red/amber/green traffic cone or card system. The student uses cones or cards to indicate their status rather than having their hand up or calling out in class.

RED – I need help and can't progress

AMBER – I need help but it's not urgent

GREEN – I'm fine at the moment



Speak to the student and agree when and how many questions they can ask in a lesson. Start with a relatively high number and gradually reduce it to an acceptable level.

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Section 3:

Tools and Information

- Social Stories™
- Comic strip conversations
- Definitions
- Iceberg Analysis
- Asperger's Syndrome - Information sheet for Lab Technicians
- Start of College Questionnaire
- Behaviour Chart
- Further reading and Websites

Social Stories™

Social stories are used to promote social understanding in people with Autism Spectrum Disorders. They describe a situation, skill or concept in terms of relevant social cues, perspectives and common responses in a specifically designed style and format.

For more information:

Gray C (2010) The New Social Story Book. Arlington. Future Horizons.

<http://www.thegraycenter.org/social-stories>

<http://www.autism.org.uk/living-with-autism/approaches-therapies-and-interventions/skills-based-interventions/social-stories-and-comic-strip-conversations.aspx>

Comic strip conversations

These combine stick-figures with "conversation symbols" to illustrate what people say and think during conversations. They are very useful for explaining other people's thoughts and feeling to Asperger students.

For more information:

Gray, C (1994) Comic strip conversations. Arlington. Future education

<http://www.autism.org.uk/living-with-autism/approaches-therapies-and-interventions/skills-based-interventions/social-stories-and-comic-strip-conversations.aspx>

Definitions

Theory of Mind (ToM): This is the ability to put oneself into someone else's shoes, to imagine their thoughts and feelings and to make sense of and predict their behaviour. AS student's lack ToM: they do not intuitively pick up the unspoken classroom rules and etiquette. They may come across as abrupt or rude and show a lack of tact and diplomacy. In some cases they may alienate other students by refusing to negotiate.

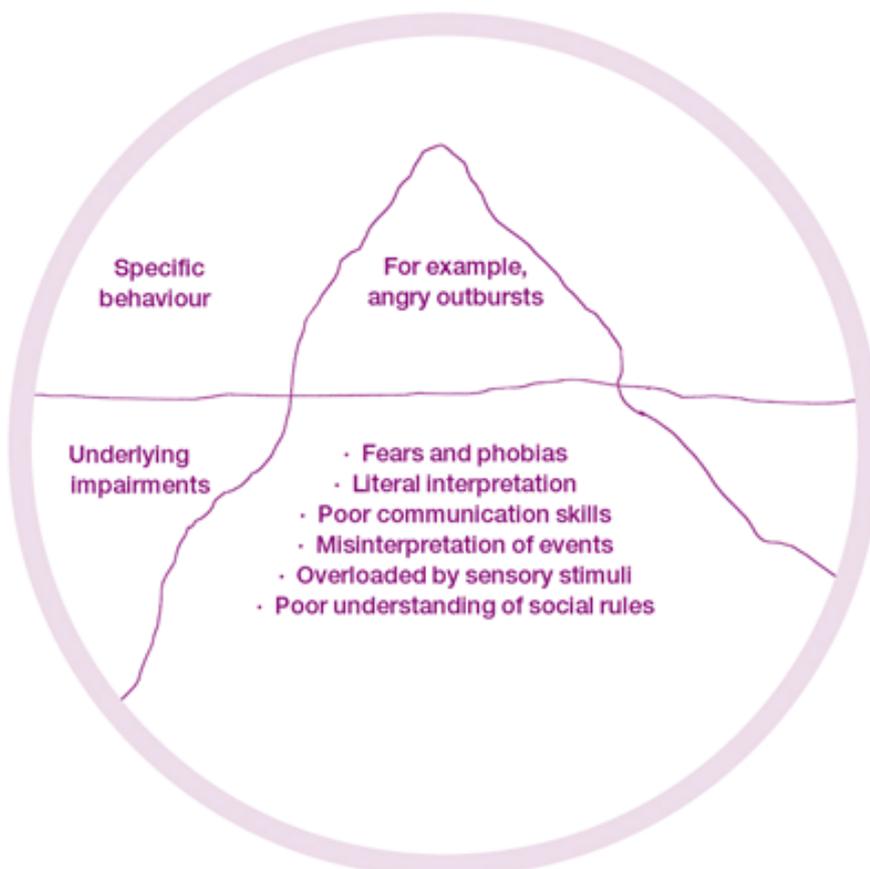
Weak Executive Function: Students with AS have problems integrating information to form a coherent, global picture. Instead they tend to focus on small, local details and fail to grasp the overall concept. This can manifest itself in the classroom, in a number of ways:

- easily distracted.
- train of thought goes off at a tangent
- difficulty in formulating a plan or structure a piece of work
- difficulty in knowing where to start and what to include in a piece of work

Iceberg Analysis

This technique is very useful for getting to the root cause of a problem. Often it is easy to jump to a conclusion without considering all the possible reasons for a particular behaviour. This is particularly the case with Asperger students.

