Lanner Primary School

Strategies for supporting pupils with Special Educational Needs and Disabilities in **Science** lessons.

Individual Need	**This is how we help…**
Dyslexia	• Providing a range of ways for pupils to show their learning, not relying just on writing to demonstrate substantive and disciplinary knowledge in Science. ○ Alternative recording methods could include: access to a computer, photographs, diagrams and drawings, labels to stick onto pictures, interactive worksheets, posters, presentations, role play, verbal contributions, Teacher / TA observations, matching and sorting activities, cloze. • Ensuring that appropriately tinted books, overlays and whiteboards are available. • Using fonts such as Century Gothic, Comic Sans, Arial or Verdana on printed sheets • Presentation slides will avoid black font on a white background. • Large close formatted paragraphs of information is avoided, with information being presented in numbered points or bullet points. • Pictures, text boxes, diagrams, clear sub-titles and 'colour-coded text' are used to break up and or replace large sections of information. • Visual representations (diagrams, pictures, illustrations) used to support understanding. • Subject specific spelling supported by word mats and Science Knowledge Organisers. • Science specific vocabulary is taught, rehearsed and reinforced. • Instructions will be broken down into smaller steps • Pupils are asked to repeat back what they are required to do. • Pupils are given extra thinking and completion time. • Pre-warning pupils of questions – never "putting them on the spot". • When appropriate support pupils organisational skills with task boards. • We understand that pupils with dyslexic tendencies may find is hard to organise information on diagrams, graphs, flow charts, spider diagrams and tables. If necessary, we will modify the task, for example by providing a blank table or graph, to ensure success.

	• We understand that pupils may find it tricky to complete pre-printed tables. We therefore make sure boxes and tables are big enough to easily write in. • We remove situations where pupils have to listen and write at the same time.
Dyscalculia	**When interpreting, gathering or presenting data we ensure that.** • Rulers and highlighters can be used to visually support the organisation and recording of data. • Key words and numbers highlighted or circled. • Peer and adult support will be built into the lesson throughout to support any corrections with recording dictated numbers/number formation. • Peer teaching will be used as a great way of the child sharing new knowledge that has been learnt. • Any mathematical language or concept, which occurs in the science lesson to be retaught and modelled. • Access to multiplication grids and number bond resources if necessary. • Extra thinking time and extra time in assessments, where mathematical thinking is required.
DCD Developmental Coordination Disorder	**Sensory Need** • Ensuring that pupils have access to the sensory equipment they need – wobble cushions, fiddle toys, Zuma chair, access to tampette etc. • Any necessary sensory equipment will be taken on Science trips and visits. • Making sure movement breaks are available throughout the Science Lesson – and are sometimes disguised, to ensure that the pupil is not embarrassed. • We understand that pupils may find it hard to wear standard school uniform and may like to wear more relaxed fit clothing or clothes of specific textures. • Pupils will be pre-warned of any potential loud noises, unpleasant textures etc, which could present during experiments. **Fine & Gross Motor Skills** • When fine motor skills are inhibiting legible handwriting we make sure that written work is not the primary communicator / evidence of substantive and disciplinary knowledge in Science. ○ Alternative recording methods could include: access to a computer, dictation software, clicker, photographs, diagrams and drawings, labels to stick onto pictures,

interactive worksheets, posters, presentations, verbal contributions, Teacher / TA observations, matching and sorting activities, cloze.

- We understand that pupils with DCD tendencies may find is hard to organise information on diagrams, maps flow charts, spider diagrams and tables. If necessary, we will modify the task, for example by providing a blank table or mind map, enlarging tables, worksheets and diagrams to ensure success.
- When equipment is to be used opportunities to touch and use them are provided before the lesson.
- During science experiments pupils will be pre-warned of activities and given opportunities to practise activities or the use of equipment that requires fine or gross motor skills.
- Thought is given of which group would me most beneficial to the pupil, ensuring that DCD pupils can thrive alongside their peers.
- We provide
    - Different pens (roller ball) and pen grips available if needed.
    - Writing slopes.
    - Finger grip rulers.
- We understand that pupils may struggle with zips and buttons when putting on coats and cardigans.

