Design and Technology SEN support

The aim of our curriculum is that it will be ambitious for all children including children with additional needs so they learn the extensive knowledge in a broad and balanced curriculum. Design technology is taught to higher levels allowing scaffold and support to access the learning so all can learn the disciplinary knowledge (facts) and practise applying the subsidiary learning in different context (skills). We use Kagan structures throughout our curriculum which means children discuss learning in mixed ability groups and again having ambition for all. Penistone St John's uses the EEF 'Every Teacher a Teacher of SEND' as a guide to consistently embedding these 'five-a-day' strategies, which are explicit instruction, cognitive and metacognitive strategies, scaffolding, flexible grouping and technology, into teaching practice.

All children should have the opportunity to participate fully in classroom Design and Technology lessons, extra-curricular and whole school activities, therefore reasonable adjustments are made to accommodate all pupils at Penistone St John's.

It is suggested that pupils with special educational needs make better progress in D&T than in most other subjects. This is because designing and making usable products gives pupils a real sense of achievement. They benefit from experiencing their own progress and taking responsibility for their own learning. They enjoy the practical application of their ideas. Plus, their personal engagement with the task improves attention span, patience, persistence and commitment. All of which means special needs pupils can achieve results that compare or even exceed their peers. Design and Technology offers these pupils the chance to experience achievement at a level that may seldom occur elsewhere in their school life.

Design and Technology is a popular and valuable subject for pupils with special educational needs. Knowledge and understanding are drawn from across the curriculum and helps to develop and enable numeracy, literacy and communication skills that can be applied in practical ways. This consolidates skills from other lessons and reinforces learning with positive outcomes. It may be necessary to provide specialist equipment, adapt room layouts, utilise adult helpers and allow additional time for tasks. Much of what has traditionally been seen as pedagogy for pupils with SEN consists of the approaches used in ordinary teaching, extended or emphasised for particular individuals or groups of pupils. This applies even when teaching approaches may look very different, e.g., when teachers are working with pupils with complex needs.

Pupils with SEN often find designing activities problematic. Therefore, thought is required to ensure pupils can access and produce successful initial design work. For example, it's vital to offer a variety of methods of recording ideas quickly. Teachers are conscious of avoiding a rigid approach when it comes to recording and communicating design ideas and developments.

Activities focused on the physical making of designs should be supported 'one to one' where appropriate. Yet it is also important to encourage pupils to work as independently as possible. For example, by using key words sheets, flow charts and visual instruction sheets which explain a process in a step-by-step manner.

Although a lot of design and technology work in school requires spatial and motor skills, the quality of such work and the potential educational experiences within it can be greatly impaired if the individual has poor verbal or numerical skills. One way of helping with poor verbal skills in terms of reading and spelling is for the design/technology teacher to produce a list or lists of technological words related to a

particular piece of work. Such list(s) are produced on a class or individual basis, and displayed around the room as well as a copy being given to each pupil in the group.

Verbal skills can be improved by requiring individual pupils to talk about/ demonstrate aspects of their design and technology work to the rest of the class for a few minutes. This could be done at the end of a project as part of the evaluation stage or during a project to initiate class/group discussion of how best to finish the project.

In relation to numerical skills, a lot of basic numerical work can often be covered in a variety of design and technological projects at Key Stage 2, even at the lower levels of attainment. For example, working amount of food required to cook a recipe.

In some activities, pupils with SEN 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, 'parallel' activities for pupils with SEN may be provided, so that they can work towards the same lesson objectives as their peers, but in a different way − e.g., using a computer simulation of a process rather than manipulating equipment.

Where intellectual, emotional or behavioural learning difficulties impair learning the following strategies might be considered.

-Use pupils' interests, experiences and strengths. Avoid abstract design situations.
-Provide clear and precise rules and methods of working; avoid over lengthy introductions and structures to achieve successful outcomes. Make sure the pupils have a clear idea of the criteria for success.
-Promote discussion about ideas; most designers work within a community of interest. Value comments on each other's work and develop an atmosphere of mutual respect.
-Celebrate work in progress through the creative use of display. Use everyday items to show how product design has developed over time.
-Use IT to support recording.
-Reduce the amount of writing and research required. All pupils will suffer, but especially those with learning difficulties, when too much emphasis is placed on abstract designing.
-Make tasks less open-ended. Clear parameters and partly prescribed activities can ensure success and provide a sense of achievement.

Where physical barriers are identified, teachers consider a range of strategies which might include:

-Adaptations to tools and equipment to aid physical difficulties.
-The use of templates, jigs, patterns and other 'shortcuts' to aid completion of a task.
-Carefully considered intervention and support to promote independence.
-Provision of pre-prepared materials.
-Use of IT to assist the making activity, e.g. textiles equipment, CAD/CAM.
-Provision of extra time to complete tasks.
-Clear landmarks on the route to the completion of longer tasks.
-Regular rewards and feedback.
-Careful consideration given to comparisons between work of special needs and other pupils' work.
-Variety of tasks
-Good advice on correcting mistakes where they occur.