Chuckery
Primary School
Working Together

Supporting SEN in DT

22-23

To make design and technology lessons inclusive, teachers need to anticipate what barriers to taking part may pose for pupils with particular SEN and/or disabilities. Teachers need to consider ways of minimising or reducing those barriers so that all pupils can fully take part and learn. In some activities, pupils with SEN and/or disabilities will be able to take part in the same way as their peers. In others, some modifications or adjustments will need to be made to include everyone. For some activities, you may need to provide a 'parallel' activity for pupils with SEN and/or disabilities, so that they can work towards the same lesson objectives as their peers, but in a different way – eg using a computer simulation of a process rather than manipulating equipment. Occasionally, pupils with SEN and/or disabilities will have to work on different activities, or towards different objectives, from their peers.

Below are some suggested adaptations that can be made.

Potential barriers	Suggested adaptations
Accessing resources e.g. VI children and children with poor motor control/mobility	• Have systems in place so that tools can be found and put away easily. Think about the layout of the room and the tables. Do they need to moved so that pupils can access resources easily? e.g. glue guns need to be plugged in at the wall. • Purchase specialist aids – eg talking weighing scales, jigs to aid cutting, templates, patterns, ready-made parts, kettle tipping devices, sprung or electric scissors generic aids – eg jumbo pencils if hand control is weak, non-slip mats (dycem) to hold papers, books and equipment in place, BluTac to hold small items or as a temporary fixing (eg for rulers when drawing), extra time • TA support in translating design ideas into a drawing. • Use of computing technology to record or draw ideas.

Health and safety Pupils with ASD may have a lower awareness of danger. Some children may have severe allergies.	• Risk assessment completed before work begins to identify specific pupils and adaptations that need to be made e.g. Make sure pupils do not come into contact with materials they are allergic to. • Think about the layout of the room. Where will you keep the glue guns and who will man that table? Will there be any wires trailing? Can a child easily escape if there is a problem? • TA or staff to support or observe pupils with sharp or potentially dangerous resources.
Language barriers EAL children/ or those with SEN for cognition and learning may struggle to understand new vocabulary	• Instructions are given clearly and reinforced visually, where necessary • Prepare visual prompts, using images, photos or symbols, showing the order to carry out a sequence of activities for a particular process. Checklists allow pupils to see what they have completed, what to do next and where to finish. • Clarify technical terms that have different meanings in other contexts, for example 'knead'/'need', 'grain', 'glaze', 'form', 'saw', 'seam', etc. • Labels placed around the room, lists of key words, posters, etc can help pupils to recognise and spell the names of important pieces of equipment. Flow diagrams of key processes, time plans or design prompts with graphics may also be helpful. • Alternative communication modes are used, where necessary, to meet pupils' communication needs, eg signing, Braille. • Some pupils might require adapted printed materials (font, print size, background, Braille, symbols); some may require simplified or raised diagrams or described pictures. • Pupils with communication impairments are given: " time to think about questions before being required to respond " time to explain, and " respect for their responses to questions and contributions to discussions. Additional adults could prepare pupils to contribute to feedback sessions, where necessary • Notes made about individual pupils' difficulties/successes in the lesson take account of their oral contributions as well as their written work.
Working with others Children that struggle to work alongside others.	• For some pupils, eg those on the autistic spectrum, developing ideas with others can be challenging. Pairings and groupings need to be sensitive to this. • Manageable mixed-ability grouping or pairing is the norm, except when carefully planned for a particular purpose. • Sequence of groupings is outlined for pupils. • The transition from whole-class to group or independent work, and back, is clearly signalled. This is particularly helpful for pupils on the autistic spectrum. • Pupils are assigned specific roles(eg chair, writer, reporter, observer) which gives all pupils something to do and keeps them focused.
Cognitive overload	• Break down the designing and making stages into small manageable steps, and incorporate designing into 'mini making' tasks with specific targets. Use a tick list or wallchart so that pupils are clear about what they are working towards and how far they have got in relation to completing the project. • Pupils may find it easier to: " look at a limited range of products at one time " have a mixture of familiar and less familiar products to look at " use prepared forms to record their responses, and " discuss, examine and taste products as a group rather than relying on written descriptions.

	• Using digital cameras to record each stage of designing and making, then sequencing the photos, can be a useful tool to aid pupils' memory of the stages of completing the work. • Regularly repeat and reinforce previously learnt skills and processes.
SEMH	• When pupils destroy work or struggle when they make mistakes, highlight the developing ideas and mistakes of professional designers and others. Show how mistakes can be corrected, to remove pupils' fear of making mistakes. • Teachers' responses to pupils' errors recognise, value and build on the thinking that led to them. End-of-lesson discussion considers the ways of working the class has found fruitful or difficult. Pupils are asked, for example: " which key words, concepts, skills or processes were difficult and why, and how this could be improved " which parts of a task slowed them down, and " what could be done to make things go more efficiently. Some pupils may have anxieties about planning to improve, especially if it involves editing or redoing a task. Pupils are encouraged to see how they've improved on their previous best. • Pupils are clear about the duration and overall structure of the lesson. Visual timetables or other devices are used to indicate the structure and progress of lessons. Warn pupils when they will need to be flexible, and anticipate and plan to cope with the distress this may cause some pupils. For instance, a food product may take between 10 and 15 minutes to cook, and some pupils may become distressed if it is not ready exactly on time. • Choose projects where pupils can produce high-quality products, so they can be proud of what they have designed and made. This will raise their confidence and self-esteem and encourage them to be more ambitious in designing and making in future projects • Consider the length and complexity of tasks. Some pupils may be daunted by long or seemingly difficult tasks, and lack the confidence to get started. Pupils often find it easier to work on shorter, more focused assignments, which provide small elements of success to reward and motivate them. Break projects into smaller steps – eg instead of broad stages such as 'research', list sub-stages • Some pupils could join a project part-way through, eg after the research is complete, so they can get into modelling and making more quickly.