- Describe the behaviour using clear language
- Brainstorm as many reasons for the behaviour as you can with a team of people
- Select the most likely reason based on:
 - Knowledge of the pupil responses
 - Communication function of behaviour
 - Context of behaviour
 - Triggers of behaviour
 - Result of behaviour
- Brainstorm strategies based on your hypothesis
 - Change environment
 - Teach new skills
- Put strategies in place
- Watch and wait
- Evaluate or re-visit step 2 start all over again



Asperger's

Syndrome: Information sheet for Lab Technicians

Aspergers's Syndrome

(AS) is a condition on the Autism spectrum. It is due to a dysfunction of specific structures and systems in the brain, basically the brain is 'wired' differently. Students with AS experience difficulties with flexibility of thought, social and emotional interaction, language and communication and hypersensitivity. This leads to a high level of anxiety that persists for some or all of the college day.

What this might mean for you:

- Last minute changes to equipment, solutions or the lab layout may upset the AS student. Routine and sameness help to make an AS student feel secure in an unpredictable world. Any unexpected changes can unsettle them.
- Their behaviour may appear unusual or rude. Many social skills are not intuitive to people with AS and it can be easy to misinterpret their abruptness and lack of social niceties for rudeness. You may need a thick skin as a defence against the directness of the student.
- Please be aware that some students with AS are hypersensitive to sensory stimuli. This may mean loud noises, bright lights or strong smells illicit an extreme response. Some AS students don't like the feeling of some textures and often have an aversion to getting their hands dirty.
- Complex or multi-step instructions may not be fully understood and processed by the AS student. Wherever possible give step by step instructions and back up verbal instructions with a written copy.
- It is also common for AS students to take information very literally. Be very explicit with any instructions. Avoid using metaphors, idioms and figures of speech. Also do not expect AS students to pick up any meaning from your voice intonation or body language.
- Some AS students are very poor at asking for help when they don't understand what to do. This is because they find social communication difficult and sometimes do not find it easy to understand and explain why they are having problems. It is a good idea to check their understanding and progress with open questions.
- Students with AS often have an associated diagnosis of dyspraxia. This can affect gross motor skills resulting in clumsiness and/or fine motor skills making precise work difficult. Students affected may require extra help.

Start of College Questionnaire

Rate each of the statements between 1 and 10 depending on how worried or anxious you are about them, with 1 being not worried at all and 10 being the most worried you have ever felt.

Are you worried or anxious about.....	Rating
Getting to and from college (transport arrangements)	
Being bullied or teased at college	
Making friends at college	
Controlling your temper or frustration at college when things don't go right	
Unexpected changes to your timetable, teachers or classroom	
Where you are going to sit in the classroom	
Who is going to sit next to you in the class	
Entering the classroom on the first day	
Meeting your teacher	
Having an LSA to support you in class	
Getting to class on time	
Not being able to keep up with note taking in class	
Finding the work too difficult	
Finding coursework too difficult	
Being organised so you have the right notes and books for the right class	
Being organised so you get your coursework and homework done on time	
Exam arrangements: getting a separate room, extra time, etc	
Sudden noises in class e.g. fire alarm, 'explosive' experiment	
Noisy classrooms in general	
Specific noises such as an electric motor sound	
Specific smells e.g chemicals or perfume	
Being asked to work with another student in the class or in a group	
Being asked by the teacher to answer a question in class	
Being asked by the teacher to read aloud in class	
Doing a presentation in front of the class	
Doing experiments in physics or chemistry	
Asking for help from the teacher when you don't understand something	
Where you are going to eat your lunch	
Where you are going to spend break time	
Where you are going to study during your free periods	
Where you can go if you want to get away from everyone and have some quiet time	
Who to go and see if you have a worry or problem at college	

Target Chart

	Mon		
Task	Student rating	Teacher's rating	Comments
I had my file out and my pencil case on the desk before the lesson began			
I made a good attempt at the starter questions on the board			
I worked hard during the lesson, listening to my teacher and filling in my chemistry workbook			
I worked well with other students in the class to get a task done			
I worked well during the chemistry practical session			
I worked hard to complete the chemistry test, using my extra time if I needed it			

Please rate the relevant tasks (1 to 5) at the end of each lesson.

- 1: Didn't try at all 2: Made some effort 3: Making progress but still needs to do more
4: Much improved 5: Worked very hard to accomplish the task

Further Reading and Websites

- 1 Attwood T. (2007) The Complete Guide to Asperger's Syndrome. London. Jessica Kingsley.
- 2 <http://www.mymaths.co.uk/>
- 3 <http://bestchoice.net.nz/bclogin.aspx?ReturnUrl=%2fdefault.aspx>