Organisation

- Ensure the pupils peg is away from other children's clutter and is easy to reach.
- Make sure the pupil's tray is close to their desk.
- Encourage children to limit the amount of resources on their desks at a given time.
- Task boards to help pupils remember all the things they need for the lesson ahead.
- Pupils to sit directly facing the board / teacher.
- Clear pencil cases so pupils can see their resources.
- Visual timetables.
- Adult support is given when it is necessary to organise movements.
- Simple step by step instructions on the board or printed worksheet.
- Instructions will be broken down into smaller steps
- We will ask pupils to repeat back what they are required to do.

Autism Spectrum Disorder	• Adults who have a positive, supportive, trusting relationship with the child will be available to support during to the lesson.
	• The Science lesson will be taught as part of the normal weekly routine (eg Wednesday afternoon is when Science is taught.) If the lesson has to me moved the pupils will be pre-warned.
	• Visual timetables will have reiterated the weekly routine and pre-warned the pupil of the Science lesson.
	• If necessary, the pupil will be pre-warned of the content of the Science lesson, especially if it takes an unpredictable form - such as sessions from visiting Science teachers.
	• When experiments are planned, pupils will be pre-warned of activities and if necessary are given opportunities to practise activities.
	• Pupils will be pre-warned of any potential loud noises, unpleasant texures etc, which could present during experiments.
	• Thought is given, prior to Science lessons of which group would me most beneficial to the pupil, to ensure that ASD pupils can thrive alongside their peers.
	• Any group activities will be thought out carefully and children can work independently if the child finds the social expectations of group work tricky or difficult.
	• If necessary learning will be adapted so that it is accessible to the child.
	• Providing a range of ways for pupils to show their learning, not relying just on writing to demonstrate substantive and disciplinary knowledge in Science.
	  o Alternative recording methods could include: access to a computer, photographs, diagrams and drawings, labels to stick onto pictures, interactive worksheets, posters, presentations, role play, verbal contributions, Teacher / TA observations, matching and sorting activities, cloze
	• When visiting another location
	  o Pre-prepare the pupils of the day's events and provide a visual timetable if necessary.
	  o Allow time for pupils to explore the venue, familiarise themselves and find the boundaries if necessary.
	  o Allow opportunities for pupils to touch equipment in a supported manner.
	  o Make sure there is an adult with a positive, supporting and trusting relationship present on the trip.
	• Planned and unplanned sensory breaks will be used and there will be a breakout space available throughout the lesson.

Anxiety	• The PACE approach will be used by all adults supporting the child within the lesson. • Adults will carefully check through the content of the lesson to ensure they are considering the child's context and background before the lesson takes place. If necessary, lessons will be adapted with this information in mind to avoid triggers and to ensure the child feels safe and secure. • Pupils will be pre-warned of any potential loud noises, unpleasant textures etc, which could present during experiments. • Children will be given the correct preparation before the lesson so they know what will be happening and what to expect prior to the Science session. This is especially important when teaching Science through visits and visiting science teachers. • Any changes that will be made to the seating plan or organisation of the lesson will be shared with the child beforehand. • Children will be able to use a 'help card' or signal in a pre-agreed manner, if they feel that they need support within the classroom. • Children will be provided with a safe and familiar break out space if they need it throughout the lesson
Attention Deficit Hyperactivity Disorder	• Children will be given the correct preparation before the lesson so they know what will be happening and what to expect prior to the Science session. • All adults supporting the child within the classroom will have a good understanding of how best to support the child. • Any rules/expectations will be consistently implemented. • Seating arrangements will be considered carefully to minimise distractions within the Science session. • Pupils will be pre-warned of any potential loud noises, unpleasant textures etc, which could present during experiments. • 'Time out' or 'help cards' can be used to ensure the child is able to communicate that they need to use their break out space. • Instructions and key information will be given clearly so the child understands what is being asked of them and how they will achieve the learning intention.
Cognition & Learning Challenges	• Simple step by step instructions verbally, on the board or printed worksheet. • Instructions will be broken down into smaller steps • Ask pupils to repeat back what they are required to do. • Extra thinking time. • Pre-warning of what question will be asked and thinking time given.

	• Providing a range of ways for the pupil to show their learning, not relying just on writing to demonstrate substantive and disciplinary knowledge in Science. ○ Alternative recording methods could include: access to a computer, photographs, diagrams and drawings, labels to stick onto pictures, interactive worksheets, posters, presentations, role play, verbal contributions, Teacher / TA observations, matching and sorting activities, cloze. • Writing support, such as sentence stems, WAGOLS (What a good one looks like) and writing frames for longer pieces. • Pre-planned peer pairings and group support. • Spelling mats and word mats. Science Knowledge Organisers. • Large close formatted paragraphs of information is avoided, with information being presented in numbered points or bullet points • Concrete resources and visual representations will be given to the child to support the learning of new information. • Break down tasks into manageable chunks and demonstrate each step as required.
Experienced Trauma	• The PACE approach will be used by all adults supporting the child within the lesson. • Adults will carefully check through the content of the lesson to ensure they are considering the child's context and background before the lesson takes place. If necessary, lessons will be adapted with this information in mind to avoid triggers and to ensure the child feels safe and secure. • Pupils will be pre-warned of any potential loud noises, unpleasant textures etc, which could present during experiments. • Children will be provided with a safe and familiar break out space if they need it throughout the lesson. • Adults supporting the child will have good understanding of the child's context and how best to support the child with their emotions.
Speech, Language & Communication Needs	• Speech will be clear and slowly paced so that children can understand what is being said, what information is being shared and any instructions that are being given. • Long sentences will be broken up into smaller, short sentences that can clearly be interpreted.

	• Children will be given time to process information and to give responses to answers. • Symbols, signs and visual timetables will be used to support communication. • Visual aids and word-mats to help with vocabulary. • Lots of opportunities will be given to communicate in either a pair or small group context to develop confidence. • Positive responses will be given to any attempts at communicating. • Adults will regularly check the child's understanding throughout the lesson.
Vision Impairment	If appropriate • The pupil will be seated facing the teacher. • A reading slope will be provided. • A thicker/darker pencil will be provided to support the child with reading their own writing. • Children will be given enlarged images, pictures and diagrams. • Resources will be provided in the correct font size for the child in question. • During standard lessons, school trips and visits, we provide the pupils with time and opportunity to explore any equipment through touch. • Pupils will be pre-warned of any potential loud noises, unpleasant textures etc, which could present during experiments. • During school trips and visits, time will be taken to ensure that the pupil is familiar with their surroundings. • Pupils will be pre-warned of activities during experiments. They will be given the opportunity to try out activities with the equipment which will be used.
Hearing Impairment	• Minimisation of background noise. • Consideration of the most beneficial seating arrangement through consultation with the pupil. Placing the child at the front or close to the teacher or demonstration, or in the place the child feels is best for them. • An awareness that group members, teacher and TA must face the child when speaking. • Adults will discretely check that the child is wearing their hearing aid. • If necessary, provide written and pictorial instructions. • Children will be provided with key vocabulary specific to Science with technical terms explained.

	• Adult support to encourage discussion and sharing of ideas to build verbal skills. • Allowances and provision will be considered needed when on Science trips and away from the school building. • During school trips and visits, time will be taken to ensure that the pupil is familiar with their surroundings. • Pupils will be pre-warned of content of experiements. They will be given the opportunity to try out activities and explore the equipment. • Pupils will be pre-warned of any potential loud noises, unpleasant texures etc, which could present during experiments.
Toileting Issues	• Children will be able to leave the classroom whenever necessary. • Seating arrangements will be carefully organised so that the child can access the toilet as easily as possible. • Allowances and provision will be considered needed when on Science trips, and when they are away from the school building.